# EvaluationGroup, LLC

**Polk-Norman-Mahnomen**

**Community Health Services**

**Community Health**

**Needs Assessment**

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Authored by

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**Background**

A thorough and valid Community Health Assessment is a customary practice and core function of public health, and also is a national standard for all public health departments. Since the passage of the Local Public Health Act in 1976, Minnesota Community Health Boards have been required to engage in a community health improvement process, beginning with a Community Health Assessment. A Community Health Assessment identifies and describes factors that affect the health of a population, and factors that determine the availability of resources within the community to adequately address health concerns. The Community Health Assessment, therefore, assures that local resources are directed toward activities and interventions that address critical and timely public health needs. The model chosen for conducting the Polk-Norman-Mahnomen Community Health Board assessment was developed by National Association of County and City Health Officials (NAACHO) and is called MAPP (Mobilizing for Action through Planning and Partnerships). MAPP is a community-driven strategic planning process for improving community health that is facilitated by local public health leaders. The framework helps communities apply strategic thinking in prioritizing public health issues and identifying resources to address them. Four stages of the MAPP process as shown in the diagram below entail: 1) Community Health Status Assessment, 2) Forces of Change Assessment, 3) Community Themes and Strengths Assessment, and 4) Local Public Health System Assessment.



A document entitled “Minnesota County-level Indicators for Community Health Assessment:

Indicators Sorted by Statewide Health Assessment Theme” was used as a point-by-point guide to provide focused data collection activities on a number of health indicators. This document was a suggested (but not required) guideline provided by MDH used to guide the data review process. Such assessments must include descriptions of community demographics, health issues, and contributing causes of community health issues based on an analysis of community health data. They must generally cover the following six areas:

* People and Place: e.g., demographics/socioeconomics, environmental conditions
* Opportunities for Health: e.g., health resource availability/access, quality of life
* Healthy Living: e.g., health behaviors, social and mental health, child and maternal health
* Chronic Disease and Conditions: e.g., heart disease, multiple sclerosis
* Infectious Disease: e.g., vaccination rates
* Injury and Violence: e.g., suicide, domestic violence, murder

These six themes reflect the organization of [*The Health of Minnesota: 2010 Statewide Health Assessment*](http://www.health.state.mn.us/statewidehealthassessment/). The State Community Health Services Advisory Committee (SCHSAC)/Performance Improvement Steering Committee has recommended that as much as possible, all Minnesota Community Health Boards use the same organization and indicators as the Statewide Health Assessment so that comparisons can be more readily made between the counties and state.

**Quantitative Findings**

***Total Population and Persons Per Square Mile***

Demographic results show steady and slow declines in population year over year over the past 6 years, continuing a decades-long trend of population exodus from rural areas. More recent data from 2011 suggests that there may be a leveling-off in population decline.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Total population 2005-2009** | | | | | | **% change 2005-09** |
|  | 2005 | 2006 | 2007 | 2008 | 2009 |  |
| Statewide | 5,132,799 | 5,167,101 | 5,197,621 | 5,220,393 | 5,266,214 |  |
| Roseau | 16,495 | 16,201 | 15,946 | 15,865 | 15,911 | -4.6% |
| Pennington | 13,608 | 13,709 | 13,756 | 13,747 | 13,842 | +2.0% |
| Marshall | 9,965 | 9,951 | 9,618 | 9,502 | 9,184 | -8.0% |
| Kittson | 4,792 | 4,691 | 4,505 | 4,462 | 4,374 | -7.8% |
| Red Lake | 4,317 | 4,168 | 4,118 | 4,069 | 4,188 | -3.0% |
| Polk |  | 31088 | 30708 | 30694 | 30766 | -1.0% |
| Norman-Mahnomen |  | 11814 | 11814 | 11733 | 11480 | -2.9% |

Population statistics per square mile reveal that 2 of the counties in the region (Kittson and Marshall) meet the designation of being a frontier population (six or fewer people per square mile) <http://www.frontierus.org/> .

|  |  |  |
| --- | --- | --- |
| **County** | **Persons per sq. mile** | **Population 2011** |
| Kittson | 4 | 4,552 |
| Marshall | 6 | 9,481 |
| Norman | 8 | 6,869 |
| Mahnomen | 9 | 5,456 |
| Roseau | 9 | 15,540 |
| Red Lake | 10 | 4,105 |
| Polk | 16 | 31,456 |
| Pennington | 23 | 14,072 |
| Minnesota | 65 | 5.34 million |
| USA | 84 | 302 million |
| World | 117 (not including water) | 7.74 billion |

Source: U. S Census Bureau statistics, 2010/11 population estimates

***Educational Levels***

Educational levels of area residents are substantially lower than in comparison to the rest of the state. Between 47-55% of the population in the region aged 25 and older has less than or equal to a high school education or equivalent compared to 37% of the population statewide.



Between 13-21% of the population in the region aged 25 and older has a bachelor’s degree or higher compared to 31.4% of the population statewide.



***Unemployment Rate***

Year over year, the 5-year unemployment rate within Norman-Mahnomen (6.1) is higher than the state average of 5.2, whereas in Polk County it is 5.1.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unemployment rate - annual average**  **2005-2009** | | | | | |  |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 5-yr avg. |
| Statewide | 4 | 4 | 5 | 5 | 8 | 5.2 |
| Polk |  | 4.7 | 4.5 | 5 | 6.2 | 5.1 |
| Mahnomen/Norman |  | 5.3 | 5.8 | 6.2 | 7.2 | 6.1 |
| Kittson | 5 | 6 | 6 | 6 | 7 | 6 |
| Roseau | 5 | 6 | 6 | 5 | 8 | 6 |
| Pennington | 6 | 6 | 7 | 7 | 9 | 7 |
| Red Lake | 7 | 7 | 8 | 8 | 10 | 8 |
| Marshall | 4 | 4 | 8 | 8 | 10 | 6.8 |

***Regional Income and Poverty***

***Median Income***

**The U.S. Median income from 2006-2010 was $51,914. In Minnesota during the same time frame it was $57,243 (**<http://quickfacts.census.gov/qfd/states/27000.html>**). Statistics show that median income in the 3-county (PNM) region ranges between 14-31% lower ($7,986 to $17,858) than the statewide average. Across a working lifetime of 40 years this means that a household in the middle of the income distribution potentially brings home $300,000 to $700,000 less than other households across the state. Income levels by township do not currently exist in a reliable form known to the authors at this time. Presently, county-level estimates provide the most reliable form of assessment.**

|  |  |
| --- | --- |
| **County** | **Median Household Income** |
| Mahnomen1 | $39,385 |
| Norman1 | $43,333 |
| Pennington | $44,926 |
| Kittson | $47,568 |
| Red Lake | $47,835 |
| Marshall | $48,565 |
| Polk1 | $49,257 |
| Roseau | $49,400 |
| Minnesota | $57,243 |
| USA | $51,914 |
| World | $7,000\* |

**\*Average income**

1 2007-2011 Time frame

***Per Capita Income***

Per capita income or income per person is a measure of mean [income](http://en.wikipedia.org/wiki/Income) within an economic aggregate, such as a country, city or county. It is calculated by taking a measure of all sources of income in the aggregate (such as GDP or Gross National Income) and dividing it by the total population. It does not attempt to reflect the distribution of income or wealth (<http://en.wikipedia.org/wiki/Per_capita_income>).

Per capita income has several weaknesses as a measurement of prosperity, including:

* As it is a mean value, it does not reflect income distribution. If the distribution of income within a country is skewed, a small wealthy class can increase per capita income far above that of the majority of the population. In this respect median income is a more useful measure of prosperity than per capita income, because it is less influenced by the outliers.
* Economic activity that does not result in monetary income, such as service provided within the family, or for barter; is usually not counted. The importance of these services varies widely among different economies.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Total per capita income 2004-2008** | | | | | |
|  | 2004 | 2005 | 2006 | 2007 | 2008 |
| Red Lake | $21,970 | $23,698 | $24,243 | $28,206 | $29,707 |
| Polk |  | $27,502 | $28,277 | $30,420 | $36,854 |
| Norman/Mahnomen |  | $29,150 | $31,129 | $33,515 | $38,578 |
| Pennington | $31,225 | $33,671 | $33,250 | $35,873 | $38,607 |
| Roseau | $28,413 | $31,495 | $32,742 | $35,150 | $39,434 |
| Marshall | $26,019 | $26,894 | $28,447 | $31,624 | $43,631 |
| Kittson | $27,731 | $27,766 | $28,798 | $31,322 | $52,127 |
| Statewide | $36,184 | $37,290 | $38,859 | $41,105 | $42,953 |

***Current Poverty Guidelines***

**The current Poverty Guidelines published by the Federal Register are shown in the table below. These figures are not the figures the Census Bureau uses to calculate the number of individuals in poverty. The figures that the Census Bureau uses are the poverty thresholds (Federal Register, Vol. 77, No. 17, Jan. 26, 2012, p. 4035).**

|  |  |
| --- | --- |
| **2012 Poverty Guidelines for the 48 Contiguous States and the District of Columbia\*** | |
| **Persons in family/household** | **Poverty guideline** |
| **1** | $11,170 |
| **2** | 15,130 |
| **3** | 19,090 |
| **4** | 23,050 |
| **5** | 27,010 |
| **6** | 30,970 |
| **7** | 34,930 |
| **8** | 38,890 |
|  | |

\*For families/households with more than 8 persons, add $3,960 for each additional person.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Census Poverty Thresholds for 2011 by Size of Family and Number of Related Children Under 18 Years** | | | | | | | | | |
|  | Related children under 18 years | | | | | | | | |
| Size of family unit | None | One | Two | Three | Four | Five | Six | Seven | Eight+ |
| One person (unrelated) |  |  |  |  |  |  |  |  |  |
| Under 65 years. | 11,702 |  |  |  |  |  |  |  |  |
| 65 years and over | 10,788 |  |  |  |  |  |  |  |  |
| Two people. |  |  |  |  |  |  |  |  |  |
| Householder < 65 years. | 15,063 | 15,504 |  |  |  |  |  |  |  |
| Householder 65 years +. | 13,596 | 15,446 |  |  |  |  |  |  |  |
| Three people. | 17,595 | 18,106 | 18,123 |  |  |  |  |  |  |
| Four people. | 23,201 | 23,581 | 22,811 | 22,891 |  |  |  |  |  |
| Five people. | 27,979 | 28,386 | 27,517 | 26,844 | 26,434 |  |  |  |  |
| Six people. | 32,181 | 32,309 | 31,643 | 31,005 | 30,056 | 29,494 |  |  |  |
| Seven people | 37,029 | 37,260 | 36,463 | 35,907 | 34,872 | 33,665 | 32,340 |  |  |
| Eight people. | 41,414 | 41,779 | 41,027 | 40,368 | 39,433 | 38,247 | 37,011 | 36,697 |  |
| Nine people or more. | 49,818 | 50,059 | 49,393 | 48,835 | 47,917 | 46,654 | 45,512 | 45,229 | 43,487 |
| Source: U.S. Census |  |  |  |  |  |  |  |  |  |

The negative consequences of poverty typically have the greatest adverse impact on the elderly and the young. Between 1% and 10% more of the regional population is aged 65 and older compared to the rest of the state; furthermore the region has 1% to 8 % more of its elderly population living at home alone. Elderly people living at home are more at-risk for accidents or injuries than those living with others. Living alone may imply greater functional ability, but injuries and outcomes can be worse, especially if the person cannot rise from the ground. Living alone has been shown to be a risk factor for falls although part of this effect appears to be related to certain types of housing older people may occupy (Health Evidence Network, 2004).

|  |  |  |  |
| --- | --- | --- | --- |
| **Number and percent of people aged 65 years and older 2010** | | | |
|  | **Population 65+ years** | | **Percent of households in which the resident is 65 and over and living alone** |
| **Number** | **Percent** |
| Roseau | 2250 | 14 | 10.5 |
| Mahnomen | 855 | 16 | 11.6 |
| Pennington | 2212 | 16 | 12.7 |
| Polk | 5,220 | 17 | 12.9 |
| Red Lake | 701 | 17 | 13.4 |
| Marshall | 1816 | 19 | 13.6 |
| Norman | 1,465 | 21 | 16.3 |
| Kittson | 1029 | 23 | 17.9 |
| **Statewide** | **683,121** | **12.9** | **9.7** |

The dependency ratio is an age-population ratio of those typically not in the labor force (the dependent part) and those typically in the labor force (the productive part). It is used to measure the pressure on the productive population and depicts the number of people 65 and older to every 100 people of traditional working ages. The elderly dependency ratio in northwest Minnesota is between 2 and 20 points higher than in comparison to the ratio statewide. This means that there is a greater portion of the population within the northwest region dependent upon government resources, such as social security and other security net programs compared to statewide.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Elderly (65+ years) dependency ratio**  **(per 100 population 15-64) 2005-2009** | | | | | |
|  | 2005 | 2006 | 2007 | 2008 | 2009 |
| Roseau | 18 | 18 | 19 | 19 | 21 |
| Pennington | 23 | 23 | 23 | 23 | 24 |
| Polk |  | 25.7 | 26 | 26 | 26 |
| Red Lake | 28 | 27 | 26 | 26 | 29 |
| Marshall | 30 | 30 | 32 | 33 | 30 |
| Mahnomen/Norman |  | 32 | 32 | 33 | 33 |
| Kittson | 38 | 38 | 39 | 39 | 39 |
| Statewide | 18 | 18 | 18 | 18 | 19 |
| USA |  |  |  |  | 22 |

*200% Poverty Rates*

Regionally, Mahnomen has the greatest percentage (48.2%) of individuals living at or below 200% of poverty according to the 2011 Minnesota County Health tables and as shown below.

|  |  |
| --- | --- |
| **Percent of people of all ages living at or below 200% of poverty 2005-2009** | |
|  | Percent of people of all ages living at or below 200% of poverty |
|
| Mahnomen | 48.2 |
| Norman | 33.6 |
| Polk | 31.6 |
| Red Lake | 31 |
| Pennington | 29 |
| Roseau | 29 |
| Marshall | 27 |
| Kittson | 26 |
| Statewide | **26** |

*Poverty and Food Program Participation*

Mahnomen County had the highest free/reduced priced lunch rate in the area in 2011 (71.8%), with Norman County (49.3%) being higher than the state average (37.3%) as well.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Children Receiving Free/Reduced Price Lunch (Percent) Showing most recent 5 years** | | | | | |
|  | **2007** | **2008** | **2009** | **2010** | **2011** |
| Mahnomen |  | 70.7% | 73.4% | 68.7% | 71.8% |
| Red Lake | 51.9% | 50.8% | 53.7% | 49.9% | 49.8% |
| Norman |  | 47.7% | 45.9% | 46.4% | 49.3% |
| Marshall | 43.1% | 44.1% | 43.6% | 46.2% | 45.4% |
| Kittson | 39.7% | 38.3% | 40.3% | 39.7% | 38.0% |
| Polk |  | 36.4% | 38.7% | 37.8% | 38.1% |
| Pennington | 34.8% | 34.8% | 38.1% | 38.7% | 38.3% |
| Roseau | 32.6% | 31.2% | 37.0% | 34.1% | 34.0% |
| Statewide | 31.8% | 32.9% | 35.6% | 36.7% | 37.3% |

***Overweight/Obesity/Physical Activity: Youth***

* Minnesota Student Survey (MNSS) results for area 12th graders indicate that overall, those students within the 3-county region are significantly more overweight than other 12th graders from across the state, and furthermore they are significantly more likely to believe they are overweight than other seniors from across the state. Mahnomen County did not achieve statistical significance because of the wide variability, likely due to small numbers.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Health Risk  Category 2010** | **MAHNOMEN (95% CI)** | **POLK**  **(95% CI)** | **NORMAN  (95% CI)** | **SHIP 1.0**  **2010 COUNTIES (95% CI)** | **MN STATE (95% CI)** |
| **1. Weight Status[1]** |  |  |  |  |  |
| a. At risk for overweight[2] | **7.9**  **(2.4 - 22.7)** | **12.7**  **(9.2 - 17.3)** | **7.4**  **(3.0 - 16.8)** | **13.0**  **(10.8 - 15.7)** | **11.9**  **(11.6 - 12.3)** |
| b. Overweight[3] | **13.2**  **(5.4 - 28.8)** | **14.2**  **(10.5 - 18.9)\*** | **17.6**  **(10.2 - 28.9)\*** | **13.7**  **(11.4 - 16.5)\*** | **9.4**  **(9.1 - 9.8)** |
| a) Thinks overweight | **31.7**  **(19.0 - 48.0)** | **31.1**  **(26.0 - 36.7)\*** | **23.6**  **(15.0 - 35.0)** | **27.3**  **(24.3 - 30.6)\*** | **23.1**  **(22.6 - 23.5)** |

[1] The CDC growth charts were used to determine weight status according to BMI for participants in the Minnesota Student Survey.

[2] 85th to less than 95th percentile on the CDC growth charts

[3] Equal to or greater than the 95th percentile on the CDC growth charts

\*=Significant difference from state CI.

See Appendix A: MNSS Data Analysis to find additional statistics on the use of cigarettes, exercise, and a healthy diet to control weight.

***Diabetes: Adults***

Synthetic Behavioral Risk Factor Surveillance Data (BRFSS) age adjusted estimates of diabetes within the region reveal that the prevalence of the disease may be elevated compared to the statewide average. Local public health staff believes strongly that the levels of diabetes within the region are higher than state averages.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **2009 Age-Adjusted Estimates of the Percentage of Adults with Diagnosed Diabetes in Minnesota\*** | | | |
|  | % | Lower 95%CI | Upper 95%CI | SD |
| Statewide | 5.8 |  |  |  |
| Mahnomen | 9.1 | 6.8 | 11.7 | 1.2 |
| Pennington | 8.6 | 6.3 | 11.4 | 1.3 |
| Norman | 8.1 | 5.9 | 10.9 | 1.2 |
| Polk | 7.7 | 5.9 | 10 | 1.1 |
| Kittson | 7.6 | 5.4 | 10.1 | 1.2 |
| Red Lake | 7.2 | 5.3 | 9.6 | 1.1 |
| Marshall | 6.9 | 5 | 9.3 | 1.1 |
| Roseau | 6.7 | 5 | 8.9 | 1 |

\*BRFSS Synthetic estimates

Source: Centers for Disease Control and Prevention (2012).

CI=Confidence Interval

SD=Standard Deviation

***Tobacco Use in Adults***

Behavioral Risk Factor Surveillance Data from 2008 was available for quick analysis and an overview is provided in the following table. While BRFSS findings allow for some measurement of adult population health, they are generally unreliable for populations in NW Minnesota because they rely on a synthetic estimate based on population parameters based on individuals who do not reside in the area but rather are similar on demographic characteristics such as age and gender (See Appendix D for more details). Findings suggested that rates of obesity and overweight are similar to statewide averages as well as smoking rates.

The data also suggest that lack of exercise for adult populations within the three counties may be a significant issue as nearly 18% of residents in each county are estimated to not participate in any form of exercise compared to the state average of nearly 13%.

2008 Behavioral Health Risks for Polk, Norman, and Mahnomen Counties (Adults: 18+)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Health risk category** | **Mahnomen County (%)** | **Polk County (%)** | **Norman County (%)** | **SHIP 1.0 Counties (%)1** | **MN State (%)** |
| **Overweight (not obese)** | 36.5 | 35.8 | 36.9 | 36.4 | 37.5 |
| **Obese** | 26.1 | 25.5 | 26.0 | 25.9 | 26.5 |
| **Current smokers** | 15.5 | 15.8 | 15.0 | 15.6 | 15.7 |
| **No Exercise** | 17.8 | 17.8 | 18.3 | 17.8 | 12.9 |
| **Fair or Poor Overall Health** | 12.5 | 12.1 | 13.3 | 12.5 | 14.2 |

1Aggregate data for Kittson, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake & Roseau Counties.

*Smoking During Pregnancy*

* Because tobacco use rates are generally higher in the region, smoking during pregnancy was examined. Data show that, the percentage of births to mothers who smoked in Mahnomen County was 40% higher than the state average.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Births to Mothers Who Smoked During Pregnancy (Percent) Showing most recent 5 years; Show All Years** | | | | | |
|  | **2006** | **2007** | **2008** | **2009** | **2010** |
| Norman | 0% | 16% | 19% | 27% | 12% |
| Kittson | 0% | 7% | 13% | 11% | 12% |
| Polk | 12% | 15% | 15% | 14% | 14% |
| Marshall | 0% | 13% | 13% | 15% | 15% |
| Roseau | 15% | 17% | 17% | 12% | 19% |
| Red Lake | 10% | 16% | 17% | 17% | 21% |
| Pennington | 0% | 28% | 27% | 29% | 24% |
| Mahnomen | 0% | 30% | 46% | 50% | 52% |
| Statewide | 9% | 10% | 10% | 10% | 10% |

***Breastfeeding Rates***

* Minnesota children tend to be breastfed at a higher rate (82.5%) than children from the rest of the United States versus (74.6%) (Minnesota Department of Health, Minnesota Pregnancy Risk Assessment Monitoring System PRAMS, 2011).
* The breastfeeding initiation rate among WIC participants in Minnesota during 2010 was 74.5%.
* Polk County is 1 standard deviation below the Healthy People 2010 goal of 75%, whereas Mahnomen and Norman Counties are currently at greater than 2 standard deviations below that level. For more information see <http://www.health.state.mn.us/divs/fh/wic/statistics/bffactsheet0312.pdf>

***Tobacco Use in Youth***

With the exception of Polk County in 2010, frequent use of tobacco in youth is estimated to be at or below state averages. (Polk County youth cigarette use past 30 days in 2010 was 18.7 (14.6-23.6 CI) and the state average was 13.0% (21.3-22.1 CI). Of great concern for the region is also the reported frequent use of smokeless tobacco. Data indicate that Polk and Norman Counties have self-reported smokeless tobacco use rates nearly double the state average.

Tobacco Products Use in Youth by County (MNSS, 2010)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MAHNOMEN (95% CI)** | **POLK  (95% CI)** | **NORMAN (95% CI)** | **SHIP 1.0 COUNTIES (95% CI)** | **MN STATE (95% CI)** |
| Frequent use of tobacco (20+ days) past 30 days | 12.5  (5.1 - 27.5) | 18.7  (14.6 - 23.6)\* | 9.6  (4.6 - 19.1) | 20.6\*  (17.9-23.7) | 13.0  (12.7-13.4) |
| Used smokeless tobacco in past 30 days | 17.5  (8.3 - 33.2) | 19.0  (14.8 - 23.9)\* | 23.3  (14.8 - 34.6)\* | 21.4\*  (18.6-24.5) | 12.1  (11.8-12.5) |

\*=significant at p<.05

To learn more about where youth are purchasing tobacco products and the use of additional forms of tobacco products, see Appendix A.

***Alcohol Use in Adults***

* BRFSS data suggest that adults for whom data were available in the three-county region binge drank at approximately the same rate as adults from the rest of the state. Similar findings held true for heavy alcohol use.
* Pennington and Kittson Counties have twice the state average per-capita costs for alcohol-related motor vehicle crashes, fatalities and injuries, and Red Lake County has 6 times the cost.

|  |  |
| --- | --- |
| **Average cost per capita of alcohol-related motor vehicle crashes, fatalities and injuries 2005-2009\*** | |
| Roseau | $65 |
| Marshall | $66 |
| Polk | $72 |
| Pennington | $101 |
| Norman | $112 |
| Kittson | $116 |
| Mahnomen | $338 |
| Red Lake | $368 |
| Northwest MN | $104 |
| Statewide | $54 |

\*Source: [Impaired Driving Facts](http://sumn.org/data/location/show.aspx?cat=1%2c10%2c71&loc=63&tf=5%2c22#src_1)

Cost estimates provided by the National Safety Council and provided above do not attempt to include "comprehensive costs” but just direct costs of traffic crashes, deaths and injuries due to medical expense, property damage and lost productivity. Other procedures that attempt to include comprehensive costs (e.g. those used by US Department of Transportation) result in total cost estimates about three times greater than those calculated here.

* The DWI arrest rate in Mahnomen County is approximately three times the national average.

|  |  |
| --- | --- |
| **DWI Arrest Rate per 10,000 population 2005-2009** | |
| Kittson | 50.8 |
| Red Lake | 58.6 |
| Norman | 64.2 |
| Marshall | 68.8 |
| Polk | 73.0 |
| Roseau | 86.5 |
| Pennington | 87.5 |
| Mahnomen | 139.0 |
| Statewide | 61.6\* |
| USA | 44.8\* |

\*2003-07 data. Source: Substance use in Minnesota (2012)

* The percent of all alcohol-related motor vehicle crashes in Norman County was twice that of the state. For Mahnomen County, it was 3 times greater.

|  |  |
| --- | --- |
| **Percent of all motor vehicle crashes that were alcohol-related 2005-2009** | |
| Roseau | 8% |
| Polk | 8.5% |
| Pennington | 9% |
| Kittson | 10% |
| Norman | 11% |
| Marshall | 13% |
| Mahnomen | 14.5% |
| Red Lake | 25% |
| Statewide | 5% |
| Northwest MN | 10% |

Source: Substance use in Minnesota (2012)

***Cancer Age Adjusted Death Rates***

* Overall, cancer age adjusted death rates reveal that Norman-Mahnomen Counties appear to have higher overall cancer death rates than the rest of the state.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cancer Age Adjusted Death Rates** | | | | |
|  | 1991-1995 | 1996-2000 | 2001-2005 | 2006-2010 |
| State | 196.3 | 191.6 | 170.2 | 169.6 |
| Polk | 216.5 | 211.3 | 171.9 | 165.5 |
| Norman-Mahnomen | 206.4 | 202.6 | 192.0 | 205.5 |

Source: MN Department of Vital Statistics

***Heart Disease***

While there were elevated rates in each of the counties depicted below for COPD Hospitalizations, none of them achieved the level of statistical significance at the 95% Confidence Interval level. Other counties not displayed in this table are available in the complete spreadsheet data file that accompanies this report.

* According to Minnesota Vital Statistics, age adjusted death rates for heart disease reveals that historically Kittson and Roseau Counties have had a substantially higher rate of heart disease death rates year over year compared to the state on average.
* With the exception of Marshall County, Age Adjusted Death Rates for Heart Disease in the region were higher than state averages from 2006-2010.

Aggregated prevalence rates for heart disease at a county level do not exist. Rather, only death rates from heart disease. In order to better capture heart disease prevalence rates, it is recommended that counties consider conducting BRFSS-style population health surveys to more clearly ascertain the incidence and prevalence of this disease within the region.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Heart Disease, Age Adjusted Death Rate** | | | |
|  | 1991-1995 | 1996-2000 | 2001-2005 | 2006-2010 |
|  |  |  |  |  |
| Marshall | 249.4 | 223.8 | 169.0 | 124.6 |
| Pennington | 221.3 | 208.4 | 200.2 | 143.6 |
| Polk | 267.8 | 216.2 | 162.9 | 148.6 |
| Norman-Mahnomen | 289.4 | 219.2 | 177.8 | 153.5 |
| Red Lake | 232.1 | 258.7 | 180.4 | 162.7 |
| Roseau | 234.8 | 265.0 | 203.2 | 174.6 |
| Kittson | 343.6 | 293.7 | 224.7 | 189.7 |
| State | 234.2 | 196.4 | 154.1 | 126.6 |

Green shaded cells indicate county number is higher than state average for that year

Source: <http://www.health.state.mn.us/divs/chs/Trends/index.html>

***Bullying***

* Data suggests that 9th graders in Norman County experience teasing or harassment at approximately twice the rate as other 9th graders from across the state.

|  |  |  |
| --- | --- | --- |
| **MNSS: Percent of 9th graders who report that a student(s)**  **Kicked, bit or hit them on school property in the last 12 months (1998-2010)** | | |
|  |  |  |
| Statewide | 9th Grade | 21.1 |
| Polk | 9th Grade | 23 |
| Mahnomen | 9th Grade | 26 |
| Norman | 9th Grade | 41 |

***Housing***

* The data suggest that housing occupied by owners across the region is greater than in comparison to the state.
  + Greater home-ownership represents both financial strength and a commitment to the area.
    - It may also indicate or suggest a need for more rental unit housing opportunities for those unable to afford a home.

|  |  |
| --- | --- |
| **Percent of housing occupied by owner 2005-2009** | |
|
| Kittson | 87 |
| Red Lake | 87 |
| Marshall | 87 |
| Roseau | 86 |
| Norman | 84 |
| Pennington | 82 |
| Polk | 78 |
| Mahnomen | 74 |
| Statewide | **78** |

* The child maltreatment rate appears to be much higher than state averages for Polk County.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2010 Rate of children maltreatment**  **per 1,000 children aged 0-17** | | | | | | | | | |
|  | **Child** | **Total** | | **Family Assessment** | | **Investigation -  Alleged** | | **Investigation -  Determined** | |
|  | **Pop.** | **Unique** | **Rate per** | **Unique** | **Rate per** | **Unique** | **Rate per** | **Unique** | **Rate per** |
|  | **Age 0-17** | **Child** | **1,000** | **Child** | **1,000** | **Child** | **1,000** | **Child** | **1,000** |
| **Minnesota** | **1,284,063** | **22,537** | **17.6** | **15,410** | **12.0** | **7,801** | **6.1** | **4,491** | **3.5** |
| Roseau | 4,104 | 19 | 4.6 | 7 | 1.7 | 13 | 3.2 | 8 | 1.9 |
| Pennington | 3,311 | 29 | 8.8 | 22 | 6.6 | 7 | 2.1 | 5 | 1.5 |
| Marshall | 2,226 | 72 | 32.3 | 53 | 23.8 | 23 | 10.3 | 10 | 4.5 |
| Red Lake | 1,007 | 15 | 14.9 | 9 | 8.9 | 6 | 6.0 | 3 | 3.0 |
| Kittson | 984 | 30 | 30.5 | 30 | 30.5 | 0 | 0.0 | 0 | 0.0 |
| Polk | 7,521 | 296 | 39.4 | 268 | 35.6 | 48 | 6.4 | 30 | 4.0 |
| Norman | 1,666 | 29 | 17.4 | 26 | 15.6 | 3 | 1.8 | 1 | 0.6 |
| Mahnomen | 1,586 | 17 | 10.7 | 12 | 7.6 | 9 | 5.7 | 1 | 0.6 |

* Four-year high school graduation rates are higher in all counties compared to the rest of the state with the exception of Mahnomen County.

|  |  |
| --- | --- |
| **Four year high school graduation rate  2007-2010** | |
| Statewide | 77 |
| Mahnomen | 60 |
| Pennington | 81 |
| Polk | 82 |
| Norman | 84 |
| Marshall | 87 |
| Kittson | 92 |
| Roseau | 92 |
| Red Lake | 93 |

Source: MN Kids Count

* Each year over the past five years the percentage of school aged children changing schools appeared to be lower in the region than in comparison to the state with the exception of Mahnomen County. This means that kids and families may be more likely to stay in their schools once they start compared to youth statewide except for in Mahnomen County.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **2006-2010 Children Changing Schools (Percent)** | | | | | |
|  | **2006** | **2007** | **2008** | **2009** | **2010** |
| Roseau | 11.0% | 9.0% | 9.3% | 7.1% | 7.7% |
| Kittson | 5.2% | 3.5% | 4.4% | 6.7% | 9.0% |
| Red Lake | 10.8% | 7.7% | 8.1% | 9.8% | 11.2% |
| Marshall | 10.4% | 11.7% | 10.8% | 10.9% | 11.6% |
| Pennington | 10.7% | 8.6% | 10.9% | 10.6% | 11.8% |
| Polk |  | 10.0% | 10.5% | 10.1% | 9.7% |
| Mahnomen |  | 24.9% | 25.5% | 23.6% | 29.6% |
| Norman |  | 10.9% | 10.4% | 10.4% | 9.5% |
| Statewide | 14.6% | 14.6% | 14.5% | 13.2% | 13.3% |

**Qualitative Findings**

***Statewide Health Improvement Program 2010 Interview Notes Analysis***

A review analysis of 24 interviews conducted by SHIP 1.0 staff in the fall of 2010 was conducted. EvaluationGroup,LLC staff reviewed the numerous interviews, because many of them had gone unanalyzed due to a lack of time and resources with the SHIP 1.0 effort. It was hoped that a review of these interviews would help shed additional and useful information as a part of this study.

1. *What do you think are the most pressing health issue(s) facing (community name)?*

In no particular order of importance, the following areas were described as the most pressing health concerns in their respective communities.

* Alcohol
* Drugs
* Not enough activities
* Obesity
* Eating Habits (bad)
* Diabetes/ Health
* Elderly (greater need for resources)
* Transportation (getting to healthcare providers)
* Cancer (all kinds)
* Health Insurance (lack of)
* Provider recruitment/retention
* Income (low)

1. *To what extent is unhealthy eating and physical inactivity a problem in (community name)?*

Responses to this question fell into three broad themes below:

* In rural areas, fast food access may be more limited (e.g. no McDonald’s), but so is access to physical fitness facilities and opportunities for participation in group activities (such as fewer community ed. offerings.)
* The climate (cold, lack of sunshine), culture (Scandinavian where everything revolves around food), coupled with busy schedules (lack of time for preparing nutritious foods) all contribute greatly to the obesity problem
* Poor eating environments exist for kids at some schools (pizza at game events becomes a meal for kids, juniors and seniors eat uptown at the convenience store instead of school lunch, lunches still not that healthy and full of carbs).

1. *To what extent is tobacco use a problem in (community name)?*

* Sentiments were split among interviewees. For some tobacco use was viewed as an issue of decreasing concern. These individuals’ believe that no smoking ordinances have worked in helping people quit, but that if people want to smoke it is their right as long as they are not hurting anyone else with their smoke. Other respondents felt strongly that smoking was on the increase both in youth and adults. A number of individuals felt that chewing tobacco use was also on the rise.

1. *Are there any activities or policies within your organization that encourage physical fitness (i.e., healthy diet, physical activity) or tobacco cessation? If so, what are they?*

* Most commonly, tobacco cessation was encouraged by a no smoking policy within any work or school buildings. Program activities such as participation in Quitline/Quitplan programs and healthy lifestyle speakers were also commonly mentioned. A wide range of physical activity/healthy eating policies and activities were discussed, including: no pop vending machines, closed lunch hour at noon for students, free membership to fitness centers, and the formation of school wellness committees; the latter of which was a focus of SHIP grant efforts.

1. *Are you aware of any policies (rules or codified procedures) within the larger community designed to encourage physical fitness or tobacco cessation?*

* Great awareness existed regarding no smoking policies at work places, restaurants, and in school buildings. Several grants were mentioned as well regarding the encouragement of physical fitness, including school fresh fruit and vegetable grant, Our children Succeed Initiative, and the Carol White Physical Education Program (PEP) grant.

1. *What systems (groups of people, organizations, businesses, etc. working together) in (community name) encourage physical fitness or tobacco cessation?*

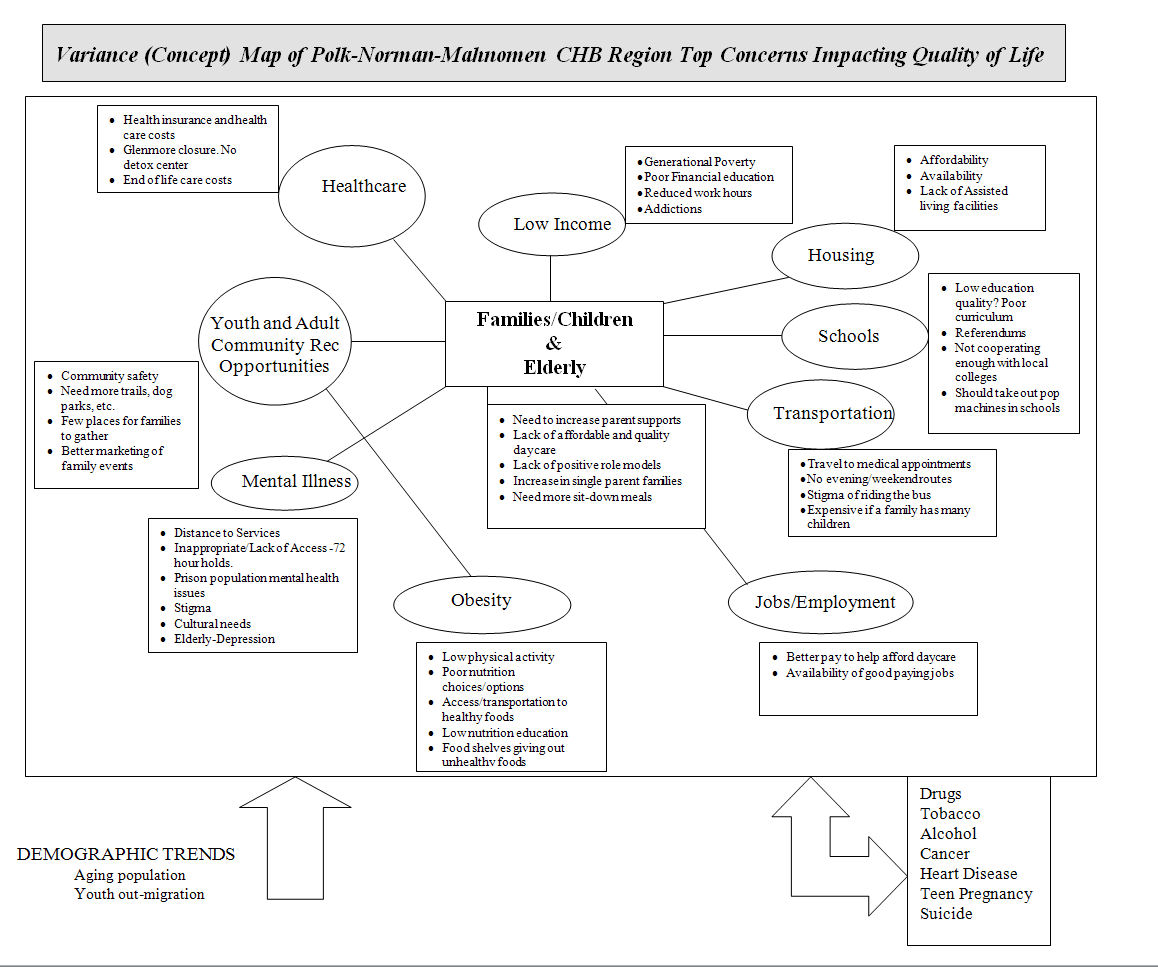
* School athletic programs and community hospital were mentioned most frequently as collaborators in promoting health/physical fitness in the overall community by opening up their exercise room facilities to community members. Weight watchers, kick-boxing and other community education were also mentioned as groups that promoted the health and well-being of community members.

1. *What environmental structures (sidewalks, building designs, parks, recreational facilities) in (community name) encourage physical fitness or tobacco cessation?*

* Most communities tended to have access to a fitness center or weight room and public parks/walking areas. On the other hand, the concept of ‘complete streets’ (environmentally designing streets to encourage walking and bicycling) was unknown to all interviewees.

***Community Themes and Strengths Discussion Groups***

Over 45 individuals participated in focus groups and individual conversations with public health staff held throughout the summer in Polk, Norman and Mahnomen Counties. Participants were asked to think broadly about the different recurring needs and concerns of clients and the general population served by them and their organizations. An in-depth analysis of the question, “What do you believe are the 2-3 most important issues that should be addressed in order to help further improve the quality of life for people in our community (county)?” is provided on the following page via a concept map. A concept map was developed in order to assist readers in understanding the large volume of information provided. While the qualitative items identified in the concept map are incomplete in terms of exhausting phenomena contributing to the quality of life within the region, at this time it is a highlight of those recurring items viewed by participants as most influential.



**Quality of Life** (See Appendix B for data on all survey items)

Individuals in the community were asked to complete an 11-item quality of life survey in the local newspaper, online or at local public health meetings or client visits. All responses were anonymous. Answers to questions were given on a 5 point scale with 5 being the most positive and 1 being the least.

235 individuals responded to the survey. 204 (87%) reported living in Polk, Norman or Mahnomen County. The remaining respondents worked but did not live in one of the three counties. All 235 responses were included in the analysis presented.



* 60% of respondents were satisfied with the health care system in the community. Factors considered included access, cost, availability, and quality, options in health care.
* 71% said theirs was a community that was a good place to raise children. Factors considered included school quality, day care, after school programs and recreation.
* 63% felt that the community a good place to grow old. This included perceived availability of elder-friendly housing, transportation to medical services, churches, shopping; elder day care, social support for the elderly living alone, meals on wheels, etc.)
* Only 7% of respondents felt their community was not a safe place to live, and only 6% felt there were not networks of support for individuals and families such as neighbors, support groups, faith community outreach agencies, etc.



* 65% of respondents felt either negative or neutral about economic opportunities within their community.
* 54% of respondents felt neutral or negative that they individually and collectively can make the community a better place to live.
* 50% of respondents felt neutral or negative that community assets were broad-based across multiple sectors of the population.
* 54% felt that levels of mutual trust and respect increase among community partners as they participate in collaborative activities to achieve shared community goals.

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Appendix A: Minnesota Student Survey Comparisons: 2007-2010

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **NORMAN COUNTY % (95% CI)** | | **MAHNOMEN COUNTY % (95% CI)** | | **POLK COUNTY % (95% CI)** | |
| **Health Risk Category** | **2007** | **2010** | **2007** | **2010** | **2007** | **2010** |
| **1. Weight Status[1]** |  |  |  |  |  |  |
| a. At risk for overweight[2] | 17.9 (10.3-29.3) | **7.4 (3.0 - 16.8)** | 18.4 (9.6 – 32.2) | **7.9 (2.4 - 22.7)** | 9.7 (6.5 -14.3) | **12.7 (9.2 - 17.3)** |
| b. Overweight[3] | 14.9 (8.1-25.9) | **17.6 (10.2 - 28.9)** | 12.2 (5.4-25.3) | **13.2 (5.4 - 28.8)** | 14.4 (10.5-19.5) | **14.2 (10.5 - 18.9)** |
| a) Thinks overweight | 29.7 (20.3-41.3) | **23.6 (15.0 - 35.0)** | 28.0 (17.0-42.4) | **31.7 (19.0 - 48.0)** | 29.2 (23.7-35.3) | **31.1 (26.0 - 36.7)** |
| b) Used cigarettes in the past 12 months to lose /control weight | 5.4 (2.0-13.8) | **6.8 (2.8 - 15.5)** | 6.0 (1.9-17.6) | **7.3 (2.3 - 21.2)** | 5.8 (3.5-9.6) | **7.9 (5.3 - 11.6)** |
| c) used exercise in past 12 months to lose / control weight | 44.6 (33.5-56.3) | **48.6 (37.3 - 60.2)** | 60 (45.5-72.9) | **51.2 (35.7 - 66.5)** | 50.0 (43.7-56.3) | **45.7 (40.0 - 51.5)** |
| d) use healthy diet to lose / control weight | 40.5 (29.8-52.3) | **45.9 (34.7 - 57.6)** | 48.0 (34.2-62.1) | **46.3 (31.3 - 62.1)** | 48.8 (42.4-55.1) | **40.9 (35.4 - 46.7)** |
| **2. Meet guidelines for weekly PA[4]** | 72.7 (60.5-82.3) | **67.1 (55.3 - 77.1)** | 75.6 (60.5-86.2) | **52.5 (36.7 - 67.9)\*** | 61.8 (55.2-68.0) | **60.9 (55.1 - 66.4)\*** |
| a. insufficient weekly PA | 16.7 (9.3-28.0) | **26.0 (17.1 - 37.5)** | 13.3 (5.9-27.3) | **30.0 (17.5 - 46.5)** | 21.8 (16.8-27.8) | **28.0 (23.1 - 33.5)\*** |
| b. No weekly PA | 10.6 (5.1-20.9) | **6.8 (2.8 - 15.7)** | 11.1 (4.6-24.7) | **17.5 (8.3 - 33.2)\*** | 16.4 (12.0-21.9) | **11.1 (7.9 - 50.3)** |
| **3. Five or more servings of fruits and vegetables per day** | 11.1 (5.6-21.0) | **11.0 (5.5 - 20.7)** | 8.0 (2.9-20.0) | **22.5 (11.8 - 38.6)** | 10.4 (7.1-15.0) | **13.2 (9.7 - 17.6)** |
| **4. Use of tobacco products in the past 30 days** | 35.2 (24.8-47.2) | **42.5 (31.5 - 54.3)\*** | 38.8 (25.9-53.5) | **40.0 (25.6 - 56.3)** | 32.5 (26.8 – 38.8) | **41.9 (36.3 - 47.7)\*** |
| a. frequent use of tobacco products (20+ days) in the past 30 days | 9.9 (4.7-19.6) | **9.6 (4.6 - 19.1)** | 14.3 (6.8-27.6) | **12.5 (5.1 - 27.5)** | 20.7 (16.0-26.3) | **18.7 (14.6 - 23.6)\*** |
| **5. Cigarette use in the past 30 days** | 32.4 (22.4-44.4) | **26.0 (17.1 - 37.5)\*** | 24.5 (14.2-38.9) | **32.5 (19.5-49.0)** | 26.6 (21.3-32.6) | **32.2 (27.0 -37.8)\*** |
| a. Frequent cigarette use (20+ days) in the past 30 days | 9.9 (4.7-19.6) | **8.2 (3.7 - 17.4)** | 10.2 (4.2-22.9) | **10.0 (3.6-24.6)** | 15.2 (11.1-20.4) | **13.8 (10.3 - 18.4)\*** |
| b. 10 + cigarettes per day in the past 30 days[5] | 4.8 (0.6-28.1) | **35.3 (16.5 - 60.2)** | 18.2 (4.3-52.1) | **15.4 (3.6 - 46.7)** | 33.9 (23.0-46.9) | **20.7 (13.5 - 30.2)** |
| c. Had a cigarette before age 13 | 21.1 (13.0-32.4) | **11.0 (5.5 - 20.7)** | 30.6 (19.0-45.3) | **17.5 (8.3 - 33.2)** | 13.8 (10.0-18.8) | **16.0 (12.2 - 20.7)** |
| **6. Used smokeless tobacco in past 30 days** | 4.2 (1.3-12.6)† | **23.3 (14.8 - 34.6)\*** | 6.1 (1.9-17.9) | **17.5 (8.3 - 33.2)** | 13.4 (9.6-18.4) | **19.0 (14.8 - 23.9)** |
| **7. Smoked cigars, cigarillos or little cigars in past 30 days** | 18.3 (10.8-29.3) | **17.8 (10.5 - 28.6)\*** | 14.3 (6.8-27.6) | **10.0 (3.6 - 24.6)** | 12.2 (8.6-17.0) | **17.6 (13.6 - 22.4)\*** |
| **8. Used smokeless tobacco or had a cigar before age 13** | 7.0 (2.9-16.1) | **none** | 16.3 (8.2-30.0) | **5.0 (1.2 - 18.8)** | 5.0 (2.9-8.7) | **6.2 (3.9 - 9.7)** |
| **9. Tobacco Access** |  |  |  |  |  |  |
| a. bought at gas stations or convenience store | 52.0 (32.7-70.8) | **61.3 (43.0 - 76.8)** | 73.7 (49.3-89.0) | **56.3 (31.5 - 78.3)** | 75.3 (64.4 - 83.7) | **75.2 (66.8 - 82.0)\*** |
| b. got it from friends | 40.0 (22.7-60.2) | **45.2 (28.5-62.9)** | 47.4 (26.2-69.6) | **37.5 (17.3 - 63.3)** | 46.8 (35.9 - 58.0) | **39.2 (31.0 - 48.1)** |
| c. got it by having someone else buy it | 12.0 (3.8-31.9) | **6.5 (1.6 - 23.0)** | 21.1 (7.8-45.5) | **12.5 (3.0 - 40.1)** | 15.6 (9.0 - 25.6) | **10.4 (6.1 - 17.1)\*** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| [1] The CDC growth charts were used to determine weight status according to BMI for participants in the Minnesota Student Survey. | | | |  |  |  |
| [2] 85th to less than 95th percentile on the CDC growth charts |  |  |  |  |  |  |
| [3] Equal to or greater than the 95th percentile on the CDC growth charts |  |  |  |  |  |  |
| [4] 12th graders who have reported participating in either vigorous physical activity for 20 or more minutes per day on 3 or more days in the past 7 days or moderate physical activity for 30 or more minutes per day on 5 or more days in the past 7 days. | | | | |  |  |
| [5] % of those who reported smoking cigarettes in the past 30 days |  |  |  |  |  |  |
| \* - value in the left column for 2010 is significantly different from a corresponding value in the right column for 2010 (e.g. county -SHIP - STATE) | | | | |  |  |
| † - value for 2007 is significantly different from the corresponding value for 2010 within county, SHIP or MN State | | |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | **SHIP COUNTIES % (95% CI)** | | | | | **MN STATE % (95% CI)** | |
| **Health Risk Category** | | | | | | | | | | | | **2007** | | | | **2010** | **2007** | **2010** |
| **1. Weight Status[1]** | | | | | | | | | | | |  | | | |  |  |  |
| a. At risk for overweight[2] | | | | | | | | | | | | **12.7 (10.7-15.1)** | | | | **13.0 (10.8 - 15.7)** | **12.4 (12.0-12.8)** | **11.9 (11.6 - 12.3)** |
| b. Overweight[3] | | | | | | | | | | | | **11.9 (9.9-14.3)** | | | | **13.7 (11.4 - 16.5)\*** | **9.2 (8.9-9.5)** | **9.4 (9.1 - 9.8)** |
| a) Thinks overweight | | | | | | | | | | | | **28.7 (25.8-31.7)** | | | | **27.3 (24.3 - 30.6)\*** | **25.2 (24.7-25.6)†** | **23.1 (22.6 - 23.5)** |
| b) Used cigarettes in the past 12 months to lose /control weight | | | | | | | | | | | | **7.6 (6.0-9.5)** | | | | **6.6 (5.0 -8.6)** | **6.6 (6.3-6.8)†** | **5.5 (5.3 - 5.7)** |
| c) used exercise in past 12 months to lose / control weight | | | | | | | | | | | | **49.1 (45.8-52.3)** | | | | **44.5 (41.0 - 48.0)** | **47.9 (47.4-48.4)** | **47.2 (46.7 - 47.8)** |
| d) use healthy diet to lose / control weight | | | | | | | | | | | | **45.8 (42.5-49.0)** | | | | **40.7 (37.2 - 44.2)** | **43.0 (42.5-43.5)†** | **41.9 (41.4-42.4)** |
| **2. Meet guidelines for weekly PA[4]** | | | | | | | | | | | | **67.4 (64.1-70.5)** | | | | **64.4 (60.9 - 67.7)** | **68.7 (68.2-69.2)** | **64.7 (64.2 - 65.2)** |
| a. insufficient weekly PA | | | | | | | | | | | | **19.3 (16.7-22.1)** | | | | **24.5 (21.6 - 27.7)** | **20.8 (20.4-21.2)†** | **25.9 (25.4 - 26.4)** |
| b. No weekly PA | | | | | | | | | | | | **13.3 (11.2-15.8)** | | | | **11.1 (9.0 -13.5)** | **10.5 (10.1-10.8)†** | **9.4 (9.1 - 9.7)** |
| **3. Five or more servings of fruits and vegetables per day** | | | | | | | | | | | | **12.0 (10.1-14.3)** | | | | **13.5 (11.2 - 16.1)\*** | **16.1 (15.7 – 16.4)†** | **17.3 (16.9 - 17.7)** |
| **4. Use of tobacco products in the past 30 days** | | | | | | | | | | | | **37.8 (34.7-41.1)** | | | | **40.6 (37.2 - 44.2)\*** | **34.0 (33.5-34.5)†** | **31.3 (30.8 - 31.8)** |
| a. frequent use of tobacco products (20+ days) in the past 30 days | | | | | | | | | | | | **20.8 (18.3-23.6)** | | | | **20.6 (17.9 - 23.7)\*** | **14.8 (14.4-15.1)†** | **13.0 (12.7 - 13.4)** |
| **5. Cigarette use in the past 30 days** | | | | | | | | | | | | **29.2 (26.3-32.3)** | | | | **28.3 (25.2 - 31.7)\*** | **25.6 (25.1-26.0)†** | **21.7 (21.3 - 22.1)** |
| a. Frequent cigarette use (20+ days) in the past 30 days | | | | | | | | | | | | **13.6 (11.5-16.1)** | | | | **12.8 (10.6 - 15.4)\*** | **11.5 (11.2-11.9)†** | **9.3 (9.0 - 9.6)** |
| b. 10 + cigarettes per day in the past 30 days[5] | | | | | | | | | | | | **27.9 (22.5-34.0)** | | | | **25.5 (20.0 - 31.9)** | **25.6 (24.6-26.5)†** | **23.1 (22.1 - 24.1)** |
| c. Had a cigarette before age 13 | | | | | | | | | | | | **16.9 (14.5-19.5)** | | | | **16.3 (13.8 - 19.1)\*** | **13.9 (13.6-14.3)†** | **10.3 (10.0 - 10.6)** |
| **6. Used smokeless tobacco in past 30 days** | | | | | | | | | | | | **16.0 (13.7-18.6)†** | | | | **21.4 (18.6 - 24.5)\*** | **10.4 (10.1-10.7)†** | **12.1 (11.8 - 12.5)** |
| **7. Smoked cigars, cigarillos or little cigars in past 30 days** | | | | | | | | | | | | **15.7 (13.4-18.2)** | | | | **13.6 (11.3 - 16.2)\*** | **17.9 (17.5-18.3)** | **17.6 (17.2 - 18.0)** |
| **8. Used smokeless tobacco or had a cigar before age 13** | | | | | | | | | | | | **7.2 (5.7-9.1)** | | | | **7.0 (5.4 - 9.1)\*** | **5.0 (4.8-5.2)†** | **4.4 (4.2 - 4.6)** |
| **9. Tobacco Access** | | | | | | | | | | | |  | | | |  |  |  |
| a. bought at gas stations or convenience store | | | | | | | | | | | | 69.1 (64.0-73.9) | | | | 71.1 (65.8 - 75.8)\* | 63.1 (62.3-64.0) | 62.6 (61.6 - 63.5) |
| b. got it from friends | | | | | | | | | | | | 41.8 (36.7-47.2) | | | | 41.5 (36.1 - 47.1) | 45.6 (44.7-46.5)† | 42.6 (41.7 - 43.6%) |
| c. got it by having someone else buy it | | | | | | | | | | | | 16.9 (13.3-21.3) | | | | 13.5 (10.1 - 17.8) | 14.6 (14.0-15.3)† | 13.2 (12.6 - 13.8) |
|  |  |  | |
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Appendix B: Quality of Life Survey Results by Item

| **Are you satisfied with the health care system in the community? (Consider access, cost, availability, quality, options in health care, etc.)** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 2 | .9 | .9 | .9 |
| 2 | 26 | 11.1 | 11.3 | 12.2 |
| 3 | 61 | 26.0 | 26.5 | 38.7 |
| 4 | 94 | 40.0 | 40.9 | 79.6 |
| 5 | 47 | 20.0 | 20.4 | 100.0 |
| Total | 230 | 97.9 | 100.0 |  |
| Missing | System | 5 | 2.1 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Is this community a good place to raise children? (Consider school quality, day care, after school programs, recreation, etc.)** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 7 | 3.0 | 3.1 | 3.1 |
| 2 | 10 | 4.3 | 4.4 | 7.4 |
| 3 | 45 | 19.1 | 19.7 | 27.1 |
| 4 | 90 | 38.3 | 39.3 | 66.4 |
| 5 | 77 | 32.8 | 33.6 | 100.0 |
| Total | 229 | 97.4 | 100.0 |  |
| Missing | System | 6 | 2.6 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Is this community a good place to grow old? (Consider elder-friendly housing, transportation to medical services, churches, shopping; elder day care, social support for the elderly living alone, meals on wheels, etc.)** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 4 | 1.7 | 1.7 | 1.7 |
| 2 | 20 | 8.5 | 8.7 | 10.4 |
| 3 | 58 | 24.7 | 25.2 | 35.7 |
| 4 | 96 | 40.9 | 41.7 | 77.4 |
| 5 | 52 | 22.1 | 22.6 | 100.0 |
| Total | 230 | 97.9 | 100.0 |  |
| Missing | System | 5 | 2.1 |  |  |
| Total | | 235 | 100.0 |  |  |
| **Is there economic opportunity in the community? (Consider locally owned and operated businesses, jobs with career growth, job training/higher education opportunities, affordable housing, reasonable commute, etc.)** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 18 | 7.7 | 7.8 | 7.8 |
| 2 | 55 | 23.4 | 23.8 | 31.6 |
| 3 | 81 | 34.5 | 35.1 | 66.7 |
| 4 | 63 | 26.8 | 27.3 | 93.9 |
| 5 | 14 | 6.0 | 6.1 | 100.0 |
| Total | 231 | 98.3 | 100.0 |  |
| Missing | System | 4 | 1.7 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Is the community a safe place to live? (Consider residents’ perceptions of safety in the home, the workplace, schools, playgrounds, parks, the mall. Do neighbors know and trust one another? Do they look out for one another?)** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 5 | 2.1 | 2.2 | 2.2 |
| 2 | 12 | 5.1 | 5.2 | 7.4 |
| 3 | 40 | 17.0 | 17.4 | 24.8 |
| 4 | 107 | 45.5 | 46.5 | 71.3 |
| 5 | 66 | 28.1 | 28.7 | 100.0 |
| Total | 230 | 97.9 | 100.0 |  |
| Missing | System | 5 | 2.1 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Are there networks of support for individuals and families (neighbors, support groups, faith community outreach, agencies, organizations) during times of stress and need?** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent | |
| Valid | 1 | 1 | .4 | .4 | .4 | |
| 2 | 12 | 5.1 | 5.3 | 5.8 | |
| 3 | 70 | 29.8 | 31.0 | 36.7 | |
| 4 | 97 | 41.3 | 42.9 | 79.6 | |
| 5 | 46 | 19.6 | 20.4 | 100.0 | |
| Total | 226 | 96.2 | 100.0 |  | |
| Missing | System | 9 | 3.8 |  |  | |
| Total | | 235 | 100.0 |  |  | |
| **Do all individuals and groups have the opportunity to contribute to and participate in the community’s quality of life?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 2 | 23 | 9.8 | 10.1 | 10.1 |
| 3 | 73 | 31.1 | 32.2 | 42.3 |
| 4 | 94 | 40.0 | 41.4 | 83.7 |
| 5 | 37 | 15.7 | 16.3 | 100.0 |
| Total | 227 | 96.6 | 100.0 |  |
| Missing | System | 8 | 3.4 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Do all residents perceive that they — individually and collectively — can make the community a better place to live?** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 2 | .9 | .9 | .9 |
| 2 | 35 | 14.9 | 15.2 | 16.1 |
| 3 | 90 | 38.3 | 39.1 | 55.2 |
| 4 | 94 | 40.0 | 40.9 | 96.1 |
| 5 | 9 | 3.8 | 3.9 | 100.0 |
| Total | 230 | 97.9 | 100.0 |  |
| Missing | System | 5 | 2.1 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Are community assets broad-based and multi-sectoral?** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 3 | 1.3 | 1.3 | 1.3 |
| 2 | 34 | 14.5 | 15.2 | 16.5 |
| 3 | 82 | 34.9 | 36.6 | 53.1 |
| 4 | 97 | 41.3 | 43.3 | 96.4 |
| 5 | 8 | 3.4 | 3.6 | 100.0 |
| Total | 224 | 95.3 | 100.0 |  |
| Missing | System | 11 | 4.7 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Are levels of mutual trust and respect increasing among community partners as they participate in collaborative activities to achieve shared community goals?** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 1 | .4 | .4 | .4 |
| 2 | 27 | 11.5 | 11.7 | 12.1 |
| 3 | 81 | 34.5 | 35.1 | 47.2 |
| 4 | 104 | 44.3 | 45.0 | 92.2 |
| 5 | 18 | 7.7 | 7.8 | 100.0 |
| Total | 231 | 98.3 | 100.0 |  |
| Missing | System | 4 | 1.7 |  |  |
| Total | | 235 | 100.0 |  |  |

| **Is there an active sense of civic responsibility and engagement, and of civic pride in shared accomplishments?** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 7 | 3.0 | 3.0 | 3.0 |
| 2 | 21 | 8.9 | 9.1 | 12.2 |
| 3 | 101 | 43.0 | 43.9 | 56.1 |
| 4 | 84 | 35.7 | 36.5 | 92.6 |
| 5 | 17 | 7.2 | 7.4 | 100.0 |
| Total | 230 | 97.9 | 100.0 |  |
| Missing | System | 5 | 2.1 |  |  |
| Total | | 235 | 100.0 |  |  |

APPENDIX C: BRFSS METHODOLOGY

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. The BRFSS questionnaire is designed by a working group of state coordinators and CDC staff and is administered annually through a random-digit-dialed telephone survey of the U.S. adult (18 and over) non-institutionalized population. The survey includes core questions that are asked by all participating states in a given year, optional modules that a state may use in their survey and state-specific questions. Furthermore core modules consist of fixed-core questions and a rotating core.

While fixed core BRFSS items include questions about *cigarette smoking*, *leisure time exercise i*n the past 30 days as well as height and weight information that allows calculation of indices of obesity such as *body mass index (BMI),* some rotating core modules are only used biannually and include specific questions about weekly levels of *moderate and vigorous physical activity,* as well as *daily consumption of fruits and vegetables*.

Optional BRFSS modules relevant to the present project include questions regarding smokeless tobacco use and smoking policy. Since 2001 the smokeless tobacco module has been expanded to include other tobacco products such as cigar and pipe use. Although in the publicly accessible CDC databases for the past 12 years this module was offered several times including the 2008 BRFSS questionnaire, the state of Minnesota did not use it in any of the years of its availability. However, the 2004 BRFSS administration in Minnesota did include another optional module on secondhand smoke policy.

**Methodology used on BRFSS in this Report**

This report provides the most recent available state and county data on important behavioral risks including physical activity levels, consumption of fruits and vegetables, excessive alcohol consumption, tobacco use, exposure to second hand smoke, preventive cancer screenings, overweight and obesity levels. The report also provides prevalence rates for debilitating chronic conditions and life threatening events such as heart disease, diabetes and stroke.

All state and county data have been extracted from the Behavioral Risk Factor Surveillance Survey (BRFSS) database. Specifically, indices of tobacco use, excessive alcohol consumption, overweight and obesity, chronic conditions and cancer screenings were obtained from the 2010 BRFSS database. Optional modules on physical activity and fruit and vegetable consumption were used in the Minnesota survey in 2009. Thus these statistics were derived from the 2009 BRFSS database. Finally data on secondhand smoke policy refers to the 2004 BRFSS administration when this optional module was last used in Minnesota.

Furthermore out of 3 counties of interest (Kittson, Marshall, Pennington, Roseau and Red Lake) BRFSS data was only available for the first three. No data was available for either Red Lake or Roseau Counties. While the number of individuals surveyed in the remaining counties in the most representative year of 2010 were still fairly low (65 participants in Kittson County, 27 participants in Marshall County and 58 individuals in Pennington County), prevalence estimates for specific risks and conditions in these counties were further adjusted using combined weights derived by the Centers for Disease Control (CDC) during national BRFSS administration.

Specifically the final weights used in statistical estimation on the state and county levels take into consideration the Stratum weight (number of records in a stratum divided by the number of records selected), Raw weighting factor (number of adults in the household divided by the imputed number of phones), and the Post-stratification weight (Population estimate for race/gender/age categories divided by the weighted sample frequency by race/gender/age). Adjustment by the final weight is thus thought to render more accurate estimates of population statistics which are presented in this report with 95% confidence (a range of values that is 95% likely to contain the true population value).