CENTRAL MINNESOTA HEALTH PROFILE

by

Beth Chapin

A Research Paper

Submitted in Partial Fulfillment of the
Requirement for the
Master of Science Degree
With a Major in

Applied Psychology

Approved: (4) Semester Credits

Dr. Thomas E. Franklin
Investigation Advisor
The Graduate College
University of Wisconsin-Stout
December, 2002

The Graduate College
University of Wisconsin-Stout
Menomonie, WI 54751

ABASTRACT

	Chapin	Elizabeth	A
(writer)	(Last Name)	(First)	(Initial)

Applied Psychology	Dr. Tom Franklin	May, 2003	76
(Graduate Major)	(Research Advisor)	(Month/Year)	(No. of Pages

American Psychological Association
(Name of Style Manual Used in this Study)

The purpose of creating the Central Minnesota Health Profile was to create an updated, easy to read, health profile to be used by CentraCare Health Foundation and to be distributed to St. Cloud Hospital and other community agencies and members. The Health Profile would be then used to assess the health and wellness trends of the CentraCare service area (13 counties) and to identify the health and wellness needs of those communities. The main and more specific goal for the completed Central Minnesota Health Profile was to assist in identifying the 2003 project topic for the CentraCare Health Foundation.

Data for the research was extracted from the Minnesota Department of Health, U.S. Census Bureau, Center for Disease Control, Minnesota Department of Human Services and Minnesota Planning. The researcher collected the existing data between June and August, 2003. The data was used to analyze trends over time of determined health issues in 13 counties, along with a 13-county

combination. The counties were ranked in order of healthiest to least healthiest and compared against data from the State of Minnesota for the same health topics. The results then indicated which county showed most improvement over time and which counties stood above or below the State of Minnesota benchmark.

The study indicated that the risk for heart disease in the 13 counties increased 29.7 percent since 1995. The estimated percent of the population that have been diagnosed with hypertension in the 13 counties increased 3 percent since 1995. The estimated percent of the population overweight in the 13 counties increased 26.8 percent since 1995. The percentage of the population with an income below the federal poverty level in the 13 counties decreased 4.2 percent since 1995. The estimated percent of the population reporting limitation in activities due to impairments or health problems in the 13 counties decreased 3.7 percent since 1995. Fatalities due to heart disease in the 13 counties decreased 3.8 percent since 1995. Years of life lost before age 65, per 100,000 people in the 13 counties decreased 549.4 years since 1995.

Recommendations were that the included counties, health agencies, St. Cloud Hospital and the CentraCare Health Foundation devise action plans for decreasing the risk of the health component for the components that have significantly increased since 1995. Each component should be carefully reviewed and shared with each county, defining reasons for increases. Resources should be put into effect to combat increases and associated health risks in the future.

Table of Contents

List of Tables

List of Graphs

Chapter I

Introduction

"Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." (World Health Organization)

The Health Foundation itself averages more than $100,000 per year in grants to improve health throughout its service area in Central Minnesota. The Foundation's grants support projects that promote health education, conduct research and provide services and programs that improve health and health care for residents of a 13-county region.

The purpose of the Central Minnesota Health Profile was to research and develop a way of using existing data to determine constituents of health. From these determinants, then identify health trends and overall healthiness in a specific13-county central Minnesota region. The completed data collection and analysis will be then used by CentraCare Health Foundation assist in identifying future projects and funding opportunities for the CentraCare Health Foundation.

The researcher was hired through the CentraCare Health Foundation to investigate health trends and issues in the 13-county services area and to research what determines health in these communities. The researcher extracted existing data taken from the Minnesota Department of Health and other state agencies beginning in June, 2002 through August, 2002. The created Central Minnesota Health Profile's specific objectives and design were decided upon by the researcher.

Dependent on literature reviews, it was then decided to rank each county, along with the 13-county combination, on specified health issues in the counties of Benton, Crow Wing, Douglas, Kandiyohi, Meeker Mille Lacs, Morrison, Pope Sherburne, Stearns, Todd, Wadena, and Wright. These health issues, defined by the UnitedHealth Foundation, were then compared to the State of

Minnesota for an overall examination of health, and health related issues, in the CentraCare service area. The State of Minnesota was used as the comparison benchmark.

In order to understand what constitutes health in a community, the researcher resorted to the UnitedHealth Foundation and other publications, some listed in the literature review, for the answer. The UnitedHealth Foundation describes healthiness for individuals, families, and communities as a composite of at least three essential elements: the personal behaviors and decisions that individuals and families make that affect their health status, the decisions made by community policy leaders regarding the availability of social resources devoted to the promotion and protection of a community's health and the community environment that shapes the possibilities for healthiness.

By creating the Central Minnesota Health Profile we hoped to improve the community's health by taking into consideration the mix of behaviors, access to care, environment, and other community issues and compiling it into a comprehensive profile for the betterment of our community's health and well being.

Chapter II

Literature Review

There is no single method of conducting a comprehensive community health assessment. However, most community health assessments share common steps such as definition and identification of the community, identification of key players, review and/or collection of data, setting of priorities, development of a community health plan, implementation of a community health plan, and evaluation of the process (Trocchi, 1994).

The intent of a community assessment is to determine the health status of the population in the community. While the heart of a community assessment is the collection and analysis of health status data on births, deaths, disease, injury, and disability, a population-based community assessment also requires the collection and analysis of data on the determinants of health. The determinants of health include behavioral, social, psychological, economic, cultural, and social structural factors that contribute to the occurrence of health problems in groups and populations (Kaplan, 1999).

To capture these elements, the UnitedHealth Foundation employs a unique methodology developed and periodically reviewed by a panel of leading public health scholars that weights the contributions of various factors, such as smoking, motor vehicle deaths, high school graduation rates, children in poverty, access to care, disabilities and incidence of preventable diseases to a community's health. These factors are then termed determinants of health and were used in the following report.

Similar reports to the UnitedHealth Foundation, 2002 include the Community Health Assessment of New York State, 2002. Characteristics of this related report include that it used the most current data available, enhanced narrative with charts, tables, graphs, maps, and other

presentation aids that facilitated interpretation. It also highlighted trends, compared local and regional indicators with state and national standards/benchmarks, as did the UnitedHealth Foundation, 2002 along with the following report.

Chapter III

Methodology

Mission Statement:
CentraCare Health Foundation engages the philanthropic community in partnerships to improve health and healthcare. We enable life victories everyday.

Subjects

The 13 counties, which make up the CentraCare service area of Central Minnesota included Benton, Crow Wing, Douglas, Kandiyohi, Meeker, Mille Lacs, Morrison, Pope Sherburne, Stearns, Todd, Wadena and Wright. The state of Minnesota was also used as a comparison.

Instruments

The Central Minnesota County Health Profile began in June of 2002. The researcher, hired through the CentraCare Health Foundation, gathered data from the Minnesota Planning Department, Minnesota Department of Health and other various stated data sources through Internet searches. The data gathering continued through August, 2002. The significant results were found and reported through data analysis software, SPSS 10.0.

The Central Minnesota Health Profile was adapted from the UnitedHealth Foundation State Health Rankings, 2001 edition to suit the goals of the CentraCare Health Foundation. Literature reviews concluded that the best community-based health profile included charts, graphs, benchmarks, standards and determinants of health, which include behaviors, economic, cultural, and social factors. The researcher found that the UnitedHealth Foundation State Health Rankings provided this. It provided a useful database for tracking and evaluating progress and was used to create the 13-county health profile due to the definition of determinants of health that included not only data on births, death, disease and injury, but also the above factors.

Though the design for the Central Minnesota Health Profile was based on UnitedHealth Foundation State Health Rankings, 2001, no data were extracted from the database. A spreadsheet was developed to calculate data and develop tables used in the report. The spreadsheet was then finalized for future updates to the Health Profile.

Procedure

The data were raw data as obtained from the stated sources between June 10 and mid August, 2002. When percentages were not available in the raw data form, the researcher calculated the data to reflect the percentage of each county based on county population estimates. The 13-county averages were obtained by taking an average of the percentages of each county. The state averages were obtained from the stated sources. All other data combined into tables are variations of the original data from the 16 components' tables. Significant differences in the 13-county data were determined through t-tests for independent measures. 'Other' county and state data are raw data taken from stated sources and displayed in graphs. This data is not calculated into the ranking and overall health score.

The components were clustered into five categories with sub-components as follows:

Lifestyle
- Prevalence of Smoking
- Motor Vehicle Fatalities
- Crime
- Risk for Heart Disease
- High School Graduation
- Teen Pregnancy

Access
- Unemployment
- Prenatal Care
- Lack of Health Insurance
- Perceived Health Status

Occupational Safety
- Limited Activity Days

Disease
- Heart Disease
- Cancer
- All Other Diseases

Mortality
- Total Mortality
- Infant Mortality
- Premature Death

All component data were extracted from 1995 and 1999 data excluding Motor Vehicle Fatalities, High School Education, Teen Pregnancy, All Other Diseases, and Infant Mortality due to data limitations.

The score for each county is stated as a percentage and is based on the following formula:

$$\text{Score} = \frac{\text{Absolute Value}}{\text{Absolute Mean}} - 1.0 \times 100$$

The calculation results in a score of 0.0 for a county with the same value as the state of Minnesota average. Counties that had a higher value than the state average had a positive score while those with lower values have a negative score. Negative scores portrayed a positive effect on health improvement. The 13-county average score was stated but not included in the 13-county ranking.

The overall score was calculated by adding the scores of each component multiplied by its weight (appendix A). The ranking is the ordering of each county according to score. Ties in score were assigned equal ranking. The scores were adjusted for the percentage of each county or otherwise noted and were a total of all races.

A panel of experts in 1990 and 1991 developed the weighting system (appendix A) for the UnitedHealth Foundation. The weights of the components total 100 percent. Each assigned weight defines that component's impact on determining the overall health score. The effect on the overall score is stated in appendix B.

The limitations of the profile include that the lack of health insurance component reflected only 2001 data. All data is stated as a percentage of the county or state population except for the premature death component, which is stated in years. Other changes from the original model of the UnitedHealth State Health Rankings, 2001 Edition, needed to be made due to data limitations. These changes included:

- Risk for Heart Disease excludes the sedentary factor.
- Support for Public Health Care has been changed to reflect Estimated Percent Perceiving their Health Status as Poor or Fair and has a negative effect on the overall score.
- Occupational Fatalities has been substituted for teen pregnancy for lack of a better component.
- Infectious Disease has been changed to reflect All Other Diseases.
- Premature Death is measured based on death prior to age 65, not 75.

When data is referred to as "current", it is referred to being the data that is the most closely related to the current date.

The primary considerations in the selection of the individual components for the Central Minnesota Health Profile were that the measures selected were believed to be the best available indicators of the various components of healthiness at this time. The overall rankings also represent a broad range of issues that affect a population's health, while the individual components all use a common health measurement criteria. Lastly, the data were available at a county level and were current and updated periodically. Reasoning for basing the Central Minnesota Health Profile on the UnitedHealth Foundation format was to base the report on a reputable and previously reviewed publication of determinants of overall health.

Notes: The data is concurrent with data stated in the Human Service Assessment, 2002 distributed by Minnesota Workforce Center, Venture Allies, and United Way of Central Minnesota.

Chapter IV

Results

Table 1

Percent of Total Population by Age and County, 2000

Age	<18	18-24	25-44	45-64	65+	Median Age
Benton	27.1	12.2	31	18.7	11	31.9
Crow Wing	24.8	8.1	25.6	24.4	17.1	39.4
Douglas	24	9.2	25	23.8	17.9	39.7
Kandiyohi	26.6	9.5	26.5	22.5	14.9	36.9
Meeker	27	7.4	26.4	23	16.3	38.3
Mille Lacs	27	7.5	26.9	22.6	16.1	38
Morrison	28	8	26.7	21.7	15.6	36.9
Pope	24.8	6.7	23.1	23.8	21.5	42.1
Sherburne	30.9	9.6	33.9	18.4	7.1	31.4
Stearns	25.7	16.1	28	19.1	11	31.6
Todd	27.4	8.1	24.7	23.8	16.1	38.5
Wadena	25.8	8.1	23.6	22.6	19.9	39.9
Wright	31.1	7.6	32.6	19.9	8.8	33.1

Source: U.S. Census, 2000.

Table 2

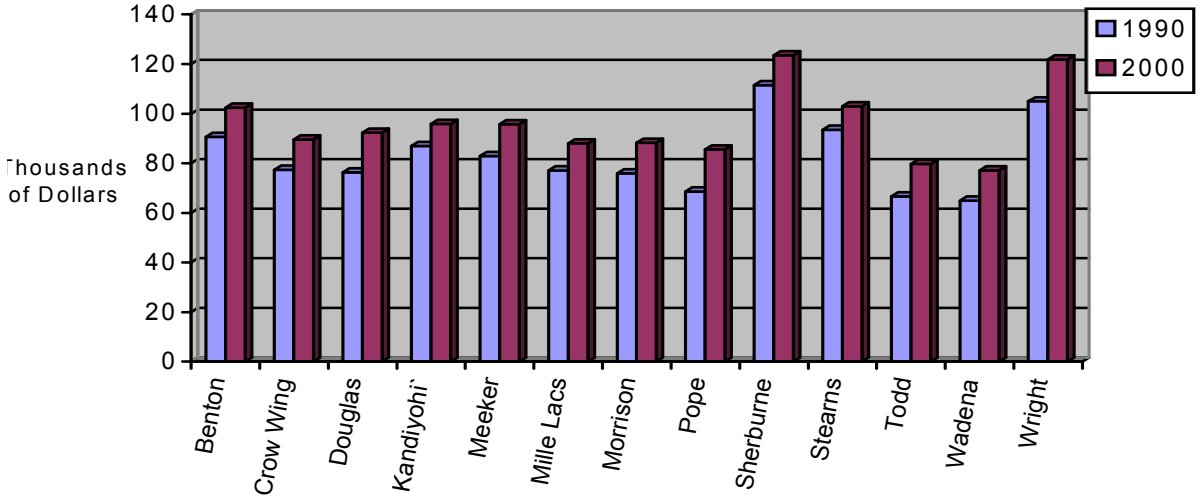
Total Population by Race, 2000

	Total Population	*White Hispanic*	*White-non Hispanic*	*Black*	*Am. Indian & Alaskan Native*	*Asian Pacific Islander*	*Hispanic*
Benton	34832	275	34026	26	237	62	74
Crow Wing	52608	298	51430	191	404	285	342
Douglas	31274	139	30835	26	96	178	148
Kandiyohi	40826	2235	38037	153	198	203	2334
Meeker	21763	398	21127	50	33	155	406
Mille Lacs	21350	148	20310	52	769	71	163
Morrison	30522	168	30130	57	91	76	170
Pope	10886	14	10816	9	25	22	14
Sherburne	63356	574	61579	378	301	524	629
Stearns	130081	861	126696	686	386	1452	927
Todd	24240	102	23973	15	64	86	107
Wadena	13238	80	13005	12	84	57	86
Wright	87864	604	86173	160	344	583	620

Source: Population Estimates Program, Population Division, U.S. Census Bureau, 2000.

Graph 1

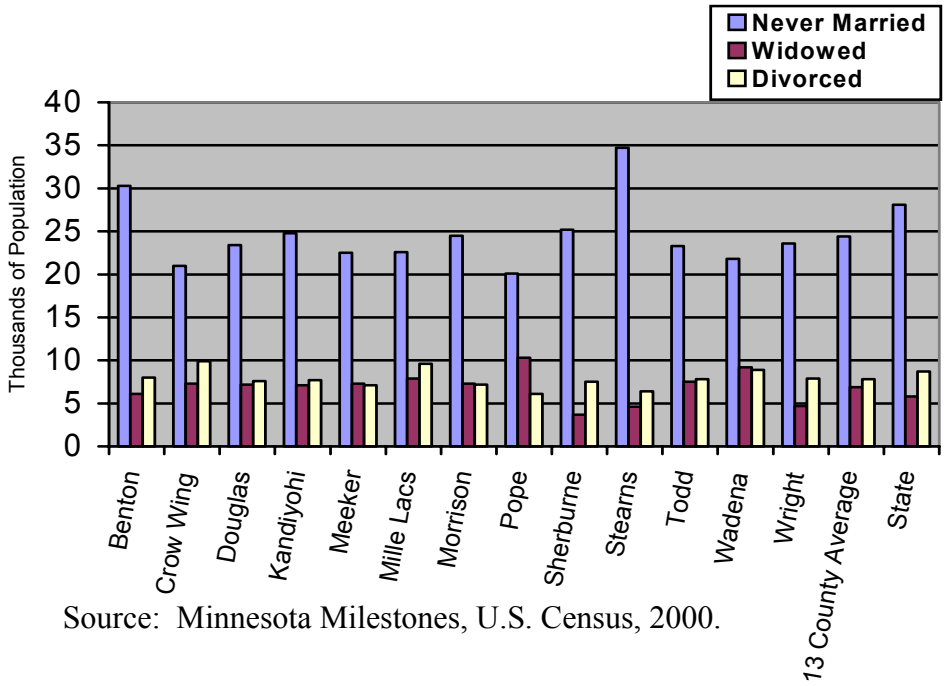
Median Family Income as a Percent of the U.S. Median



Source: Minnesota Milestones, U.S. Census, 1990, 2000.

Graph 2

Marital Status



Source: Minnesota Milestones, U.S. Census, 2000.

County Health Profile Ranking Instructions:

Each component consists of one table. The table displays the alphabetized counties, past data (rank, percent, score), current data (rank, percent, score), and change in score. The title of each table states the component being measured. Starting from the left most column, are the alphabetized counties. The second column displays the county rank. The rank is determined by the score. The score is the calculated county percentage above or below the state.

The Percent column represents the raw percentage of each county for the specific component. The bottom of Percent column comprises a 13-county average, which is the average of the raw percents of each county. This average is not calculated into the 13-county ranking.

The Score column represents a percentage above or below the state. For example, a score of –9.8 states that the county average is 9.8% below the state average for the particular component. A score of +9.8 states that the county average is 9.8% above the state average for the particular component. The last column states the change in score between the two sets of data. The change is score represent which counties have increased or decreased in score between the years. When looking at the change in score, a negative change indicates that the county has changed for the better (decreased) except for the components “high school graduation” and “prenatal care” due to the positive effect on score.

Considerations

Much of the data you are about to read shows considerable differences between state and county data and considerable increases and decreases from past data. The considerations that need to be taken into account while reviewing the profile include that the raw data only shows the numbers without contemplation of external factors that may contribute to success or failure. Some examples are listed below.

- Suicide is only a top three cause of death for the 25-44 age group, not for 45-64 or 65-74 age groups.
- Stroke is only a top three cause of death for the 65-74 year age group.
- The highest percentage of the population with income below the federal poverty level is Wadena County. This may be because Wadena County has the second highest median age for the 13 counties, because it has the second lowest population of the 13 counties, or because it is the second highest widowed population of the 13 counties.
- The top three counties for overall health are also the top three youngest counties per population estimate.
- The bottom three counties for overall health are also the three oldest counties by age.

Current Smokers

Cigarette smoking is the single most preventable cause of premature death in the United States. Each year, more than 400,000 Americans die from cigarette smoking (National Center for Chronic Disease Prevention and Health Promotion, 2002).

Table 3

Current Smokers							
	1995			*1999*			
County	Rank	Percent	Score	Rank	Percent	Score	Change In Score
Benton	6	20.5%	0.0	11	20.2%	3.1	3.1
Crow Wing	3	19.4%	-5.4	4	18.6%	-5.1	0.3
Douglas	3	19.4%	-5.4	4	18.6%	-5.1	0.3
Kandiyohi	5	19.9%	-2.9	9	19.2%	-2.0	0.9
Meeker	3	19.4%	-5.4	4	18.6%	-5.1	0.3
Mille Lacs	3	19.4%	-5.4	3	18.5%	-5.6	-0.2
Morrison	4	19.6%	-4.4	8	18.8%	-4.1	0.3
Pope	1	18.5%	-9.8	1	17.7%	-9.7	0.1
Sherburne	8	21.6%	5.4	13	20.9%	6.6	1.3
Stearns	7	20.9%	2.0	12	20.5%	4.6	2.6
Todd	3	19.4%	-5.4	7	18.7%	-4.6	0.8
Wadena	2	19.1%	-6.8	2	18.2%	-7.1	-0.3
Wright	7	20.9%	2.0	10	20.1%	2.6	0.6
State		20.5%			19.6%		
13-County Average		20.4%			19.1%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Center for Health Statistics
Includes respondents who say they are a current regular smoker (that is, they ever smoked 100 cigarettes and smoke now).

In 1995, the proportion of the population that smoked varied from a low of 18.5 percent in Pope County to over 28 percent in Benton County. As a whole, the 13-county area was closely tied to the same average as the state. Nine of the 13-counties were below the state average while Stearns, Wright, Sherburne, and Benton County exceeded the state average.

In 1999, the proportion of the population that currently smokes varies from 17.7 percent in Pope County to 20.9 percent in Sherburne County. The largest increase is from Benton County with an increase of 0 to 3.1 percent above the state average. The largest decrease is from Wadena County with a decrease in percentage of 6.8 percent below the state average to 7.1 percent below the state average. Overall, nine out of the thirteen counties rank below the state average.

Percent of Motor Vehicle Fatalities

Deaths and injuries resulting from motor vehicle crashes are the leading cause of death for persons from 4 through 33 years old. In the year 2000, 41,821 people were killed in the estimated 6,394,000 police-reported motor vehicle tragic crashes, while, 3,189,000 people were injured (U.S. Department of Transportation, 2000).

Table 4

Percent of Motor Vehicle Fatalities

	1997			2000			
County		Percent	Score	Rank	Percent	Score	Change in Score
Benton	1	0.7	-56.3	12	4.4	144.4	200.7
Crow Wing	5	1.7	6.3	6	2.2	22.2	16.0
Douglas	3	1.3	-18.8	3	1.5	-16.7	2.1
Kandiyohi	2	1.1	-31.3	2	1.3	-27.8	3.5
Meeker	7	2.2	37.5	11	3.9	116.7	79.2
Mille Lacs	3	1.3	-18.8	10	2.8	55.6	74.3
Morrison	6	1.9	18.8	7	2.3	27.8	9.0
Pope	3	1.3	-18.8	1	0	-100.0	-81.3
Sherburne	8	3.3	106.3	5	1.9	5.6	-100.7
Stearns	5	1.7	6.3	8	2.4	33.3	27.1
Todd	5	1.7	6.3	4	1.8	0.0	-6.3
Wadena	4	1.4	-12.5	9	2.6	44.4	56.9
Wright	9	5.4	237.5	5	1.9	5.6	-231.9
State		1.6			1.8		
13-County Average		1.9			2.2		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

In 1997 the percent of motor vehicle fatalities ranged from 0.7 percent to 5.4 percent. As a whole, six of the thirteen counties are below the state average for fatalities due to motor vehicle crash fatalities in 1997. In 2000, the percent of motor vehicle crashes varied from 0 percent in Pope County to 4.4 percent in Benton County.

The county with the largest increase in score is Benton County with an increase from 56.3 below the state average to 144.4 percent above the state average. Wright County decreased from 237.5 percent above the state average to 5.6 percent below the state average. As a whole, there are four counties (Pope, Kandiyohi, Douglas, Todd) that are at or below the state average.

Total Crimes Reported, Violent and Serious

Homicide is a good tracker of violent crime due to the reporting of the crime. Homicide itself was the cause of death for 19,491 persons in the United States in 1997. Homicide is the second leading cause of death for young persons aged 15 to 24 years and the leading cause of death for African Americans in this age group (Fox & Zawits, 1994).

Table 5

Percent of Total Crimes Reported, Violent and Serious

	1995			1999			
County	Rank	% of Total Crimes	Score	Rank	% of Total Crimes	Score	Change in Score
Benton	1	2.3%	-48.8	2	1.5%	-57.8	-9.0
Crow Wing	2	6.3%	40.1	12	4.0%	11.1	-29.0
Douglas	3	3.0%	-32.6	11	2.9%	-20.4	12.2
Kandiyohi	4	4.6%	1.5	10	2.8%	-22.7	-24.1
Meeker	5	3.2%	-28.3	9	2.7%	-25.5	2.7
Mille Lacs	6	4.1%	-8.5	13	4.2%	16.1	24.6
Morrison	7	2.4%	-46.8	8	2.5%	-30.5	16.4
Pope	8	1.9%	-58.0	4	1.7%	-52.9	5.1
Sherburne	9	2.3%	-49.0	3	1.7%	-53.9	-4.9
Stearns	10	3.9%	-12.9	1	0.9%	-74.9	-62.0
Todd	11	2.2%	-51.4	5	2.0%	-44.3	7.1
Wadena	12	2.4%	-47.7	6	2.3%	-37.3	10.3
Wright	13	2.6%	-42.0	7	2.4%	-33.9	8.1
State		4.5%			3.6%		
13-County Average		3.2%			2.4%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

The percent of the reported crimes, both violent and serious, varies from 1.9 percent in Pope County to 6.3 percent in Crow Wing County. Overall, the 13 counties as a whole are 1.3 percent lower than the state average for reported crime in 1995.

In 1999 the state average is 3.6 percent of the population, a 0.9 percent decrease since 1995. The 13-county average scored 1.3 percent below the state average. The county with the largest increase in score from 1995 to 1999 is Mille Lacs County showing an increase of 8.5 percent below the state average to 16.1 percent above the state average. Stearns County decreased from 12.9

percent below the state average to 74.9 percent below the state average. Overall, 11 of the 13 counties are currently below the state average for Percent of Total Crimes Reported, Violent and Serious.

Risk For Heart Disease (hypertension & overweight)

Heart disease and stroke remain the leading causes of death and a major cause of disability in the United States. Individual level risk factors which put people at increased risk for cardiovascular diseases include: high blood pressure, high blood cholesterol, tobacco use, physical inactivity, poor nutrition, overweight, and diabetes (National Center for Chronic Disease Prevention and Health Promotion, 2002).

A recent result of the National Health and Nutrition Examination Survey indicated that an estimated 61 percent of U.S. adults are either overweight or obese, defined as having a body mass index of 25 or more (National Center for Chronic Disease Prevention and Health Promotion, 2002). About 50 million people in the United States have high blood pressure and it is the major medical diagnosis that brings the adult patient to the physician, yet only 25% of patients have their blood pressure controlled (World Hypertension League, 2002).

Table 6

Risk For Heart Disease (hypertension, overweight)

County	1995 Rank	1995 Percent	1995 Score	1999 Rank	1999 Percent	1999 Score	Change in Score
Benton	3	46.0%	-3.0	3	74.1%	-3.9	-0.9
Crow Wing	8	50.9%	7.4	7	80.7%	4.7	-2.7
Douglas	7	50.7%	7.0	9	81.2%	5.3	-1.6
Kandiyohi	5	48.8%	3.0	5	78.3%	1.6	-1.4
Meeker	9	51.1%	7.8	9	81.2%	5.3	-2.5
Mille Lacs	8	50.9%	7.4	8	81.1%	5.2	-2.2
Morrison	6	50.3%	6.1	6	80.3%	4.2	-2.0
Pope	12	53.5%	12.9	12	84.5%	9.6	-3.3
Sherburne	1	44.1%	-7.0	1	72.7%	-5.7	1.3
Stearns	2	44.2%	-6.8	2	73.1%	-5.2	1.6
Todd	10	51.3%	8.2	10	81.3%	5.4	-2.8
Wadena	11	51.9%	9.5	11	82.8%	7.4	-2.1
Wright	4	46.6%	-1.7	4	75.6%	-1.9	-0.3
State		47.4%			77.1%		
13-County Average		49.3%			79.0%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics
Risk for Heart Disease is an addition of overweight and hypertension statistics.
Overweight is defined as a body mass index (weight in kilograms divided by height in meters) of 27.8 or greater for men and 27.3 or greater for women.
Hypertension includes respondents who report, "they have ever been told by a doctor, nurse or other health professional they have high blood pressure".

In 1995, the percent at risk for heart disease varies from 44.1 percent to 53.5 percent in Pope County. The 13 counties, as a whole, exceed the state average by 1.9 percent.

In 1999, the percent reported hypertension and overweight varies from 72.7 percent of the population in Sherburne County to 84.5 percent in Pope County. The state average has increased 29.7 percent since 1995. The thirteen counties as a whole have significantly increased 29.7 percent since 1995, though four counties, including Sherburne, Stearns, Benton, and Wright, are still below the current state average for the Risk for Heart Disease. The county with the largest increase in

score is Stearns County showing an increase of 6.8 percent below the state average to 5.2 percent above the state average. Todd County decreased from 8.2 percent above the state average to 5.4 percent below the state average. As a whole, only four of the thirteen counties are below the state average for the component Risk for Heart Disease.

High School Graduation Rate

Table 7

High School Graduation Rate

County	1996-1997 1997-1998 Rank	Percent	Score	1997-1998 Rank	Percent	Score	Change In Score
Benton	2	97.1%	24.2	2	96.2%	23.3	-0.8
Crow Wing	13	69.1%	-11.6	13	71.9%	-7.8	3.8
Douglas	7	90.4%	15.6	5	92.2%	18.2	2.6
Kandiyohi	11	85.0%	8.7	10	87.7%	12.4	3.7
Meeker	4	93.5%	19.6	6	91.6%	17.4	-2.1
Mille Lacs	8	90.0%	15.1	8	89.1%	14.2	-0.9
Morrison	9	89.4%	14.3	11	87.6%	12.3	-2.0
Pope	1	99.1%	26.7	1	97.9%	25.5	-1.2
Sherburne	12	81.0%	3.6	12	85.4%	9.5	5.9
Stearns	10	87.6%	12.0	9	87.9%	12.7	0.7
Todd	3	94.9%	21.4	4	94.9%	21.7	0.3
Wadena	5	92.9%	18.8	3	96.0%	23.1	4.3
Wright	6	92.7%	18.5	7	91.4%	17.2	-1.4
State		78.2%			78.0%		
13-County Average		89.4%			90.0%		

Score has a positive variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health

In the period of 1996-1997 and 1997-1998 the rate of high school graduation varies from 99.1 percent in Pope County to 69.1 percent in Crow Wing County. The 13-county average is 89.4 percent, which is 11.2 percent higher than the state average.

In the period of 1997-1998 the High School Graduation Rate varies from 97.9 percent in Pope County to 71.9 percent in Crow Wing County. The state average is 78 percent, down 0.2 percentage points from the past years. The counties as a whole scored 11.2 percent higher than the state average with a 90 percent graduation rate.

The county showing the largest increase in score is Sherburne County, which increased from 3.6 percent above the state average to 9.5 percent above the state average. Meeker County decreased from 19.6 percent above the state average to 17.4 percent below the state average. Currently, 12 out of the 13 counties are above the state average for current High School Graduation Rate.

Teen Pregnancy

Table 8

Teen Pregnancy Rate							
		1993-1995			1997-1999		
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	4	19.0%	-39.1	1	14.0%	-42.9	-3.8
Crow Wing	13	37.5%	20.2	8	22.0%	-10.2	-30.4
Douglas	3	18.4%	-41.0	5	15.2%	-38.0	3.1
Kandiyohi	1	16.9%	-45.8	9	25.9%	5.7	51.5
Meeker	8	22.8%	-26.9	7	20.1%	-18.0	9.0
Mille Lacs	12	30.3%	-2.9	10	26%	6.1	9.0
Morrison	11	26.1%	-16.3	6	19.8%	-19.2	-2.8
Sherburne	10	23.9%	-23.4	3	15.0%	-38.8	-15.4
Stearns	6	19.9%	-36.2	2	14.5%	-40.8	-4.6
Todd	7	21.8%	-30.1	5	15.2%	-38.0	-7.8
Wright	5	19.4%	-37.8	4	15.1%	-38.4	-0.5
State		31.2%			24.5%		
11-County Average		22.8%			18.4%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health
Teen Pregnancy Rate: The number of pregnancies per 1,000 population aged 15-17.
Pope and Wadena County N/A.

The teen pregnancy rate for 1993-1995 varies from 16.9 percent in Kandiyohi County to 37.5 percent in Crow Wing County. The state average for the combined years equals 31.2 percent while the 11-county average equals 22.8 percent, 8.4 percent lower than the state average.

The current data shows pregnancy rates from 14 percent in Benton County to 26 percent in Mille Lacs County. The 11-county average scored 6.1 percent below the state average. The county with the largest change in score is Kandiyohi County showing a decrease of 45.8 percent below the state average to 5.7 percent above the state average. Crow Wing County decreased in percentage from 20.2 to 10.2 percent above the state average. Overall, nine of the eleven counties, where data sources were updated, scored lower than the state average for teen pregnancies

Unemployment Rate

Table 9

Unemployment Rate							
	1995			1999			
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	5	4.4%	18.9	3	3.1%	10.7	-8.2
CrowWing	8	6.2%	67.6	5	4.4%	57.1	-10.4
Douglas	4	4.3%	16.2	4	3.4%	21.4	5.2
Kandiyohi	1	3.5%	-5.4	4	3.4%	21.4	26.8
Meeker	7	6.1%	64.9	6	5.2%	85.7	20.8
Mille Lacs	11	8.0%	116.2	9	6.1%	117.9	1.6
Morrison	10	7.5%	102.7	8	6.0%	114.3	11.6
Pope	3	4.1%	10.8	3	3.1%	10.7	-0.1
Sherburne	2	3.9%	5.4	1	2.6%	-7.1	-12.5
Stearns	3	4.1%	10.8	2	2.9%	3.6	-7.2
Todd	9	6.9%	86.5	6	5.2%	85.7	-0.8
Wadena	6	5.3%	43.2	7	5.4%	92.9	49.6
Wright	2	3.9%	5.4	2	2.9%	3.6	-1.8
State		3.7%			2.8%		
13-County Average		5.2%			4.1%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

The unemployment rate in 1995 varies from 3.5 percent to 8 percent. The state average is 3.7 percent where the 13 counties as a whole equal 5.2 percent, 1.5 percent higher than the state average.

The unemployment rate in 1999 varies from 2.6 percent in Sherburne County to 6.1 percent in Mille Lacs County. The state average is 2.8 percent where the 13 counties as a whole equal 4.1 percent, over 1.3 percent higher than the state average.

The county with the largest change in score is Wadena County with an increase from 43.2 percent above the state average to 92.9 percent above the state average. Sherburne County

decreased in score from 5.4 percent above the state average to 7.1 percent below the state average. Overall, only one county in all thirteen counties is below the state average for unemployment.

Percent of Prenatal Care Received First Trimester

Approximately 6 million American women become pregnant each year, and more than 10,000 give birth each day. Safe motherhood begins before conception with proper nutrition and a healthy lifestyle. It continues with appropriate prenatal care, the prevention of complications when possible, and the early and effective treatment of any complications that do occur (Center for Disease Control, 2002).

Table 10

Percent of Prenatal Care Received First Trimester

County	1995 Rank	1995 Percent	1995 Score	1999 Rank	1999 Percent	1999 Score	Change in Score
Benton	6	86.2%	2.9	6	87.9%	3.9	1.0
Crow Wing	10	82.6%	-1.4	5	88.0%	4.0	5.5
Douglas	4	87.8%	4.8	4	89.5%	5.8	1.0
Kandiyohi	12	79.5%	-5.1	10	79.0%	-6.6	-1.5
Meeker	8	84.5%	0.8	8	83.7%	-1.1	-1.9
Mille Lacs	13	74.4%	-11.2	9	82.3%	-2.7	8.5
Morrison	1	88.75	5.8	3	90.5%	7.0	1.1
Pope	7	85.0%	1.4	7	87.3%	3.2	1.8
Sherburne	2	88.6%	5.7	1	91.1%	7.7	2.0
Stearns	5	86.4%	3.1	3	90.5%	7.0	3.9
Todd	9	83.9%	0.1	11	78.6%	-7.1	-7.2
Wadena	11	79.9%	-4.7	12	77.3%	-8.6	-4.0
Wright	3	87.9%	4.9	2	90.8%	7.3	2.4
State		83.8%			84.6%		
13-County Average		84.3%			85.9%		

Score has a positive variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

In 1995, the percentages vary from 88.7 percent in Morrison County to 74.4 percent in Mille Lacs County for the percentage of the population receiving adequate prenatal care in their first trimester. The-13 county average as a whole is 84.3 percent, only slightly higher than the state average.

In 1999, the percentage of prenatal care ranges from 91.1 percent in Sherburne County to 77.3 percent of the population. The 13-county average is 85.9 percent, which still remains slightly higher than the state average.

The county with the largest increase in score is Mille Lacs County showing an increase from 11.2 percent below the state average to 2.7 percent below the state average. Todd County decreased in score from 0.1 percent above the state average to 7.1 percent below the state average. Overall, eight of the thirteen counties have scores above the state average for prenatal care.

Lack of Health Insurance

More than 44 million persons in the United States do not have health insurance, including 11 million uninsured children. Over the past decade, the proportion of persons under age 65 years with health insurance remained steady at about 85 percent. About one-third of adults under age 65 years below the poverty level were uninsured. For persons of Hispanic origin, approximately one in three was without health insurance coverage in 1997. Mexican Americans had one of the highest uninsured rates at 40 percent (IOM, 1997).

Table 11

Percent Uninsured

2001

County	Rank	Percent Population	Score 2001
Benton	1	2.5	-53.7
Crow Wing	2	10.9	101.9
Douglas	3	6.4	18.5
Kandiyohi	4	7.4	37.0
Meeker	5	6.2	14.8
Mille Lacs	6	3.8	-29.6
Morrison	7	4.7	-13.0
Pope	8	4.9	-9.3
Sherburne	9	5.3	-1.9
Stearns	10	3.1	-42.6
Todd	11	7.5	38.9
Wadena	12	6.3	16.7
Wright	13	5.4	0.0
State		5.4	
13-County Average		5.7	

Source: Minnesota Department of Health, Health Economics Program, 2001.

Currently, the percent of people uninsured in the 13-county area vary from 2.5 percent in Benton County to 10.9 percent in Crow Wing County. The state average for lack of health insurance is 5.4 percent, just below the 13-county average of 5.7 percent. Overall, seven of the thirteen counties are either below or that of the state average for the current percent of the population who are living without health insurance.

Perceived Health Status

Table 12

Estimated Percent Perceiving Their Health Status as Fair or Poor

County	Rank	1995 Percent	Score	Rank	1999 Percent	Score	Change in Score
Benton	3	9.5%	-2.1	3	9.3%	-5.1	-3.0
Crow Wing	6	11.4%	17.5	5	11.3%	15.3	-2.2
Douglas	7	11.5%	18.6	10	11.6%	18.4	-0.2
Kandiyohi	4	10.6%	9.3	5	10.6%	8.2	-1.1
Meeker	7	11.5%	18.6	7	11.2%	14.3	-4.3
Mille Lacs	6	11.4%	17.5	9	11.4%	16.3	-1.2
Morrison	5	11.1%	14.4	6	11.0%	12.2	-2.2
Pope	9	12.8%	32.0	12	12.5%	27.6	-4.4
Sherburne	1	8.1%	-16.5	1	8.1%	-17.3	-0.9
Stearns	2	9.1%	-6.2	4	9.5%	-3.1	3.1
Todd	7	11.5%	18.6	7	11.2%	14.3	-4.3
Wadena	8	12.0%	23.7	11	12.1%	23.5	-0.2
Wright	2	9.1%	-6.2	2	9.1%	-7.1	-1.0
State		9.7%			9.8%		
13-County Average		10.7%			10.7%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics
The percent at risk for various behavior health risk factors was derived through the application of the synthetic estimation method. The Minnesota Center for Health Statistics used data from the statewide behavioral risk telephone survey to provide estimates at the county level. These estimates represent the proportion of adults 18 years of age and older at risk for behavioral risk factors.

In 1995, the estimated percent of the population who perceive their health status as fair or poor ranges from 8.1 percent in Sherburne County to 12.8 percent in Pope County. The 13-county average is estimated at 10.7 percent, slightly higher than the state average of 9.7 percent.

In 1999, the estimated percent of the population that perceived their health status as fair or poor ranged from 8.1 percent in Sherburne County to 12.5 percent in Pope County. The 13 counties as an average scored 0.9 percent higher than the current state average.

The county with the largest increase in score is Stearns County showing an increase from 6.2 percent below the state average to 3.1 percent below the state average. Meeker County decreased in score from 18.6 percent above the state average to 14.3 percent above the state average. Overall, only four of the thirteen counties are below the state average in estimated perception of health status.

Limited Activity Days

Table 13

Estimated Percent Reporting Limitation in Activities Due to Impairments or Health Problem

	1995			1999			
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	1	13.5	-25.0	3	13.4	-5.0	20.0
Crow Wing	4	17.5	-2.8	8	15.6	10.6	5.5
Douglas	7	19.8	10.0	8	15.6	10.6	1.0
Kandiyohi	5	18.8	4.4	5	14.7	4.3	-1.5
Meeker	8	19.9	10.6	7	15.5	9.9	-1.9
Mille Lacs	7	19.8	10.0	8	15.6	10.6	8.5
Morrison	6	19.5	8.3	6	15.3	8.5	1.1
Pope	11	21.2	17.8	10	16.6	17.7	1.8
Sherburne	2	16.4	-8.9	1	12.6	-10.6	2.0
Stearns	3	16.9	-6.1	2	13.3	-5.7	3.9
Todd	9	20	11.1	7	15.5	9.9	-7.2
Wadena	10	20.4	13.3	9	16.2	14.9	-4.0
Wright	4	17.5	-2.8	4	13.5	-4.3	2.4
State		18			14.1		
13-County Average		18.6			14.9		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics
The percent at risk for various behavior health risk factors was derived through the application of the synthetic estimation method. The Minnesota Center for Health Statistics used data from the statewide behavioral risk telephone survey to provide estimates at the county level. These estimates represent the proportion of adults 18 years of age and older at risk for behavioral risk factors.

In 1995 the estimated percent of the population that had limited activity days due to impairments or health problems ranged from 13.5 percent in Benton County to 21.2 percent in Pope County. The 13- county average reported 18.6 percent, closely related to that of the state average.

In 1999 the percentage of estimated reports ranged from 12.6 percent in Sherburne County to 16.6 percent again in Pope County. The 13-county average significantly decreased 3.7 percent from 1995. The state saw a decrease of 3.9 percent from 1995.

The county with the largest increase in score is Benton County increasing from 25 percent below the state average to 5 percent below the state average. Todd County decreased in score from 11.1 percent above the state average to 9.9 percent above the state average. Overall, six of the thirteen counties are currently below the state average for Estimated Percent Reporting Limitations in Activities Due to Impairments or Health Problems, 1999.

Fatalities Due to Heart Disease

Heart disease and stroke-the principal components of cardiovascular disease-are the first and third leading causes of death in the United States, accounting for more than 40% of all deaths. About 950,000 Americans die of cardiovascular disease each year, which amounts to one death every 33 seconds (Preventing Heart Disease and Stoke, At a Glance, 2001).

Table 14

Fatalities Due to Heart Disease

	1995			1999			
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	7	30.8%	11.2	11	32.4%	17.0	19.5
Crow Wing	12	33.8%	22.0	9	29.7%	7.2	-2.3
Douglas	6	29.9%	7.9	12	34.1%	23.1	16.3
Kandiyohi	10	31.8%	14.8	7	24.8%	-10.5	-14.8
Meeker	9	31.5%	13.7	5	24.3%	-12.3	-0.4
Mille Lacs	8	30.9%	11.6	6	24.6%	-11.2	-12.4
Morrison	3	28.8%	4.0	8	29.1%	5.1	13.4
Pope	13	34.2%	23.5	1	19.7%	-28.9	-4.1
Sherburne	1	24.4%	-11.9	4	22.2%	-19.9	1.4
Stearns	2	25.6%	-7.6	9	29.7%	7.2	27.3
Todd	5	29.5%	6.5	2	19.9%	-28.2	-26.3
Wadena	11	33.5%	20.9	10	32.0%	15.5	8.1
Wright	4	29.2%	5.4	3	21.4%	-22.7	-19.1
State		27.7%			23.1%		
13-County Average		30.3%			26.5%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

In 1995 the rate of heart disease varied from 24.4 percent of deaths in Sherburne County to 34.2 percent of deaths in Pope County. The 13-county average shows a rate of 30.3 percent of deaths occurred from heart disease as compared to 27.7 percent of the state average

In 1999 the rate of heart disease ranges from 19.7 percent in Pope County to 34.1 percent in Douglas County. The 13-county average significantly decreased (3.8%) in fatalities due to heart disease since 1995.

The county with the largest increase in score is Stearns County showing an increase from 7.6 percent below the state average to 7.2 percent above the state average. Todd County decreased in score from 6.5 percent above the state average to 28.2 percent below the state average. Overall, currently there are seven of the thirteen counties who are below the state average of 23.1 percent.

Cancer Cases per 100,000 Population

Cancer is the second leading cause of death among Americans. One of every four deaths is from cancer. In 2001, an estimated 553,400 Americans will die of cancer-more than 1,500 people per day (Center for Disease Control, 2002).

Table 15

Cancer Cases per 100,000 Population

	1995			1999		
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	5	21.7%	-6.5	1	18.6%	-19.5	-13.0
Crow Wing	13	26.1%	12.5	6	22.0%	-4.8	17.3
Douglas	8	23.1%	-0.4	8	22.9%	-0.9	0.4
Kandiyohi	12	25.6%	10.3	9	23.5%	1.7	8.6
Meeker	7	22.7%	-2.2	11	24.3%	5.2	-7.3
Mille Lacs	6	22.6%	-2.6	12	24.6%	6.5	-9.1
Morrison	9	23.7%	2.2	7	22.7%	-1.7	3.9
Pope	2	20.0%	-13.8	2	19.7%	-14.7	0.9
Sherburne	1	19.5%	-15.9	3	21.1%	-8.7	-7.3
Stearns	11	25.0%	7.8	10	24.1%	4.3	3.4
Todd	4	21.6%	-6.9	1	18.6%	-19.5	12.6
Wadena	3	21.5%	-7.3	5	21.7%	-6.1	-1.3
Wright	10	24.5%	5.6	4	21.5%	-6.9	12.5
State		23.2%			23.1%		
13-County Average		22.9%			21.9%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

In 1995, the cancer rate in the 13 counties varied from 19.5 percent to 26.1 percent in Crow Wing County. The state cancer rate average is 23.2 percent while the 13-county average is 22.9 percent, a reasonable comparison.

Currently, the cancer rate ranges from 18.6 percent in Benton County to 24.6 percent in Mille Lacs County. The state average is 23.1 percent while the 13-county average equals 21.9 percent, a difference of 1.2 percent between the state and the county average.

The county with the largest increase in score is Crow Wing County showing an increase of 12.5 percent above the state average to 4.8 percent below the state average. Benton County decreased from 6.5 percent below the state average to 19.5 percent below the state average. Overall, nine of the thirteen counties are below the state average (32.1%) for cancer cases per 1,000 population.

All Other Diseases

Infectious diseases remain major causes of illness, disability, and death. Moreover, new infectious agents and diseases are being detected and some diseases considered under control have reemerged in recent years. Between 1980 and 1992, the number of deaths from infectious diseases rose 58 percent in the United States. Even when human immunodeficiency virus diagnoses are removed, deaths from infectious diseases still increased 22 percent during this period (Hoyert et al., 1997).

Table 16

All Other Diseases

	1997			2000			
County	Rank	Percent	Score	Rank	Percent	Score	Change in Score
Benton	12	16	21.2	6	11.5	-21.8	-43.0
Crow Wing	2	9.1	-31.1	5	11.3	-23.1	7.9
Douglas	9	13.5	2.3	3	10.9	-25.9	-28.1
Kandiyohi	11	15	13.6	11	16.3	10.9	-2.8
Meeker	1	8.7	-34.1	10	15.5	5.4	39.5
Mille Lacs	8	13	-1.5	12	17.4	18.4	19.9
Morrison	4	10.8	-18.2	2	10.8	-26.5	-8.3
Pope	7	12.5	-5.3	13	19.5	32.7	38.0
Sherburne	10	14.8	12.1	9	14.9	1.4	-10.8
Stearns	6	11.6	-12.1	8	14.6	-0.7	11.4
Todd	4	10.8	-18.2	1	9.7	-34.0	-15.8
Wadena	5	11.5	-12.9	4	11	-25.2	-12.3
Wright	3	9.9	-25.0	7	14.5	-1.4	23.6
State		13.2			14.7		
13-County Average		12.1			13.7		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics
All other disease includes all diseases, infectious and non-infectious, which are not defined by the mortality table, selected resident mortality statistics by county and selected city, Minnesota, 2000.
*Indicates significant difference from 1997 data.

In 1997 the percent of deaths to all other diseases varies from 8.7 percent in Meeker County to 16 percent of deaths in Benton County. The state average is 13.2 percent while the 13-county average is 12.1 percent, 1.1 percent below the state average.

In 2000, the percent of deaths to all other diseases ranges from 9.7 percent in Todd County to 19.5 percent in Pope County. The state shows an average of 14.7 percent, a 1.5 percent increase since 1997. The 13-county average shows an over 1.6 percent increase in deaths from all other diseases since 1997 and 1 percent higher average than the state.

The county with the largest increase in score is Meeker County showing an increase of 34.1 percent below the state average to 5.4 percent above the state average. Benton County decreased in score from 21.2 percent above the state average to 21.8 percent below the state average. Overall, eight of the thirteen counties currently are below the state average concerning deaths due to all other diseases.

Total Mortality

Table 17

Death Rate Per 1,000 Population							
		1995			1999		
Rank	County	Percent	Score	Rank	Percent	Score	Change in Score
4	Benton	8.6%	6.2	2	9.0%	12.5	6.3
6	Crow Wing	9.9%	22.2	3	10.0%	25.0	2.8
9	Douglas	11.7%	44.4	3	10.0%	25.0	-19.4
5	Kandiyohi	9.0%	11.1	2	9.0%	12.5	1.4
7	Meeker	10.1%	24.7	4	11.0%	37.5	12.8
10	Mille Lacs	12.3%	51.9	5	12.0%	50.0	-1.9
5	Morrison	9.0%	11.1	2	9.0%	12.5	1.4
11	Pope	14.2%	75.3	6	14.0%	75.0	-0.3
2	Sherburne	6.0%	-25.9	1	6.0%	-25.0	0.9
1	Stearns	5.8%	-28.4	1	6.0%	-25.0	3.4
8	Todd	10.5%	29.6	2	9.0%	12.5	-17.1
12	Wadena	15.0%	85.2	7	15.0%	87.5	2.3
3	Wright	6.3%	-22.2	1	6.0%	-25.0	-2.8
	State	8.1%			8.0%		
	13-County Average	9.9%			9.7%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics
The number of deaths per 1,000 population.

In 1995 the mortality rate in the 13 counties ranged from 5.8 percent in Stearns County to 15 percent in Wadena County. The state average is 8.1 percent while the 13-county average is 9.9 percent, 1.8 percent higher than the state average.

Currently the mortality rate varies from 6 percent to 15 percent in Wadena County. Currently the state mortality rate is 8 percent while the 13-county average is 9.7 percent, a decrease of 1.7 percent from 1995. The 13-county average is 1.7 percent higher than the state average.

The county to display the largest increase in score is Meeker County showing an increase of 24.7 percent above the state average to 37.5 percent above the state average. Overall, only three of the thirteen counties are below the state average for deaths per 1,000 population.

Infant Mortality

Infant mortality rates are an important indicator of health and well being of families. Minnesota's infant mortality rate is currently 5.9 deaths per 1000 live births. This rate has been consistent for the past three years and is one of the lowest state rates in the nation. However, this overall rate masks severe disparities in infant mortality experienced by some of Minnesota's populations (Minnesota Department of Health, 2001). The Minnesota Department of Health shows that infant death rates in African American and American Indian families are about three times that of Whites. Also, the CDC reported that of the states reporting, Minnesota had the highest American Indian infant mortality in the nation for 1998.

Table 18

Infant Mortality Rate Per 1,000 Live Births

County	1992-1994 Rank	1992-1994 Rate Per 1,000	1992-1994 Score	1996-1998 Rank	1996-1998 Rate Per 1,000	1996-1998 Score	Change in Score
Benton	1	1%	-86.1	9	7.4%	25.4	111.5
Crow Wing	8	12%	66.7	6	4.9%	-16.9	-83.6
Douglas	3	3%	-58.3	5	4.7%	-20.3	38.0
Kandiyohi	7	9%	25.0	7	6.3%	6.8	-18.2
Meeker	3	3%	-58.3	8	7.2%	22.0	80.4
Mille Lacs	2	1%	-86.1	6	4.9%	-16.9	69.2
Morrison	5	7%	-2.8	3	4.1%	-30.5	-27.7
Pope	3	3%	-58.3	1	3.1%	-47.5	10.9
Sherburne	6	8%	11.1	2	3.6%	-39.0	-50.1
Stearns	4	6%	-16.7	6	4.9%	-16.9	-0.3
Todd	5	7%	-2.8	2	3.6%	-39.0	-36.2
Wadena	9	18%	150.0	7	6.3%	6.8	-143.2
Wright	4	6%	-16.7	4	4.6%	-22.0	-5.4
State		7.2%			5.9%		
13-County Average		6.5%			5.0%		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health
The number of deaths of infants under 1 year old per 1,000 live births.

In the three-year period of 1992 through 1995, the infant mortality rate for the 13 counties varied from 1.0 percent in Benton County to 18.0 percent in Wadena County. The state average equals 7.2 percent while the 13-county average equals 6.5 percent, 0.7 percent lower than the state average.

In 1998 the infant mortality rates ranged from 3.1 percent in Pope County to 7.4 percent in Benton County. The state average dropped from 7.2 percent to 5.9 percent. The 13-county average dropped from 6.5 percent to 5 percent per 1,000 live births.

The county with the largest increase in score is Benton County showing an increase of 86.1 percent below the state average to 25.4 percent above the state average. Wadena County decreased from 150 percent above the state average to 6.8 percent above the state. Overall, the most current data shows that nine out of the thirteen counties remain below the state average for infant mortality statistics.

Loss of Life Years Before Age 65, per 100,000 People

Table 19

Years of Life Lost Before Age 65, per 100,000 People							
		1995			1999		
County	Rank	# Years Lost	Score	Score	# Years Lost	Score	Change in Score
Benton	11	4266.6	26.0	5	2475.1	-26.9	-52.9
Crow Wing	4	2960.9	-12.6	6	2605.5	-23.1	-10.5
Douglas	5	2997.8	-11.5	8	2956.7	-12.7	-1.2
Kandiyohi	7	3344.4	-1.2	10	3303.9	-2.4	-1.2
Meeker	7	3344.1	-1.2	7	2844	-16.0	-14.8
Mille Lacs	10	4138.4	22.2	11	3776	11.5	-10.7
Morrison	12	4285.8	26.6	9	3001.9	-11.3	-37.9
Pope	8	3648.8	7.8	2	2148.4	-36.6	-44.3
Sherburne	1	2284.3	-32.5	7	2714.6	-19.8	12.7
Stearns	2	2456.2	-27.5	4	2439.4	-28.0	-0.5
Todd	6	3255.5	-3.9	3	2215.8	-34.6	-30.7
Wadena	9	3952.1	16.7	12	3976.8	17.4	0.7
Wright	3	2677.5	-20.9	1	2012.3	-40.6	-19.6
State		3386			2939.1		
13-County Average		3354.8			2805.4		

Score has a negative variance against the state.
Change in score is the difference in the scores varying with the state change.
Source: Minnesota Department of Health Statistics

In 1995, the loss of life years ranged from 2284.3 years in Sherburne County to 4285.8 years in Morrison County. The state average is 3386 years whereas the 13-county average is 2254.8 years, a very close estimate.

Current data shows the loss of life years range from 2012.3 years in Wright County to 3976.8 years in Wadena County. The state average is 2939.1 years, a significant decrease from 1995. The 13 counties overall average 2805.4 years.

The county with the largest increase in score is Sherburne County with an increase from 32.5 percent below the state average to 19.8 percent below the state average. Benton County decreased from 26 percent above the state average to 26.9 percent below the state average. Overall, the most current data shows that 11 out of the 13 counties are well below the state average for loss of life years.

Overall Health

Table 20

Overall Health		
	Sorted	Rank
Sherburne	-1206.3	1
Wright	-913.0	2
Stearns	-818.6	3
Todd	-434.9	4
Pope	-259.8	5
Douglas	181.4	6
Benton	309.3	7
Kandiyohi	347.3	8
Morrison	399.5	9
Crow Wing	939.1	10
Mille Lacs	1544.1	11
Meeker	1653.2	12
Wadena	1878.9	13

Overall health is based on the sum of the scores for each component multiplied by its assigned weight. The overall scores were then placed into a rank.

Table 50 shows Sherburne at the top of the ranking system with a rank of one. Wadena County bottoms the list with an overall health rank of 13.

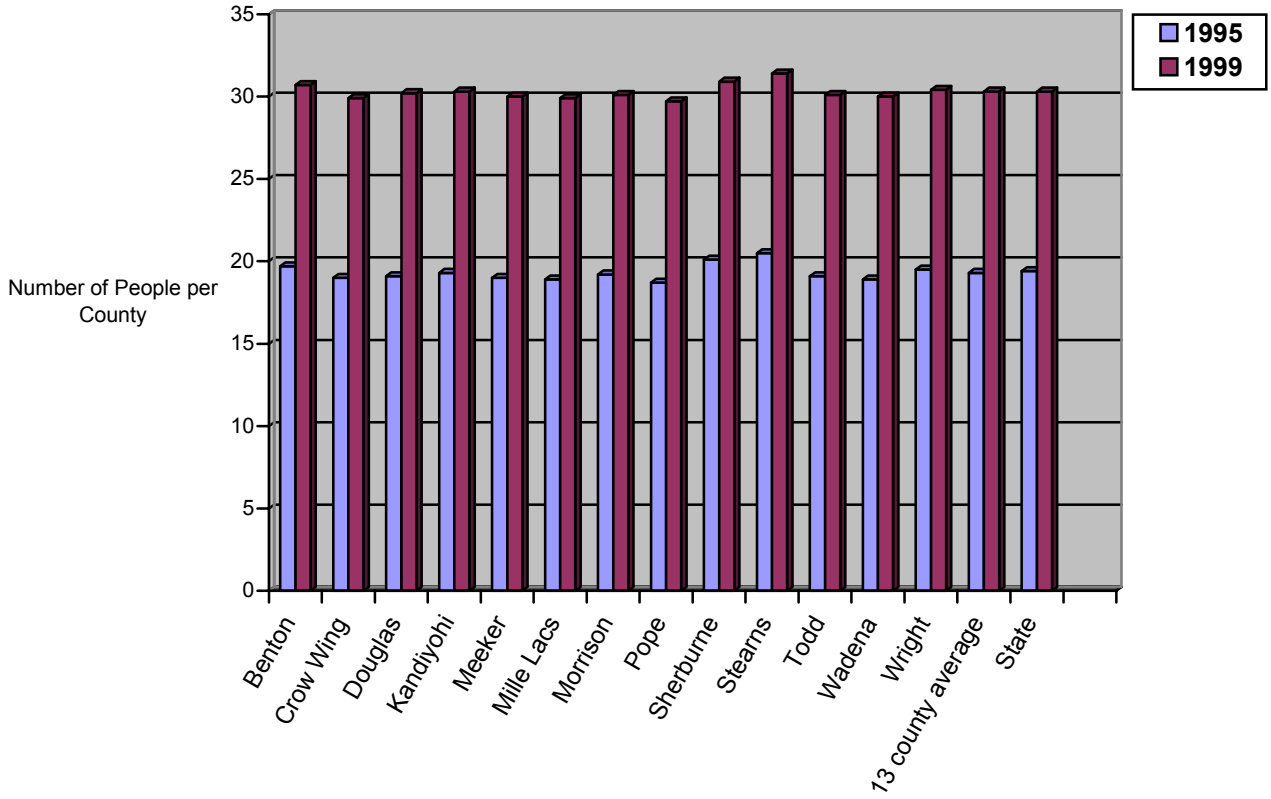
Other County and State Data

Estimated Percent of Seatbelt Nonuse

On average in 1999, one person died every 13 minutes in a motor vehicle crash—114 people a day.

In 61 percent of these fatalities, the person was not wearing a seat belt (NHTSA, 2001).

Graph 3

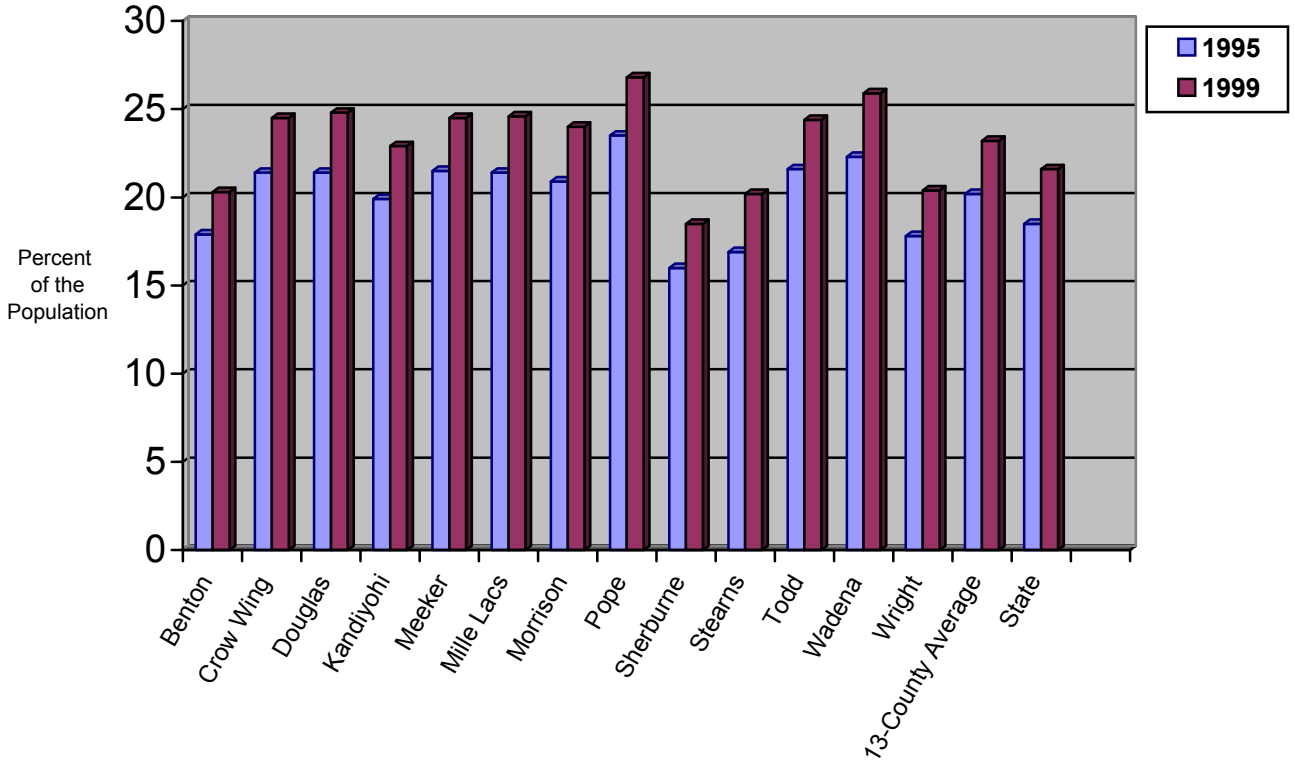


Source: Minnesota Department of Health 1996, 2000.
Included respondents who report they "sometimes", "seldom", or "never" use seat belts.

- 5 of the 13 counties are above the state average in seatbelt nonuse.
- 13-county average is tied with the state average.
- The 13-county average has significantly increased 11 percent since 1995.

Estimated Percent of the Population Diagnosed with Hypertension

Graph 4

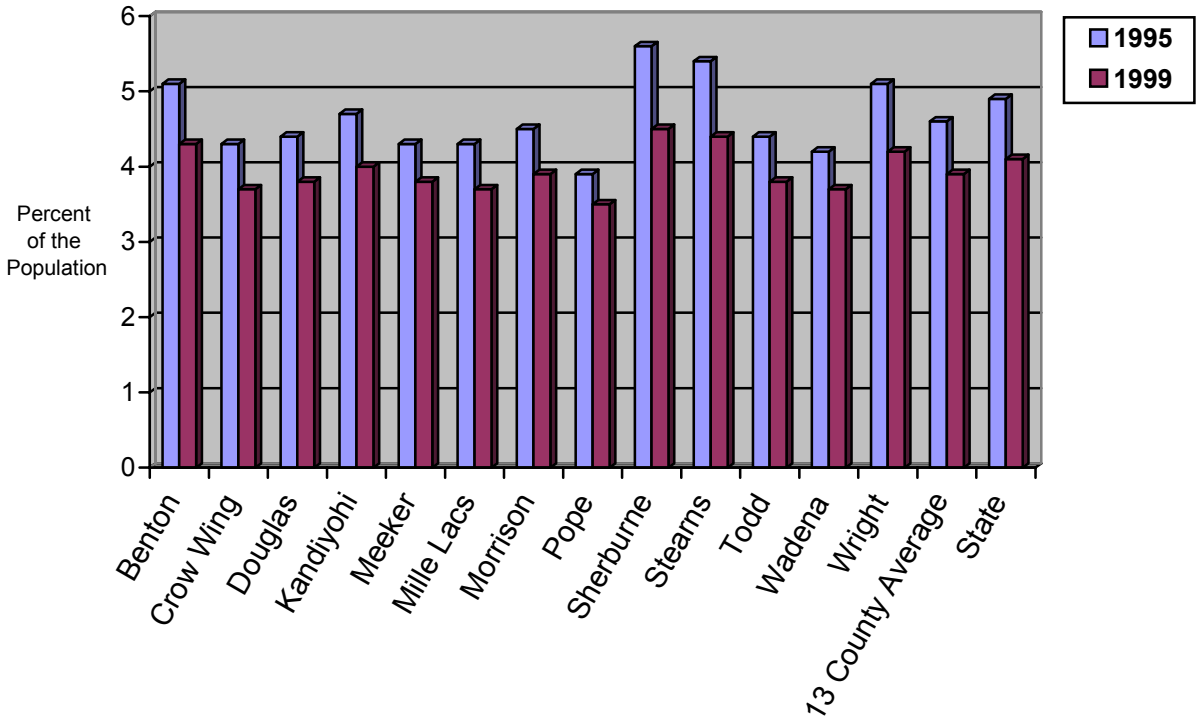


Source: Minnesota Department of Health Statistics 1996, 2000
Includes respondents who report, "they have ever been told by a doctor, nurse, or other health professional they have high blood pressure".

- 4 of the 13 counties are below the state average.
- 13-county average is 1.6 percent above the state average.
- 13-county average has significantly increased 3 percent since 1995.

Estimated Percent of the Population who Reported Drinking and Driving

Graph 5

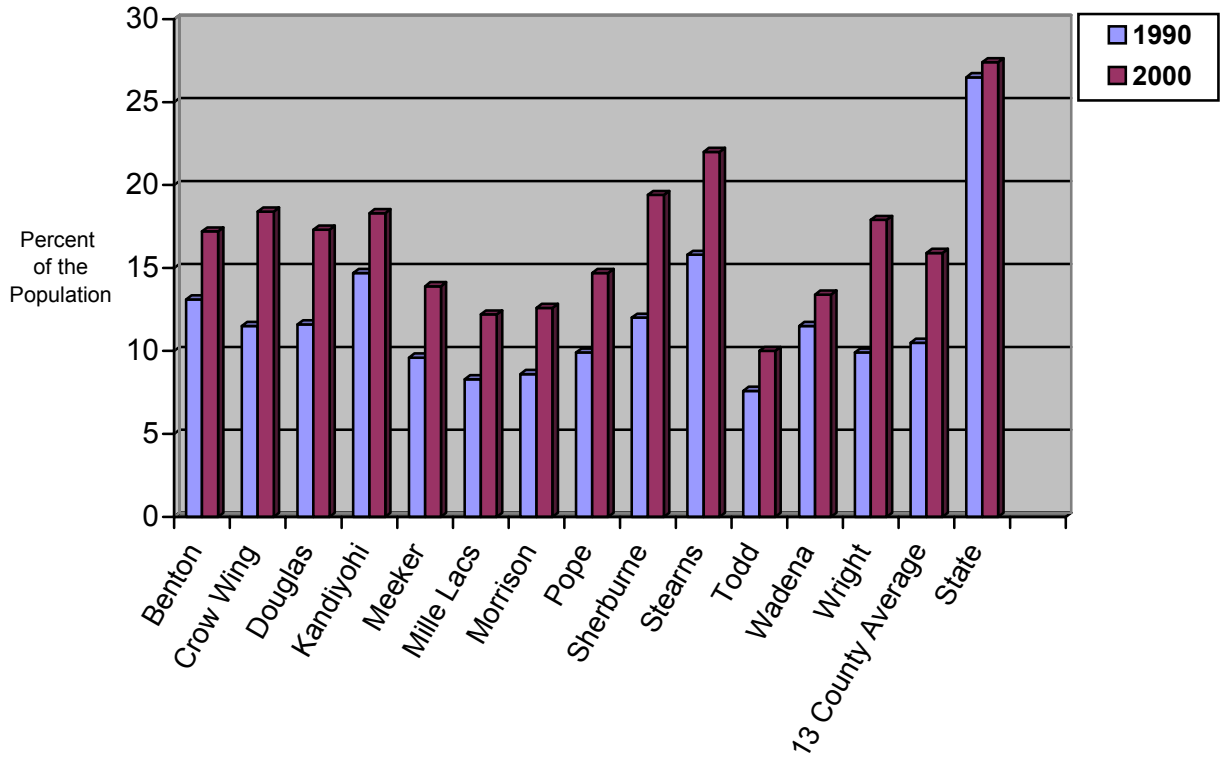


Source: Minnesota Health Profiles 1996, 2000
Includes respondents who say they have driven after having too much to drink one or more times in the month.

- Nine of the thirteen counties are below the state average for the estimated percent of the surveyed population that drive while drinking.
- 13-county average is 0.2 percent below the state average for the estimated percent of the surveyed population who drive while drinking.
- The 13-county average significantly decreased 0.7 percent from 1995.

Percent of the Population Age 25 or Older with a Bachelors' Degree

Graph 6

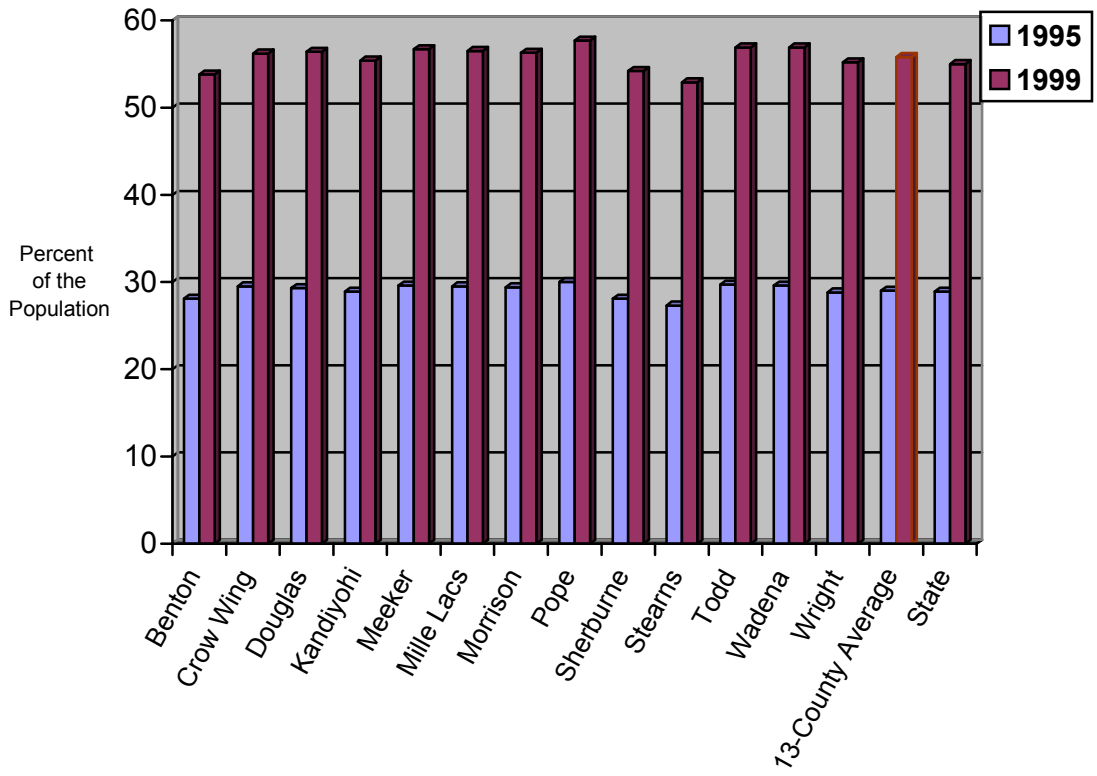


Source: Minnesota Planning, 2000

- All of the 13 counties are below the state average in the percentage of the population aged 25 and older that has obtained a bachelor's degree.
- The 13-county average is 11.5 percent below the state average.
- The 13-county average significantly increased 5.4 percent since 1990.

Percentage of the Population Overweight

Graph 7



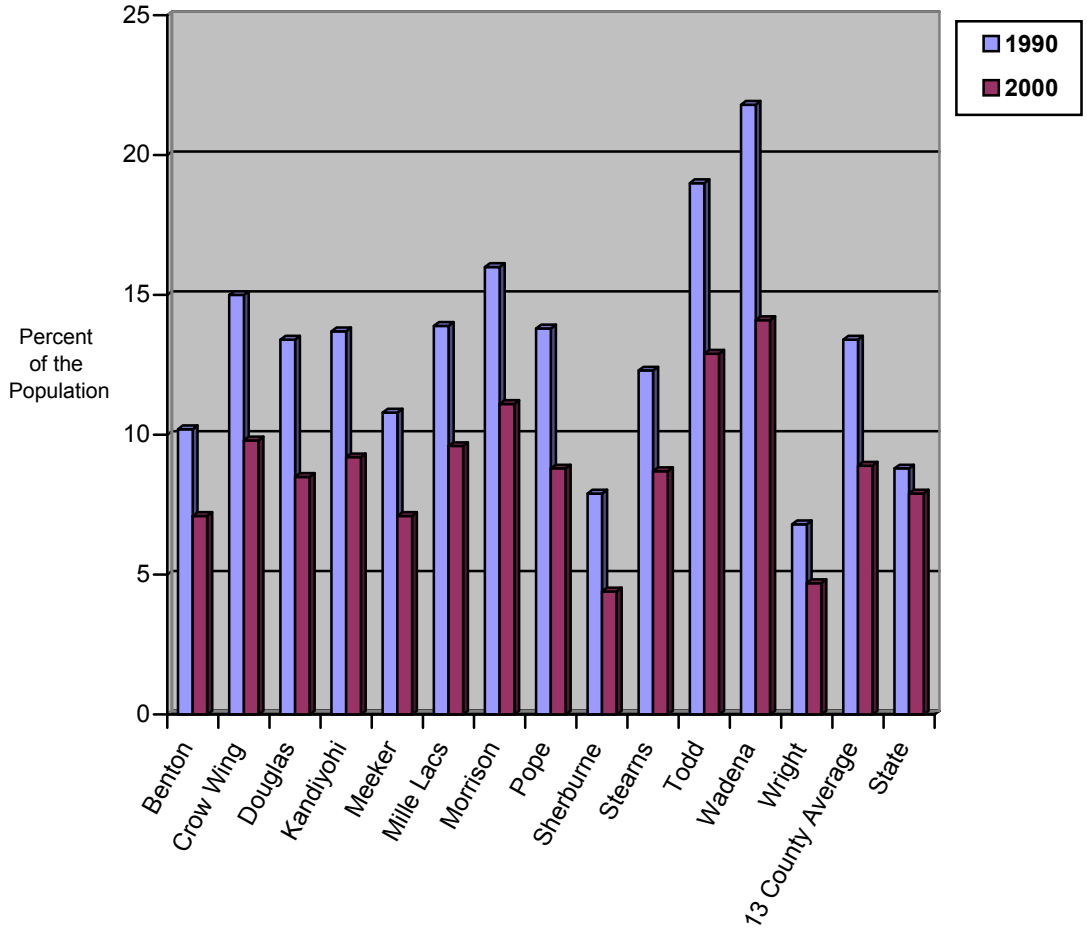
Source: Minnesota Health Profiles, 1996, 2000.
Overweight is defined as a body mass index of 27.8 or greater for men and 27.3 or greater for women.

- Ten of the thirteen counties are above the state average.
- 13-county average is 0.8 percent above the state average in 1999.
- The 13-county average significantly increased 26.8 percent since 1995.

Percentage of the Population with Income Below the Federal Poverty Level

Graph 8

The United States recently experienced the longest period of economic expansion in its history. Despite this growth, poverty remains a persistent problem in America. In 2000, the official rate of poverty was 11.3 percent. Black and Hispanic people, female-headed households, and children experience particularly high rates of poverty relative to other groups (CHN, 2000).

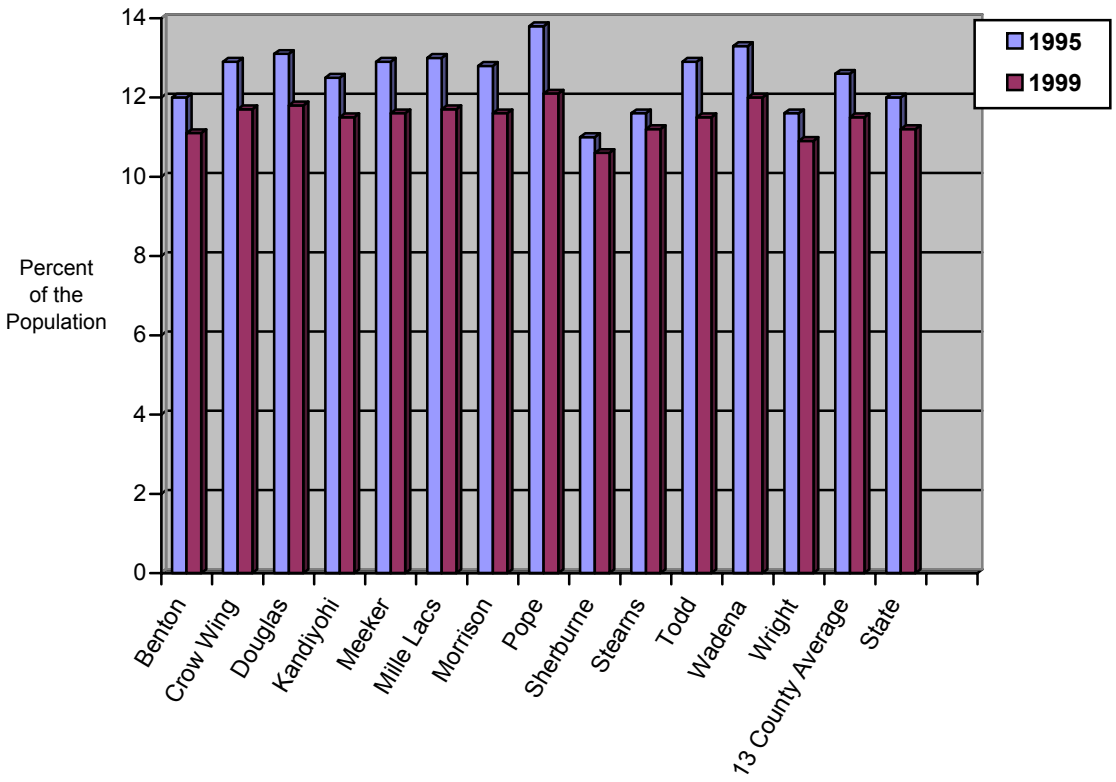


Source: Minnesota Milestones, 2000

- Ten of the thirteen counties have an income below the state average for poverty level. Wadena County alone has 3.2 percent of its population with an income below the poverty level than the state average.
- 13-county average is 1 percent above the state average.
- The 13-counties significantly decreased 0.9 percent in the percentage of the population with an income below the Federal Poverty Level

Estimated Percent of the Population Reporting Hospitalization in Past Year

Graph 9



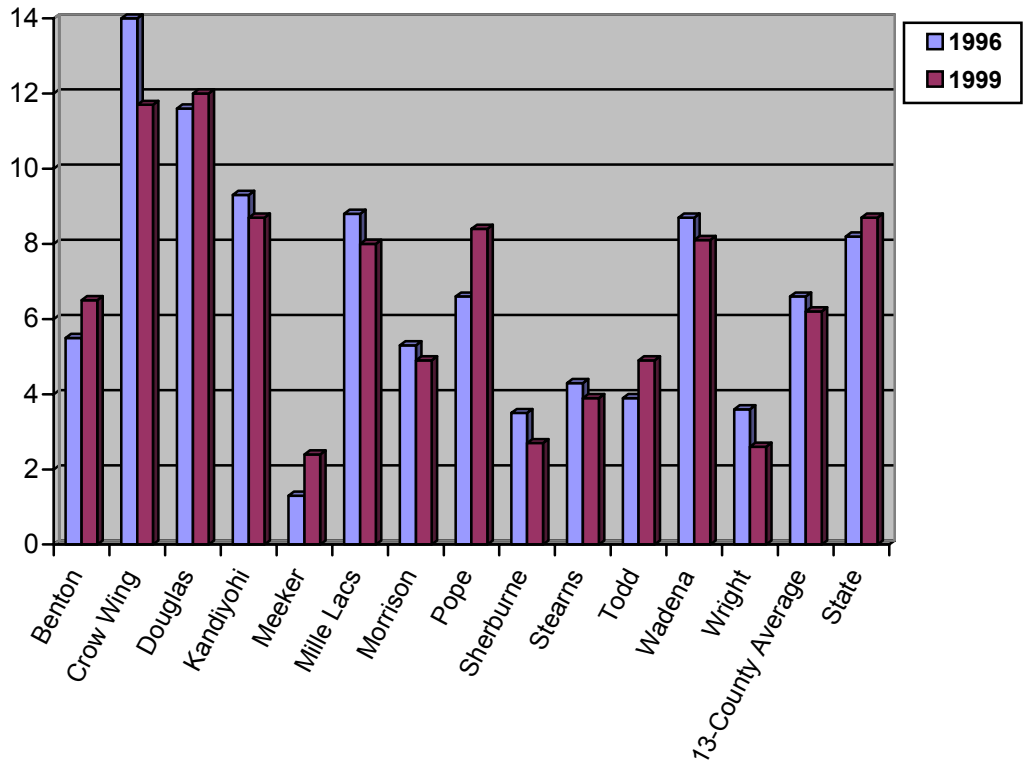
Source: Minnesota Health Profiles 1996, 2000

The percent at risk for various behavioral health risk factors was derived through the application of the synthetic estimation method. The Minnesota Center for Health Statistics used data from the statewide behavioral risk telephone survey to provide estimates at the county level. These estimates represent the proportion of adults 18 years of age and older at risk for behavioral risk factors.

- Ten of the thirteen counties have a higher rate of hospital utilization than the state average.
- The 13-county average is 1.1 percent higher than the state average.

Abused or Neglected Children, per 1,000 Children Under Age 18

Graph 10

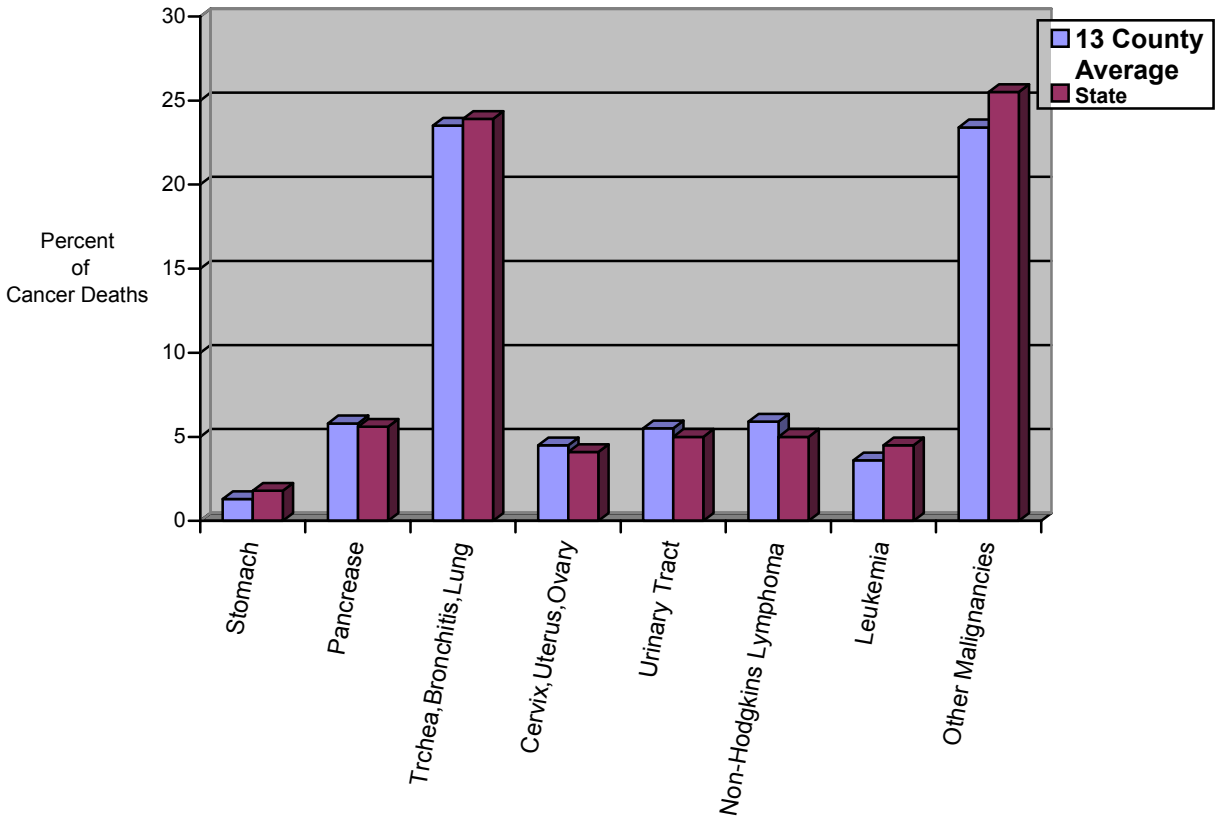


Source: Minnesota Milestones, 1997, 2000.

- 10 of the 13 counties are below the current state average.
- 1995 13-county average is 1.6 percent lower than the 1995 state average.
- 2000 13-county average is 2.5 percent lower than the 2000 state average.

Other Types of Cancer as a Percent of Cancer Deaths by County, 2000

Graph 11



Source: Minnesota Department of Health, 2000.

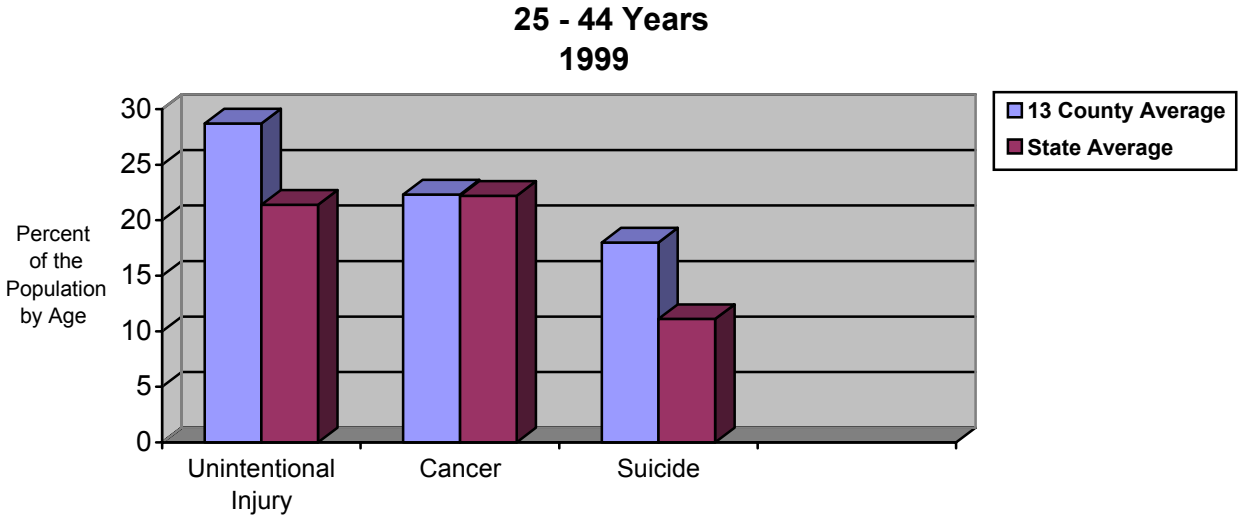
- 13-county average is 0.5 percent lower than the state average in deaths due to stomach cancer.
- 13-county average is 0.2 percent higher than the state average in deaths due to pancreatic cancer.
- 13-county average is 0.4 percent lower than the state average in deaths due to trachea, bronchitis, or lung cancer.
- 13-county average is 0.4 percent higher than the state in deaths due to cervix, uterus, or ovarian cancer.
- 13-county average is 0.5 percent higher than the state in deaths due to urinary tract cancer.
- 13-county average is 0.9 percent higher than the state in deaths due to non-Hodgkin's lymphoma.
- 13-county average is 0.9 percent lower than the state in deaths due to leukemia.
- 13-county average is 2.1 percent lower than the state in deaths due to other malignancies.

Top Three Cause of Death Ages 25-44

Suicide takes the lives of more than 30,000 Americans every year. For every two victims of homicide in the U.S. there are three persons who take their own lives. More teenagers and young adults die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia and influenza and chronic lung disease, combined (NSSP, 2002).

More than 1,600 Minnesotans die each year from unintentional injuries. Unintentional-injury deaths are the leading cause of death for Minnesotans ages 1-34, the second leading cause of death for those ages 33-44 and the third leading cause for those ages 45-54 (Minnesota Safety Council, 1999).

Graph 12

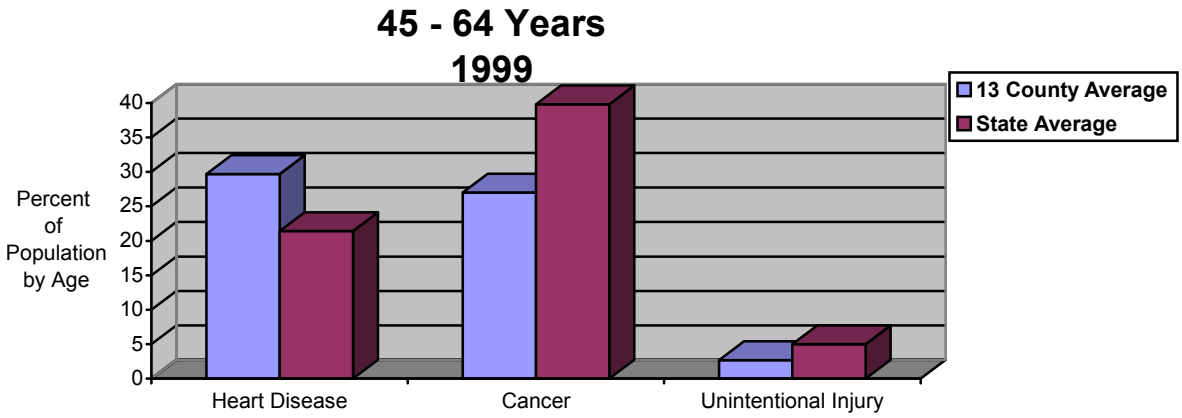


Source: Minnesota Department of Health, 2000.

- 13-county average is 7.3 percent higher than the state average in deaths due to unintentional injury.
- 13-county average is 0.1 percent higher than the state average in deaths due to cancer.
- 13-county average is 6.9 percent higher than the state in deaths due to suicide.

Top Three Causes of Death Ages 45-64

Graph 13

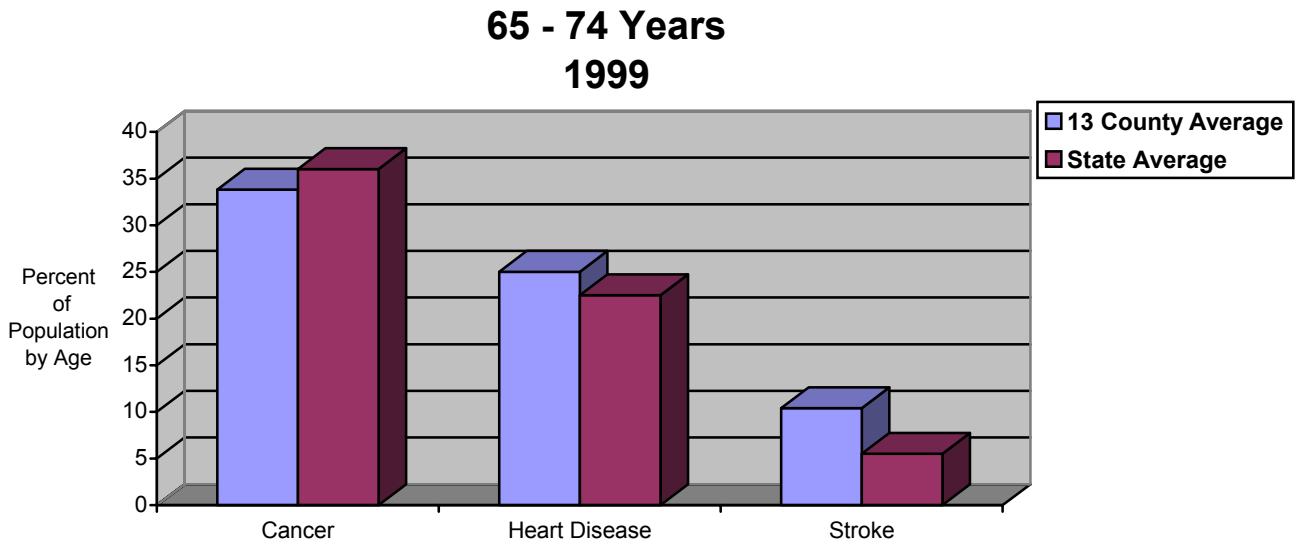


Source: Minnesota Department of Health, 2000.

- 13-county average is 8.3 percent higher than the state average in death due to heart disease.
- 13-county average is 12.8 percent lower than the state average in death due to cancer.
- 13-county average is 2.3 percent lower than the state average in death due to unintentional injury.

Top Three Causes of Death Ages 65-74

Graph 14

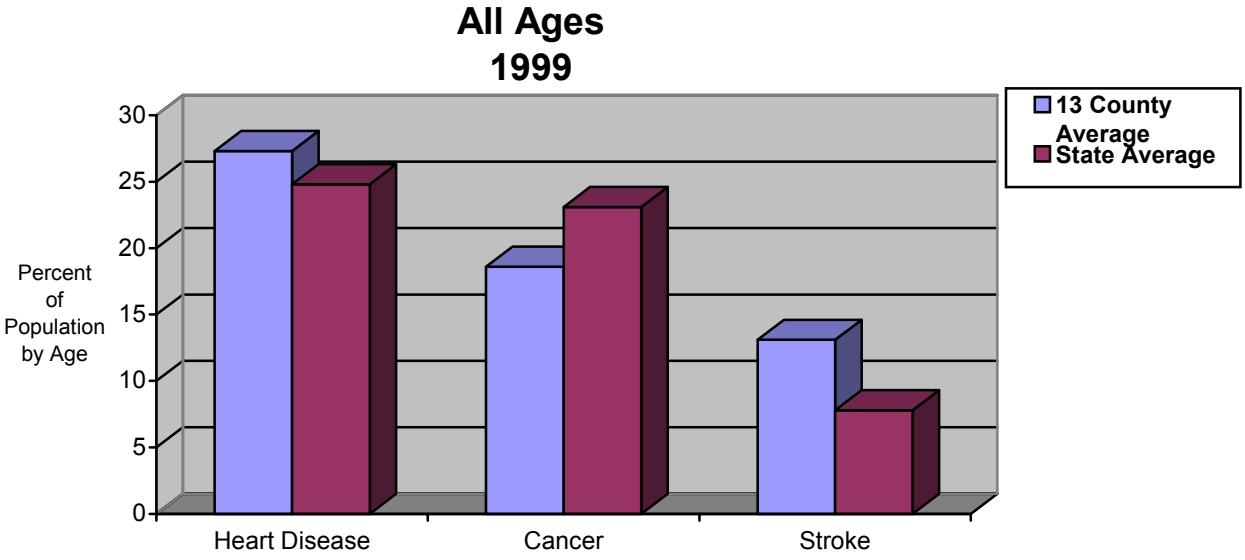


Source: Minnesota Department of Health, 2000.

- 13-county average is 2.2 percent lower than the state average in death due to cancer.
- 13-county average is 2.5 percent lower than the state average in death due to heart disease.
- 13-county average is 4.9 percent higher than the state average in death due to stroke.

Top Three Causes of Death All Ages

Graph 15



Source: Minnesota Department of Health, 2000.

- 13-county average is 2.5 percent higher than the state average for death due to heart disease.
- 13-county average is 4.5 percent lower than the state average for death due to cancer.
- 13-county average is 5.3 percent higher than the state average for death due to stroke.

Number of Counties Currently Below the State Average

Table 21

Number of Counties Below State Average for Each Component

Component	Number of Counties Below
Smoking	9
Motor Vehicle Fatalities	4
Crime	11
Risk For Heart Disease	4
High School Graduation	12
Unemployment	1
Prenatal Care	8
Uninsured	7
Perceived Health Status	4
Teen Pregnancy	9
Limited Activity Days	6
Heart Disease	7
Cancer	9
All Other Diseases	8
Total Mortality	3
Infant Mortality	9
Life Loss Years	11

Table 51 displays the number of counties for each component that exhibited a lower component percentage than the state.

Overall, there are only five components out of the seventeen where more than half of the counties stand above the state average. These components include motor vehicle fatalities, risk for heart disease, unemployment, perceived health status, and total mortality rate. The worst component for the 13-counties is unemployment, where only one county average is below the state average. For the rest of the components, more than half of the counties fair better than the state average.

The best component is high school graduation rate, where 12 of the 13 counties fair better than the state average. Other high outcomes include crime, loss of life years, current smokers, teen pregnancy rate, and cancer rate where at least nine counties fair better than the state average.

County Comparison with Past Average

Table 22

County Comparison with Past Average

Component	Past Average	Current Average	Percent Change
Prevalence of Smoking	20.4	19.1	-1.3
Motor Vehicle Fatalities	1.9	2.2	0.3
Crime	3.2	2.4	-0.8
Risk For Heart Disease	49.3	79.0	29.7
High School Graduation	89.4	90.0	0.5
Teen Pregnancy	22.8	18.4	-4.4
Unemployment	5.2	4.1	-1.1
Prenatal Care	84.3	85.9	1.6
Lack of Health Insurance	N/A	5.7	N/A
Perceived Health Status	10.2	10.7	0.5
Limited Activity Days	18.6	14.9	-3.7
Heart Disease	30.3	27.3	-3.0
Cancer	22.9	21.9	-0.9
All Other Diseases	12.1	13.7	1.6
Total Mortality	9.9	9.7	-0.2
Infant Mortality	6.5	5.0	-1.4
Premature Death	3354.8	2805.4	-549.4

A negative change indicates a drop in the average from past data to current data. A positive change indicates an increase in the average from the past data to the current data.

The component with biggest percent increase from the past average is Risk for Heart Disease with a 29.7 percent increase from 1995. The component with the biggest percent decrease from the past average is Teen Pregnancy with a 4.4 percent decrease from 1995.

Percent Change Table, State vs. County

Table 23

Percent Change, State vs. County		
Component	State Change Based on Percents	County Change Based on Percents
Prevalence of Smoking	-0.9%	-1.3%
Motor Vehicle Fatalities	0.2%	0.3%
Crime	-0.9%	-.08%
Risk for Heart Disease	29.7%	29.7%
High School Graduation	-0.2%	0.6%
Teen Pregnancy	-6.7%	4.4%
Unemployment	-0.9%	1.1%
Prenatal Care	.08%	1.6%
Lack of Health Insurance	N/A	N/A
Perceived Health Status	.01%	0%
Limited Activity Days	-3.9%	-3.7%
Heart Disease	-4.6%	-3.8%
Cancer	-.01%	-1.0%
All Other Diseases	1.5%	1.6%
Total Mortality	-.01%	-.02%
Infant Mortality	-1.3%	-1.5%
Premature Death	-446.9 years	-549.4 years

Table 53 represents trends in past and current data and how the 13-county average has compared to the changes of the state for each component.

The components that have kept up with or surpassed the states change include: percent of smoking, the high school graduation rate, deaths due to cancer, total mortality and infant mortality.

Findings Summary

Risk for Heart Disease

The risk for heart disease has significantly increased 29.7 percent since 1995.

Hypertension

The estimated percent of the population that have been diagnosed with hypertension has significantly increased 3.0 percent since 1995.

Seatbelt Nonuse

The estimated percent of the population that is estimated to not use their seatbelt on a regular basis significantly increased 11.1 percent since 1995.

Percentage Overweight

The percentage of the population estimated to be overweight has significantly increased 26.8 percent since 1995.

Percentage of the Population with Income Below the Federal Poverty Level

The percentage of the population with income below the federal poverty level has significantly decreased 4.2 percent since 1995.

Estimated Percent Reporting Limitation in Activities Due to Impairments or Health Problem

The percent of the population for this component has significantly decreased 3.7 percent since 1995.

Fatalities Due to Heart Disease

Fatalities due to heart diseases have significantly decreased 3.8 percent since 1995.

Years of Life Lost Before age 65, per 100,000 people

The amount of years lost have significantly decreased 549.4 years since 1995.

Chapter V

Discussion

Recommendations and Future Research

Limitations

- The health components and topics discussed in this report are only equivalent to the data available to the researcher at the time of the report.
- The data collected can only be as valid and reliable as the source from which it was taken.

Recommendations

- St. Cloud Hospital should devise an action plan for the increase of risk for heart disease, hypertension, seatbelt nonuse, and the percentage of the population that is overweight.
- St. Cloud Hospital and the surrounding counties, agencies, and health care groups should be aware of the increasing risk for overweight population. Overweight has become a national epidemic. Action plans on reducing the weight of our society should be an immediate agenda.
- Use the information cautiously and take into consideration other external factors that could contribute to the findings.

Recommendations for Future Research

- Compare data to National Data as well as State data to obtain a closer look at overall achievements of the state and counties.
- Cross-reference the ethnicity, age, income, and sex of the population by the health components on an in-depth scale to search for causal indicators.
- Assess community members and leaders through questionnaires, focus groups, and interviews, on what they consider topics of health, what they constitute as a healthy community, and what can be done to better the health of a community.

- Devise implementation plans of significant findings.

Recommendations for Dissemination

- Dissemination to policy makers, stakeholders, community members, and local agencies.

References

Abused or Neglected Children, per 1,000 Children under Age 18. Minnesota Milestones 2000. Minnesota Planning. Minnesota Department of Human Services. Retrieved from the web 06/10/02. www.mnplan.state.mn.us/mm/custom.html.

American Cancer Society. Cancer Facts & Figures-1996. Atlanta (GA): American Cancer Society, 1996.

American Heart Association 2002. Heart and stroke statistical update. DallasTX: AHA, 2000.

American Heart Association 2002. High blood pressure increases your risk for stroke. Retrieved from the web 07/31/02. www.americanheart.org.

American Heart Association, 2002. The heart of diabetes: Understanding insulin resistance. Retrieved from the web 07/31/02. www.amerianheart.org.

Bureau of Labor Statistics (BLS) (1993). Work injuries and illnesses by selected characteristics. BLS News Publication 95-142.

Byrne, C., Crucetti, J., Medvesky, M., Miller, M., Pirani, S., Irani., P. (2002). The process to develop a meaningful community health assessment in New York State. Journal of Public Health Management Practices, Inc., 8, 45-53.

CDC. Health insurance coverage and receipt of preventive health services-United States, 1993. Morbidity and Mortality Weekly Report, 44, 219-225.

Centers for Disease Control and Prevention. Cancer registries: The foundation for cancer prevention, 2001. Retrieved from the web 07/31/02. www.cdc.gob/cancer/npcr/register.htm.

Centers for Disease Control and Prevention. Smoking-attributable mortality and years of potential life lost-United States, 1990. Morbidity and Mortality Weekly Report 1993, 42, 645-648.

Center for Disease Control and Prevention. Mortality trends for selected smoking-related and breast cancer-United States, 1950-1990. Morbidity and Mortality Weekly Report 1993, 42, 857, 863-866.

Center for Disease Control and Prevention. Safe motherhood: Promoting health for women before, during, and after pregnancy. Reproductive Health, 2002. Retrieved from the web 07/31/02. www.cdc.gob/nccdphp/drh.

Chemical Health Indicators, Alcohol Related Motor Vehicle Fatalities. Minnesota County Health Profiles. Minnesota Planning. Retrieved from the web 06/10/02. www.mnplan.state.mn.us/datanetweb/health.html

Children's Report Card Trend Line. Children's Report Card. Datanet. Minnesota Planning. Retrieved from the web 07/02/02. www.mnplan.state.mn.us/cgi-bin/datanetweb/chi.

Coalition on Human Needs (CHN), 2000). Poverty Data. Retrieved from the web 08/06/02. www.chn.org.

Curtis, D. (2002). Evaluation of community health assessment in Kansas. Journal of Public Health Management Practices, Inc., 8, 20-25.

Demographic and Vital Statistics Leading Causes of Death by Age Group. Minnesota Health Profiles. Minnesota Planning. Retrieved from the web 07/01/02. www.mnplan.state.mn.us/datanetweb/health.html.

Demographic and Vital Statistics Selected Natality and Mortality Statistics. Minnesota Health Profiles. Datanet. Minnesota Planning. Retrieved from the web 07/10/02. www.mnplan.state.mn.us/datanetweb/health.html.

Demographic and Vital Statistics Prenatal Care. Minnesota Health Profiles. Datanet. Minnesota Planning. Retrieved from the web 07/01/02. www.mnplan.state.mn.us/datanetweb/health.html.

Demographic and Vital Statistics Teen Pregnancy. Minnesota Health Profiles. Datanet. Minnesota Planning. Retrieved from the web 08/01/02. www.mnplan.state.mn.us/datanetweb/health.html.

Fox, J.A., & Zawits, M.W.(1994). Homicide trends in the U.S. U.S. Department of Justice, Bureau of Statistics.

Healthy People 2010: A systematic Approach to Health Improvement. Retrieved from the web 08/01/02. www.health.gov/healthypeople/Document/html/uih/uih_2.htm.

Healthy People 2010: Understanding and Improving Health 2nd ed. Retrieved from the web 08/01/02. www.healthypeople.gov/healthypeople/Document/tableofcontents.html.

Hoyert, D.L.; K.D.; & Murphy, S.L. (1999). Deaths: Final data for 1997. National Vital Statistics Reports, 47.

IOM. Improving Health in the Community. Washington, DC: National Academy Press, 1997, 48-65.

Johnson, K. (1994). Striving towards health care for all. World Health, 47, 12-14.

Local Area Unemployment Statistics. U.S. Department of Labor. Retrieved from the web 06/27/02. www.data.bls.gov/servlet/SurveyOutputServlet.

Low Birth Weight Babies, total (percent). Minnesota County Health Profiles. Minnesota Planning. Minnesota Department of Health. Retrieved from the web 06/24/02. www.mnplan.state.mn.us/mm/custom.html.

Kaplan, G. (1999). A multilevel Framework of Determinants of Healthy. Presented at University of Michigan, EP1761: Social Epidemiology.

Marital Status. Minnesota Health Profiles. Datanet. Minnesota Planning. Census 2000. Retrieved from the web 07/31/02. www.mnplan.state.mn.us/mm/datanetweb/html.

McGinnis, J.M., & Maiese, D.R. Defining mission, goals, and objectives. In: Scutchfield, F.D., and Keck, C.W., eds. Principles of Public Health Practice. Albany, NY: Delmar Publishers, 1997, 136-145.

Median Family Income as a Percentage of the U.S. Median. Minnesota Milestones. Minnesota Planning. U.S. Census. Retrieved from the web 06/27/02. www.mnplan.state.mn.us/mm/custom.html.

Minnesota Department of Health Economics Program, 2001. (Percentage uninsured by county).

Minnesota Department of Health. Minnesota Department of Health Fact Sheet. Diabetes in Minnesota 2002. Retrieved from the web 07/05/02. www.health.state.mn.us.

Minnesota Department of Health. Minnesota Department of Health Fact Sheet. Eliminating Health Disparities: Infant Mortality 2001. Retrieved from the web 08/06/02. www.health.state.mn.us/facts/health2001.html.

Minnesota Safety Council, (1999). Injury in Minnesota. Retrieved from the web 08/06/02. www.health.state.mn.us.

Morbidity and Utilization Behavioral Risk Factors of Adults. Minnesota County Health Profiles 2000. MN Planning. Retrieved from the Web 06/10/02. www.mnplan.state.mn.us/datanetweb/health.html

Morbidity and Utilization Health Status and Health Care Utilization. Minnesota Health Profiles. Datanet. Minnesota Planning. Retrieved from the web 07/02/02. www.mnplan.state.mn.us/datanetweb.heath.html.

Morbidity and Utilization Office of Rural Health and Primary Care Data. Minnesota Health Profiles. Datanet. Minnesota Planning. Retrieved from the web 07/02/02. www.mnplan.state.mn.us/datanetweb.health.html.

Mortality 2000. Department of Planning. Retrieved from the web 06/15/02. www.mnplan.state.mn.us/divs/chs/00annsum/mortality/pdf.

Mortality 1997. Department of Planning. Retrieved from the web 06/15/02. www.health.state.mn.us/divs/chs/data/97cover/pdf.

National Center for Chronic Disease Prevention and Health Promotion. Cardiovascular Health. About cardiovascular disease. Retrieved from the web 07/24/02.

www.cdc.gob/nccdphp/cvd/aboutcardio.htm

National Center for Chronic Disease Prevention and Health Promotion. Cardiovascular Health. Lowering personal risk of heart disease. Retrieved from the web 07/24/02. www.cdc.gov/nccdphp/cvd/naps_cvd.htm.

National Center for Chronic Disease Prevention and Health Promotion. Cardiovascular Health. Stroke Fact Sheet. Retrieved from the web 07/24/02. www.cdc.gov/nccdphp/cvd/fs-stroke.htm.

National Center for Chronic Disease Prevention and Health Promotion. Cigarette smoking-related mortality. Retrieved from the web 07/24/02. www.cdc.gov/tobacco/research_data/health_consequences/mortali.htm.

National Center for Chronic Disease Prevention and Health Promotion. Heart disease and stroke: The nation's leading killers. Retrieved from the web 07/24/02. www.cdc.gov/nccdphp.cvc/cvdaag2001.htm.

National Center for Chronic Disease Prevention and Health Promotion. Obesity and overweight a public epidemic. Retrieved from the web 07/24/02. www.cdc.gov/nccdphp/dnpa/obesity/epidemic.htm.

National Highway Traffic Safety Administration. U.S. Department of Transportation, 2001. Our summer seat belt agenda: Country roads, city streets. Retrieved from the web 08/01/02. www.nhtsa.dot.gob/people/injurty/airbags/buckle-upmayo01/article.html.

National Strategy for Suicide Prevention (NSSP), 2002). Suicide: Cost to the Nation. Retrieved from the web 08/06/02. www.mentalhealth.org/suicideprevention/sosttonation.asp.

Oswald, J., & Collins, N. (2002). Recommendations for addressing quality and health assessment initiatives in Minnesota. Journal of Health Management Practice, Inc., 8, 33-37.

Percentage of Minnesotans age 25 and Older with a Bachelor's Degree. Minnesota Milestones. U.S. Bureau of the Census. Retrieved from the web 06/07/02. www.mnplan.state.mn.us/mm/custom.html.

Percentage of Minnesotans with Income Below the Federal Poverty Level. Minnesota Milestones. Minnesota Planning. U.S. bureau of the Census. Retrieved from the web 6/10/02. www.mnplan.state.mn.us/mm/custom/html.

Personal Income for Minnesota and Counties. Minnesota Planning. U.S. Bureau of Economic Analysis. Retrieved from the web 06/27/02. www.mnplan.state.mn.us/demography/DownloadedFiles/income/inc99web.html.

Sosin, D. & Thacker, S. (2000). Tools for public health assessment in the twenty-first century. Editorial. No copyright.

State and County Population, Total. Minnesota Milestones. Minnesota Planning. Retrieved from the web 06/27/02. www.mnplanning.state.mn.us/mm/custom.html.

Stoto, M. (1999). Sharing responsibility for the public's health. Public Health Reports, 114, 231-240.

Trocchi, J. (1994). The how's and whys of conducting a community needs assessment. Trustee, 47, 6-7, 27.

Total Crimes Reported, Violent and Serious. Minnesota Milestones. Minnesota Planning. Retrieved from the web 06/28/02. www.mnplan.state.mn.us/mm/custom.html.

U.S. Census Bureau, Census 2000 Summary File 1. Population Estimates. Retrieved from the web 07/06/02. www.census.gov.

U.S. Census Bureau. Race for the population 18 years and over 2000. Retrieved from the web 07/06/02. www.census.gov.

U.S. Department of Transportation's Fatal Accident Reporting System and the National Highway Traffic Safety Administration's National Center for Statistical Analysis. Impaired driving facts. Retrieved from the web 07/31/02. www.pbs.org/justone/justo5.htm.

U.S. Department of Transportation National Highway Traffic Safety Administration. Traffic Safety Facts 2000. Retrieved from the web 07/10/02. www.nhtsa.dot.gov.

U.S. Environmental Protection Agency. Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders. Washington (DC): U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development. EPA/600/6-90/006F. December 1992.

World Hypertension League, 2002. Cardiovascular risk factors-The importance of controlling them. Retrieved from the web 07/31/02. www.mco.edu/org/whl/cvdinter.html.

World Hypertension League, 2002. Overweight and Obesity: A global problem requires practical tools. Retrieved from the web 07/31/02. www.mco.edu/org/whl/obesity.html.

Years of Potential Life Lost Before Age 65, Per 100,000 People. Minnesota Milestones. Minnesota Planning. Retrieved from the web 06/27/02. www.mnplanning.state.mn.us/mm/custom.html.

Appendix A

Components	Weighting
Lifestyle	
Prevalence of Smoking	10
Motor Vehicle Deaths	5
Crime	5
Risk for Heart Disease	5
High School Graduation	5
Teen Pregnancy	2.5
Access	
Unemployment	5
Prenatal Care	5
Lack of Health Insurance	5
Perception of Health Status	5
Occupational Safety	
Limited Activity Days	2.5
Disease	
Heart Disease	7.5
Cancer	7.5
All Other Diseases	5
Mortality	
Total	10
Infant	7.5
Premature Death	7.5

Appendix B

Components	Effect on Overall Score
Lifestyle	
Prevalence of Smoking	Negative
Motor Vehicle Deaths	Negative
Crime	Negative
Risk for Heart Disease	Negative
High School Graduation	Positive
Teen Pregnancy	Negative
Access	
Unemployment	Negative
Prenatal Care	Positive
Lack of Health Insurance	Negative
Perception of Health Status	Negative
Occupational Safety	
Limited Activity Days	Negative
Disease	
Heart Disease	Negative
Cancer	Negative
All Other Diseases	Negative
Mortality	
Total	Negative
Infant	Negative
Premature Death	Negative