2016 Lake Region Healthcare Community Health Needs Assessment Summary

Lake Region HEALTHCARE

Vision. Integrity. Award winning care.

INTRODUCTION

Lake Region Healthcare's commitment to community health is an essential part of our mission. We have a proud history of investing in community health programs and partnering with County, State and other organizations to identify and address the most urgent health needs in the communities we serve.

In preparing this needs assessment, the hospital collaborated with Otter Tail Public Health Department and with Minnesota Department of Health Center for Health Statistics to conduct a mailing to a random sample of households in Becker, Clay, Otter Tail and Wilkin counties in Minnesota and Richland county in North Dakota. The survey instrument was created in Clay County in a partnership with Sanford Health, Essentia Health and Cass County Public Health in North Dakota. The survey was then modified with the assistance of Minnesota Department of Health to capture the required questions to comply with Partnership for Health funding requirements.

SURVEY METHODOLOGY SURVEY INSTRUMENT

Staff from the public health agencies of Becker, Clay, Otter Tail and Wilkin counties in Minnesota developed the questions for the survey instrument with technical assistance from the Minnesota Department of Health Center for Health Statistics. Existing items from the Behavior Risk Factor Surveillance System (BRFSS) survey and from recent county-level surveys in Minnesota were used to design some of the items on the survey instrument. The survey was formatted by the survey vendor, Survey Systems, Inc. of New Brighton, MN, as a scannable, self-administered English-language questionnaire.

SAMPLE

A two-stage sampling strategy was used for obtaining probability samples of adults living in each of the five counties. A separate sample was drawn for each county. For the first stage of sampling, a random sample of county residential addresses was purchased from a national sampling vendor (Marketing Systems Group of Horsham, PA). Address-based sampling was used so that all households would have an equal chance of being sampled for the survey. Marketing Systems Group obtained the list of addresses from the U.S. Postal Service. For the second stage of sampling, the "most recent birthday" method of within-household respondent selection was used to specify one adult from each selected household to complete the survey.

SURVEY ADMINISTRATION

An initial survey packet that included a cover letter, the survey instrument, and a postage-paid return envelope was mailed August 19-20, 2015, to 1600 sampled households in each of the five counties. About 10 days after the first survey packets were mailed (September 1), a reminder postcard was sent to all sampled households, reminding those who had not yet returned a survey to do so, and thanking those who had already responded. Two weeks after the reminder postcards were mailed (September 11 and 14), another full survey packet was sent to all households that still had not returned the survey. The remaining completed surveys were received over the next six weeks, with the final date for the receipt of surveys being October 21, 2015.

COMPLETED SURVEYS AND RESPONSE RATE

Completed surveys were received from 1920 adult residents of the five counties; thus, the overall response rate was 24.0% (1920/8000). County-specific response rates can be found on the next page.

DATA ENTRY AND WEIGHING

The responses from the completed surveys were scanned into an electronic file by Survey Systems, Inc.
To ensure that the survey results are representative of the adult population of each of the five counties, the data were weighted when analyzed. The weighting accounts for the sample design by adjusting for the number of adults living in each sampled household. The weighting also includes a post-stratification adjustment so that the gender and age distribution of the survey respondents mirrors the gender and age distribution of the adult populations of the five counties, according to U.S. Census Bureau 2010 estimates.

County	Response Rate	Gender	Age groups	Race (Nonwhite)	Education <HS Grad	Income <$40,000	Unemployed or Disabled
BECKER, MN	22.90%	50-50	10.6%-19.8%	3.90%	2.20%	30.90%	1%-5%
CLAY, MN	21.60%	49-51	7.6%-40.1%	3.20%	3.40%	28.80%	2.6%-4.7%
OTTER TAIL, MN	27.30%	50-50	12.9%-21.0%	1.40%	5.70%	28.50%	0.8%-5.2%
WILKIN, MN	26.30%	50-50	10.7%-22.9%	1.20%	2.20%	28.90%	4.9%-5.5%
RICHLAND, ND	21.90%	48-52	8.9%-30.2%	1.80%	3.40%	19.70%	2.0%-3.1%

DEMOGRAPHICS/POPULATION WE SERVE

Lake Region Healthcare's primary service area extends to most of Otter Tail County and parts of Wilkin and Grant Counties in Minnesota. For some services, our secondary market extends to the counties of Becker, Big Stone, Clay, Douglas, Pope, Stevens, Todd Traverse, and Wadena MN; Roberts SD and Richland ND.

The majority of our patients live in Otter Tail County. The total population of Otter Tail County is 57,635, the median age is 46.3 and 25% of residents are 62 or older. Males and females are evenly split and race is 96% white, 2.9% Hispanic or Latino, 1.0% African American, 0.6% American Indian, 0.5% Asian, and 0.1% Native Hawaiian or Pacific Islander. Median household income is $45,500, as compared to the statewide median income of $58,476. 10% of households are single parent householders and 9% of families in Otter Tail County have income below the poverty level. Of that 9%, over half are female householders with no husband present and with children under 5 years old. (U.S. Census).

Otter Tail County is also one of the few rural counties projected to see growth in population over the next 30 years. According to the state demographer's office, the number of households in Otter Tail County is projected to grow by nearly 15% from 2010 to 2040.

INTRODUCTION - CONTINUED

DEMOGRAPHICS/POPULATION WE SERVE - CONTINUED

According to the U.S. Department of Health and Human Services, there are six medically underserved communities in Otter Tail County. These include: Battle Lake, Henning, New York Mills, Parkers Prairie, Perham and Pelican Rapids. These areas all fall within our primary and secondary service areas. (See Appendix A for Otter Tail County 2015 Adult Survey Characteristics)

ABOUT LAKE REGION HEALTHCARE

Lake Region Healthcare (LRH) is a not-for-profit healthcare system with a 108-bed hospital, multi-specialty clinic, cancer center, assisted living community, and group fitness facility on our main campus in Fergus Falls. Expanded clinic hours are offered at our west-side Walk-In Clinic and outreach clinic services are provided in Ashby, Battle Lake and Barnesville.

LRH is the largest employer in Otter Tail County. With over 80 Medical Staff and over 900 employees, our team is dedicated to serving our patients and community with integrity, teamwork, compassion and excellence. LRH is governed by a 15-member Board of Trustees. These trustees are dedicated community members who care deeply about the health care services and people served by Lake Region Healthcare. LRH works closely with other resources in our community such as Otter Tail County Social Services and Public Health, senior centers and Skilled Nursing Facilities, Mental Health providers, State agencies, group homes, assisted living facilities, and other community resources.

ABOUT LAKE REGION HEALTHCARE'S COMMITMENT TO COMMUNITY BENEFIT

For more than 100 years, LRH has been dedicated to providing high-quality, affordable health care services and to improving the health of the communities we serve. We believe good health is a fundamental right shared by all and we recognize that good health extends beyond the doctor's office and the hospital. It begins with healthy environments: fresh fruits and vegetables in neighborhood stores, successful schools, clean air, accessible parks, and safe playgrounds. These are the vital signs of healthy communities. Good health for the entire community requires equity and social and economic well-being.

Like our approach to medicine, our work in the community takes a prevention-focused, evidence-based approach. We believe strongly in solid community partnerships that have taken years to develop and grow. We have worked for many years side-by-side our partner organizations to address serious public health issues such as obesity, access to care, and end of life decisions. These partnerships, combined with the knowledge we gather through the Community Health Needs Assessments, allows us to develop strategies aimed at making long-term, sustainable change. It also allows us to deepen the strong relationships we have with other organizations that are working to improve community health.

A summary of Community Benefit Financials from numbers reported at cost from FY 2015 990 Schedule H:

- Financial Assistance $132,022
- Bad Debt Expense $1,653,545
- Unreimbursed Medicaid $7,256,469

DATA

IDENTIFICATION AND PRIORITIZATION OF COMMUNITY'S HEALTH NEEDS

Throughout 2015 and 2016, numerous Community Conversations, focus groups, key informant interviews, and stakeholder meetings were conducted. Information gathered from these activities along with the results of the Community Needs Assessment survey was utilized to identify common issues across all four counties. These common issues or themes were aligned to the Healthy People 2020 which has four overarching goals:

1. Attain high-quality, longer lives free of preventable disease, disability, injury and premature death;
2. Achieve health equity, eliminate disparities, and improve the health of all groups;
3. Create social and physical environments that promote good health for all;
4. Promote quality of life, health development, and health behaviors across all life stages

In addition to the primary data results, secondary data was reviewed to identify potential health care needs. Secondary data sources included: Minnesota State, County and Community Health Board Vital Statistics Trend report.

SUMMARY OF PRIORITIZED NEEDS

1. Reduce substance use (Opioid Epidemic)
2. Reduce obesity
3. Address mental health issues
4. Prevent adverse childhood events
5. Focus on chronic disease management (with an emphasis on hypertension and diseases associated with high cholesterol such as coronary heart Disease, stroke, peripheral vascular Disease and diabetes)

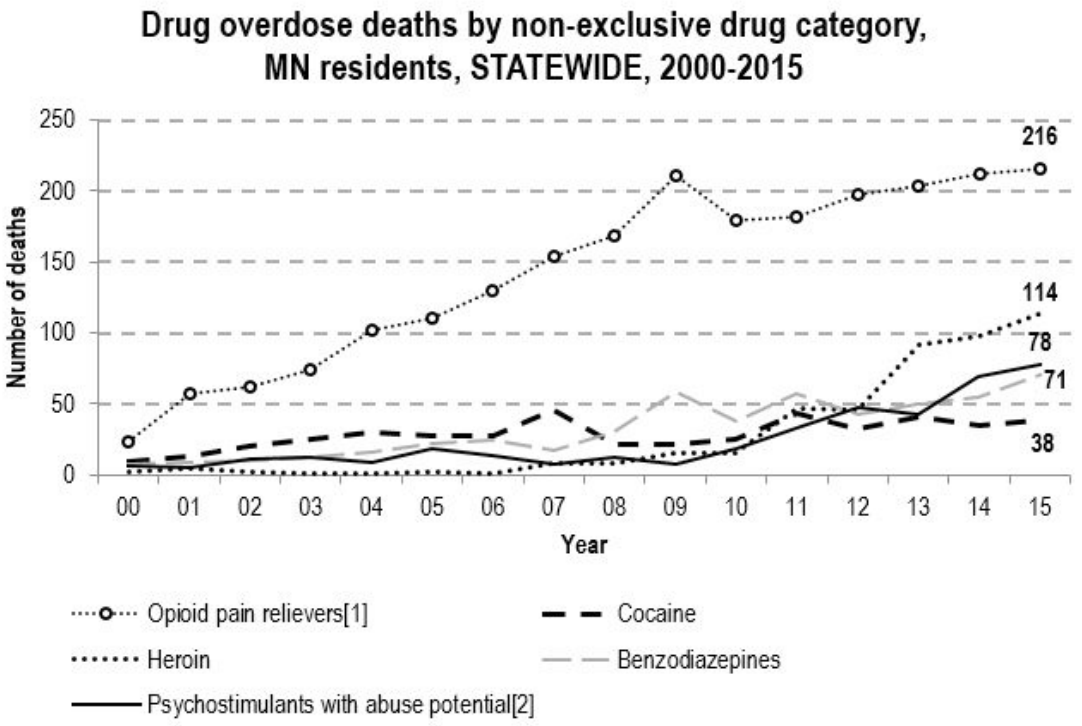
"A healthy community is one that continuously creates and improves both its physical and social environments, helping people to support one another in aspects of daily life and to develop to their fullest potential. Healthy places are those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders—where every person is free to make choices amid a variety of healthy, available, accessible, and affordable options."

The US Department of Health and Human Services

SUBSTANCE USE

Recently, the Centers for Disease Control and Prevention declared the United States is experiencing an opioid overdose epidemic (CDC, 2016). In 2014, 28,000 people in the United States died of drug overdose, the highest number ever recorded, with more than half of these deaths related to prescription opioids or heroin (CDC, 2016). Since 1999, overdose deaths related to opioids and heroin have quadrupled throughout the nation (CDC, 2016).

Minnesota has seen similar trends as a state. From 2014 to 2015, the state recorded an 11% increase in drug overdose deaths, both unintentional and suicide (MDH, 2016). With overdose rates four times as high in 2015 than in 2000 and more than half of these being related to prescription medications (See Figure 1.1 below) (MDH, 2016).



NOTE: Drug categories are not exclusive.

SOURCE: Minnesota death certificates, Injury and Violence Prevention Unit, Minnesota Department of Health (MDH), 2000-2015

1 Opioid pain relievers: Includes methadone
2 Psychostimulants with abuse potential: Include methamphetamine

DATA - CONTINUED

OBESITY

Through the survey, we learned that approximately 28% of the population a whole is considered overweight or obese as calculated using the Body Mass Index (BMI) chart. Rates in Clay County were lower, around 25%, but higher in Otter Tail and Wilkin Counties at around 30% and 40%, respectively (see Figure 2.1). According to the County Health Rankings, the state of Minnesota is experiencing an obesity rate of 26%. Therefore, rates within the service area and specified counties are considerably higher than the state average.

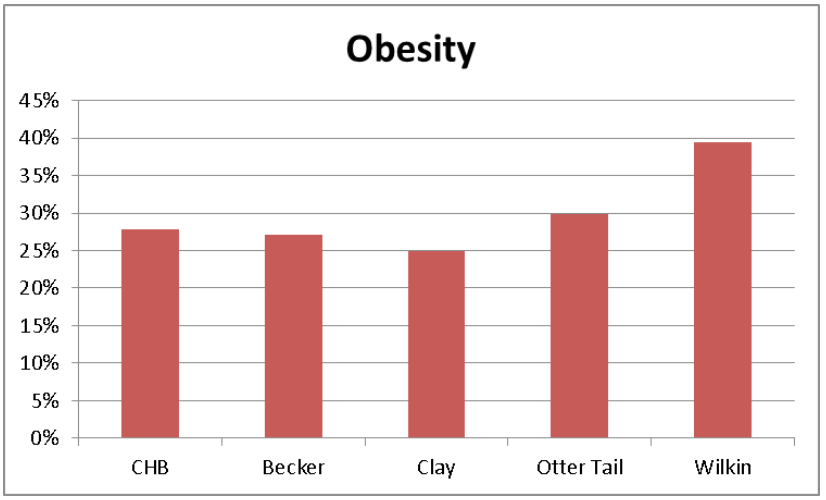


Figure 2.1

Even though rates are considerably higher, the survey identified that only 20% of the population within the service area is "very concerned" about obesity. These rates of concern also decreased within counties where obesity is more widespread (see Figure 2.2).

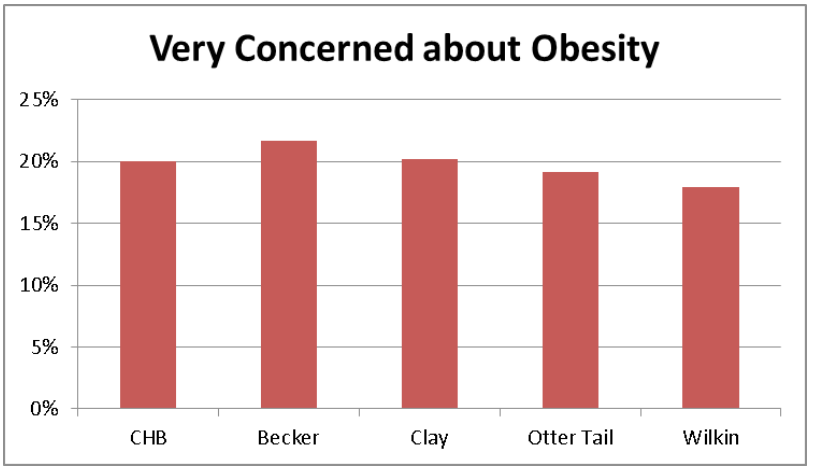


Figure 2.2

Though there was little concern of physical inactivity identified by the survey (see Figure 2.3), the County Health Rankings identified that approximately 20% of Minnesotans over age 20 reported no leisure time physical activity. Unfortunately, these rates were even higher among the CHB, ranging from 22 to 26% and concern was lowest among counties with the highest rates of physical inactivity (County Health Rankings, 2016).

Like schools, worksites offer an ideal place to create a culture of wellness, due to the amount of time that adults spend at their place of employment. These changes not only benefit the health of the employee, but also the employer through decreased absenteeism and increased productivity.

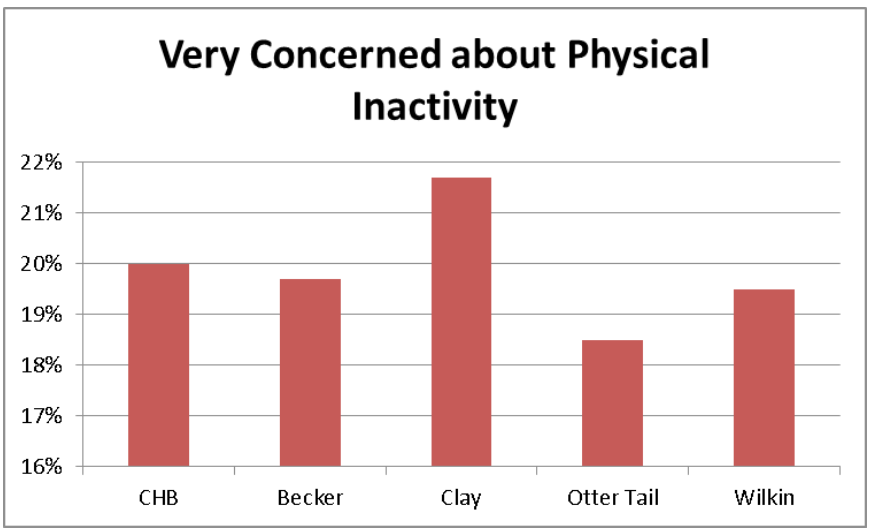


Figure 2.3

Community Health Needs Assessment survey findings revealed the following self-reported healthy behaviors:

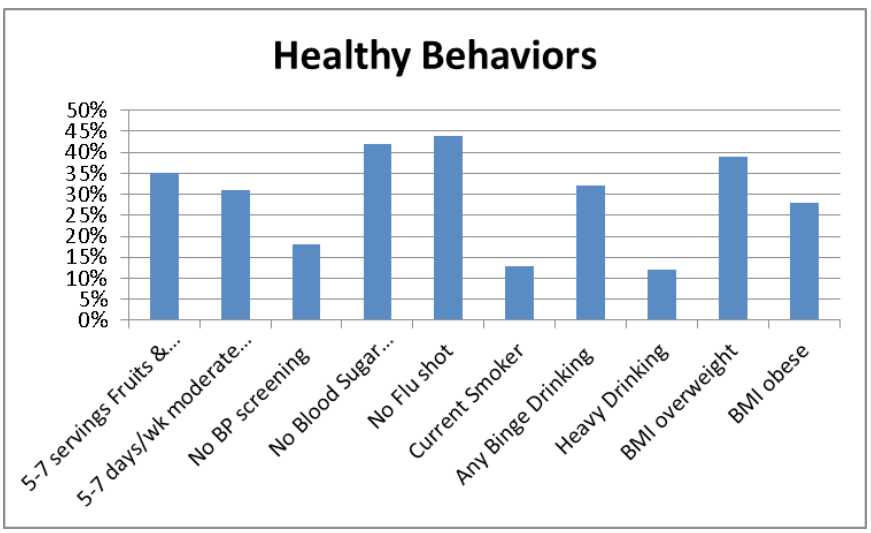
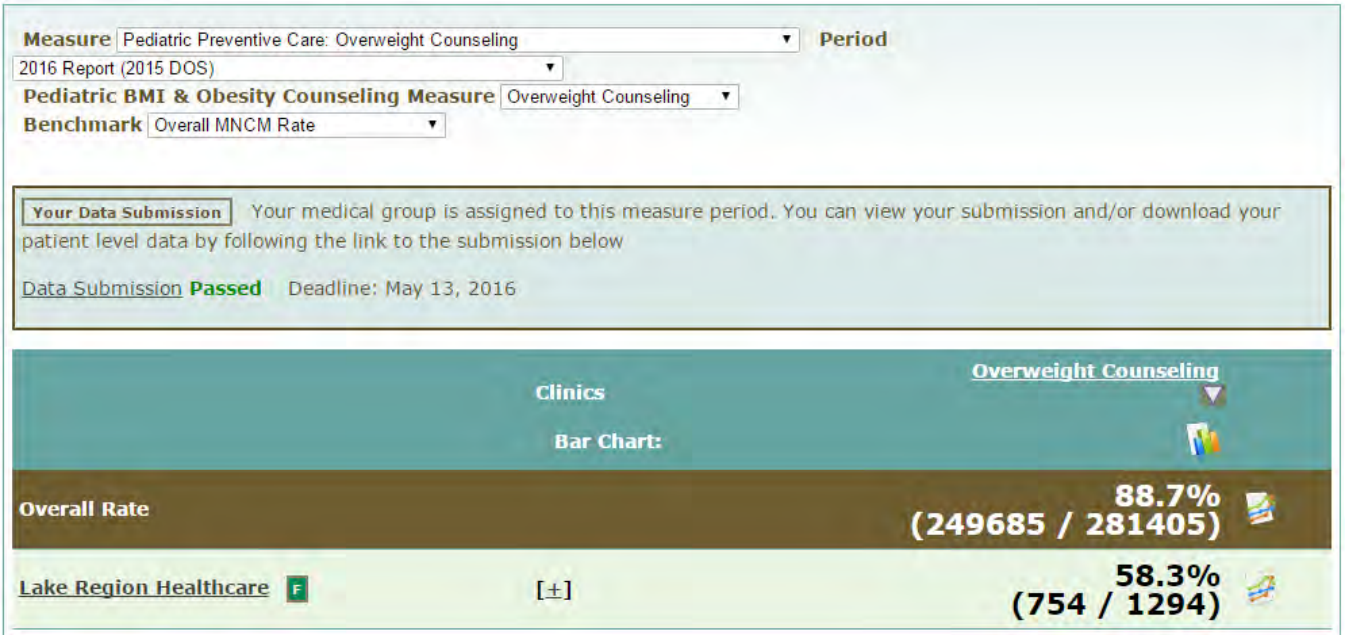


Figure 2.4

DATA - CONTINUED

Pediatric Overweight Counseling



MENTAL HEALTH

The survey showed that 21% of the service area is affected by depression, with rates ranging from 17 to 25% within specific counties (See Figure 3.1). These statistics are a bit alarming, when considering that the National Health and Nutrition Examination Survey found that between 2009 and 2012, approximately 7.6% of Americans over age 12 had depression (CDC, 2015). These rates are more similar to those of Minnesota in 2011, when over 8% of Minnesotans experienced significant depressive systems (MDH, 2012). With these rates so significantly different, more specific data may be collected to determine similarities of question bases used to obtain these results. However, the number of poor mental health days reported, in the last 30 days and collected by the County Health Rankings, for Minnesota was 2.9 and the group of four counties ranged from 2.7 to 2.9 (2016).

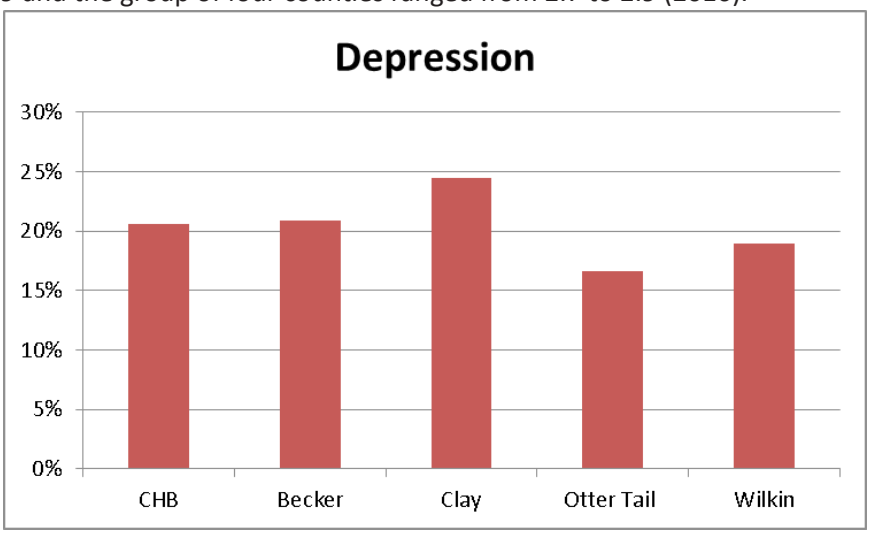


Figure 3.1

With rates seemingly high compared to state and national rates, there didn't seem to be significant concern of depression and consequent suicide (See Figure 3.2 and 3.3). Overall, throughout the service area, only 17% of the population was 'very concerned' about depression while only 15% were 'very concerned' about suicide rates.

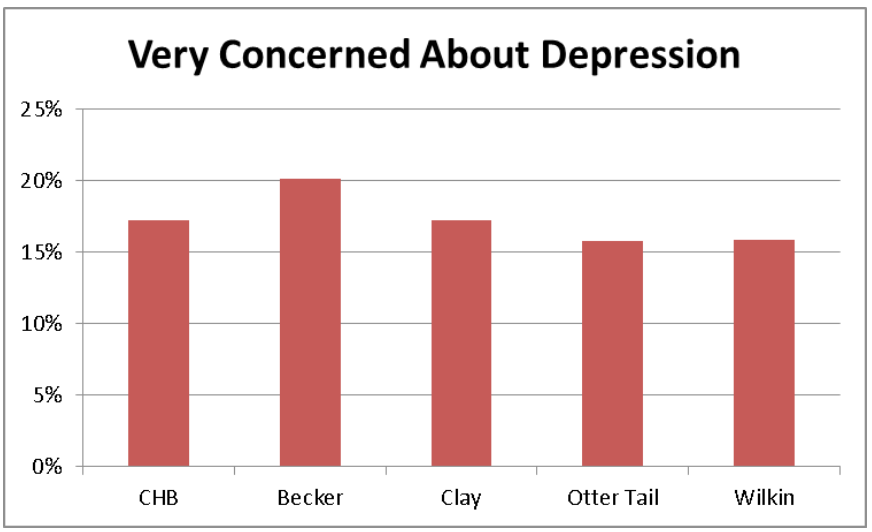


Figure 3.2

DATA - CONTINUED

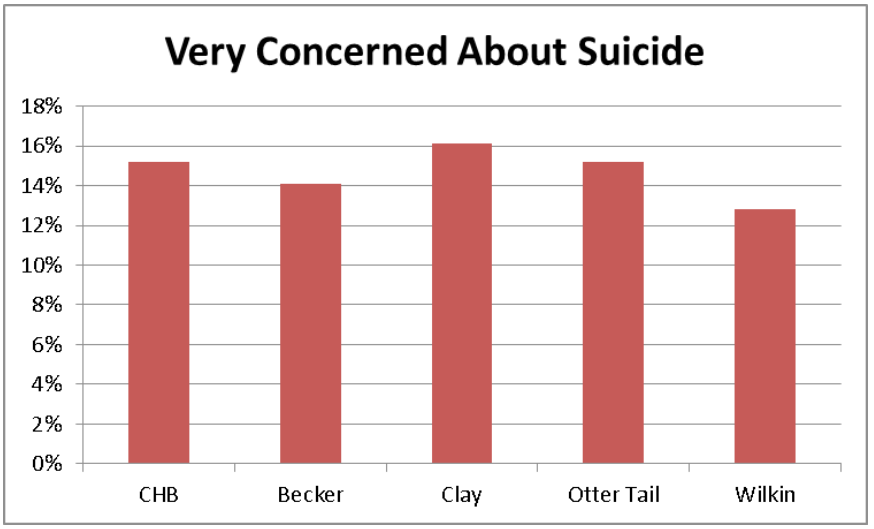


Figure 3.3

In 2014, suicide was the 8th leading cause of death within Minnesota, claiming 683 lives (MDH, 2014). Causes of death ranking ahead of suicide included cancer, heart disease, stroke and other chronic illnesses (MDH, 2014).

Another statistic to consider is the number of mental health providers within the specific counties. Throughout the state, there is an overall ratio of population to provider of 490:1 (County Health Rankings, 2016). This rate is similar to that of Clay County (450:1) and Wilkin County (590:1), however Becker County and Otter Tail County are experiencing a different disparity with rates at 760:1 and 990:1, respectively (County Health Rankings, 2016). As depicted from the survey that was conducted, this was of little concern of the residents within the service area (See Figure 3.4).

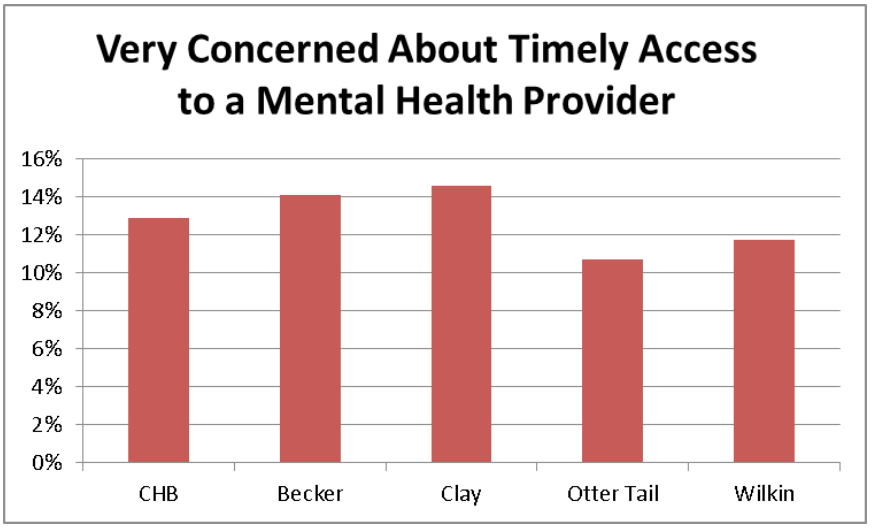


Figure 3.4

Community Health Needs Assessment survey findings revealed the following self-reported mental health findings:

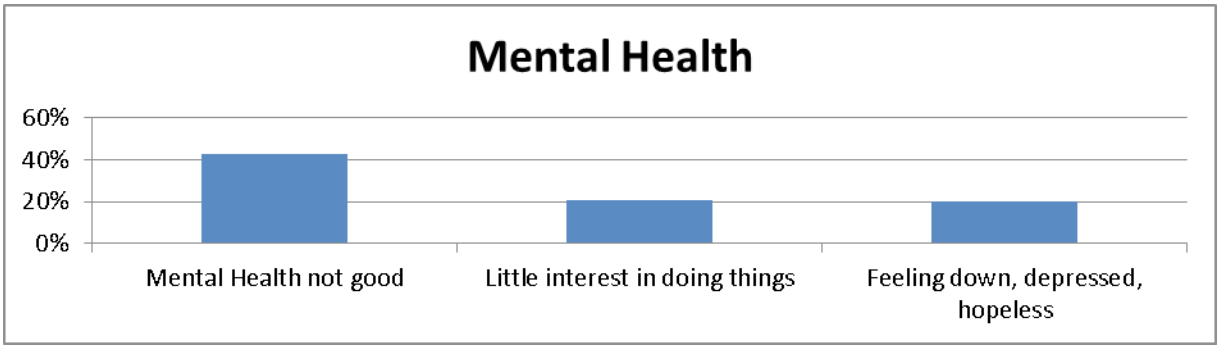


Figure 3.5

Pediatric Mental Health Screening using PHQ-9 for children:

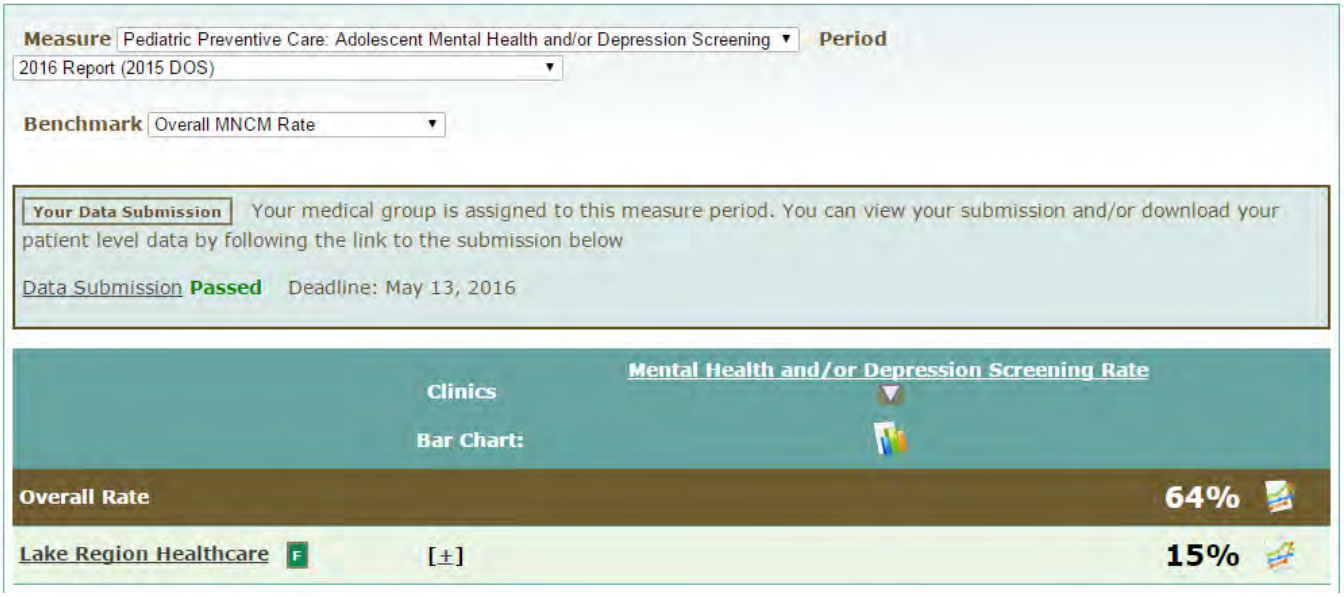


Figure 3.6

ADVERSE CHILDHOOD EVENTS

The last priority identified by Partnership4Health Community Health Board was Adverse Childhood Events. As defined by the Minnesota Department of Health, "an adverse childhood experience (ACE) describes a traumatic experience in a person's life occurring before the age of 18 that the person remembers as an adult (2013)." Different types of ACES include physical, sexual, or emotional abuse, mental illness of a household member, alcoholism of a household member, drug use by a household member, divorce or separation of a parent, domestic violence towards a parent, and incarceration of a household member (MDH, 2013). Over half (55%) of Minnesotans responding to a survey conducted by the Minnesota Department of Health, experienced at least on ACE in their childhood (MDH, 2013). Through the survey conducted throughout the service area, it was identified that nearly 25% of the CHB as a whole is very concerned about child abuse and neglect, with rates lower in Otter Tail County, slightly higher in Clay and Wilkin Counties, and higher yet within Becker County (See Figure 4.1).

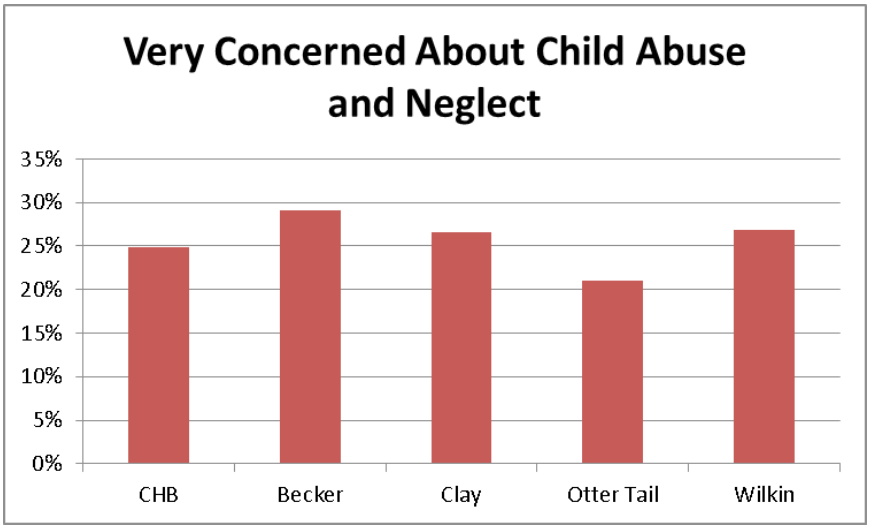


Figure 4.1

Those experiencing one ACE are more likely to experience others, and as the number of ACES increases, so does the risk for subsequent health problems as an adult (MDH, 2013). Figure 4.2 below, created by the Minnesota Department of Health shows the linkage between the number of ACES and subsequent chronic illness as an adult.

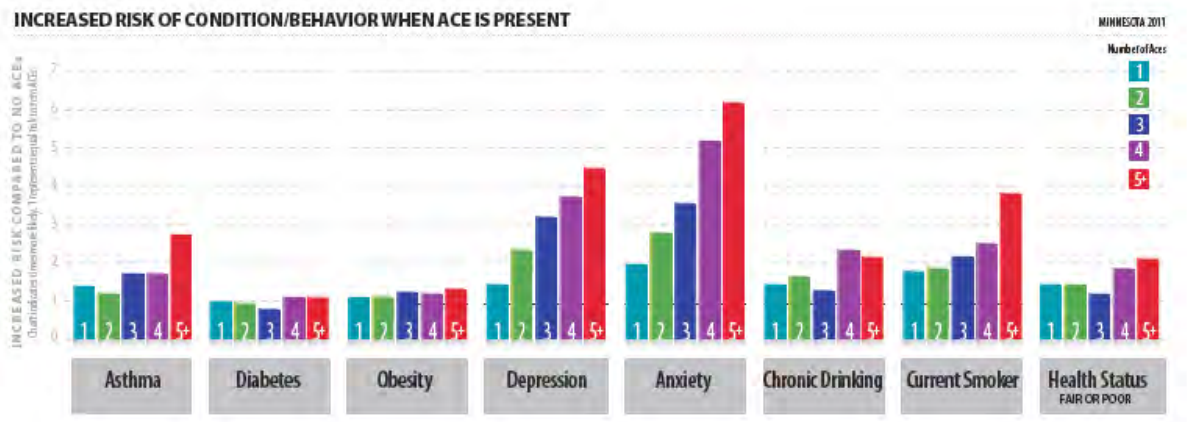


Figure 4.2

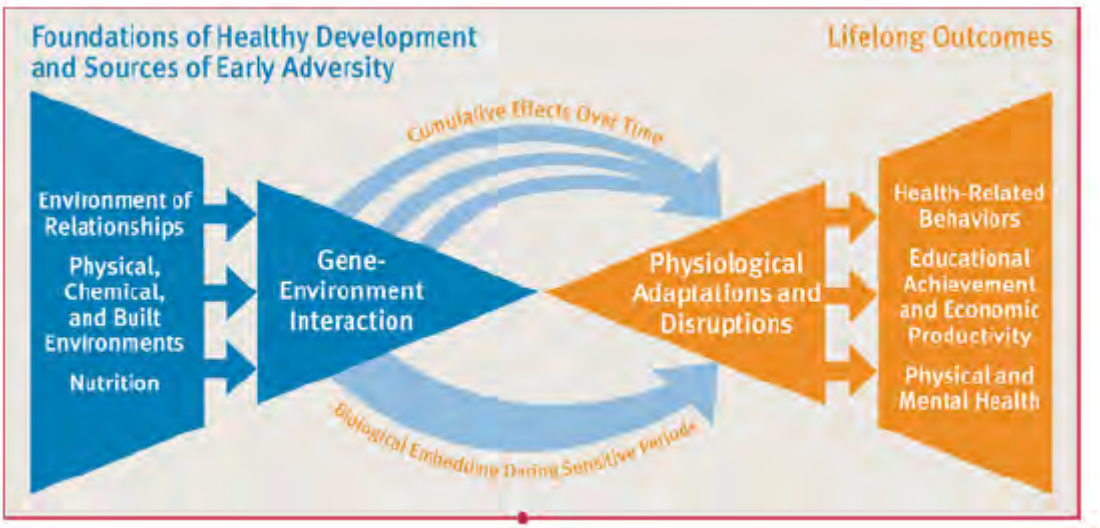


Figure 4.3

Through the Minnesota ACE Study a few strategies to reduce and build resiliency to ACES have been identified. These include:

- Increasing awareness of ACES and their impact on health through developing a language and working with education, welfare, healthcare, and other public systems.
- Help communities develop ways to prevent and respond to ACES.
- Continue to collect data on ACES and health outcomes by designating funds for research.

Evidence based intensive family home visiting programs have demonstrated success related to the strategies listed above. Specially trained public health nurses provide home visits on a specified schedule providing activities and information to address factors impacting the child's health and development. Counties within the service are have in place the Nurse Family Partnership program to serve first time pregnant women and their child until age two.

Counties within the service area are working with these strategies by striving to become accredited sites of Healthy Families America, which is an evidence based home visiting model. Becker County has had their site visit for accreditation while the Clay, Otter Tail, and Wilkin Counties site visit is scheduled for July 2017. The local county programs are planning to serve families until the child is 3 years of age due to funding limitations. Goals of Healthy Families America include reducing child maltreatment, improving parent-child interactions and children's social-emotional well-being, and promoting children's school readiness (DHHS, 2013). Weekly home visits begin prenatally or within the first three months of the child's life and continue until they are 5 years old (DHHS, 2013). Activities and information offered during the visits are tailored to fit the specific needs of parents and children (DHSS, 2013).

CHRONIC DISEASE MANAGEMENT *(with an emphasis on hypertension and diseases associated with high cholesterol such as coronary heart disease, stroke, peripheral vascular disease and diabetes)*

Chronic diseases and chronic conditions are those which persist over a long period of time, from months to years. These diseases are among the leading causes of death and years of potential life lost in Minnesota and also contribute significantly to long-term disability and poor quality of life. Examples of common chronic disease and conditions include: Alzheimer's disease, arthritis, obesity, asthma, chronic obstructive pulmonary disease, heart disease and stroke, diabetes, mental illnesses, and cancer. Community Health Needs Assessment survey findings revealed the following self-reported chronic health conditions:

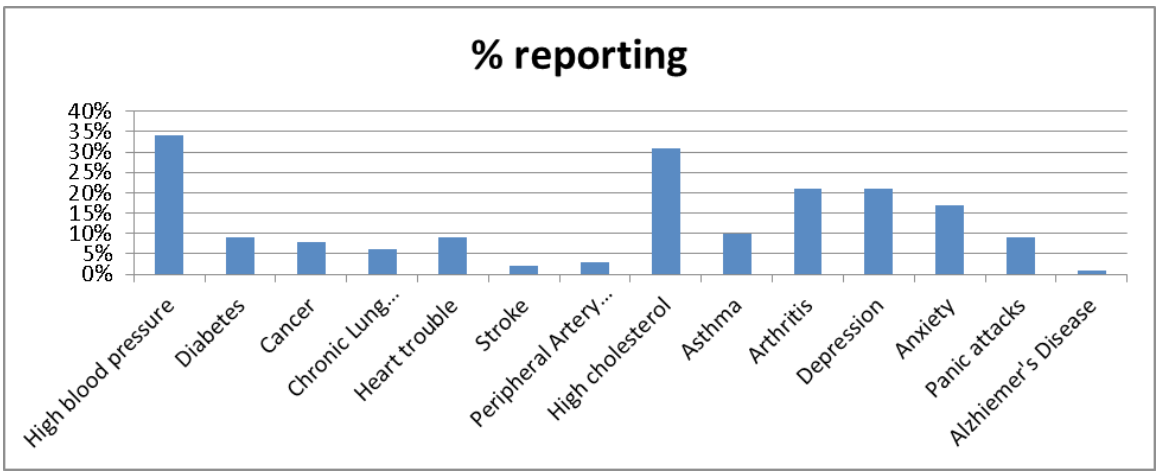


Figure 5.1

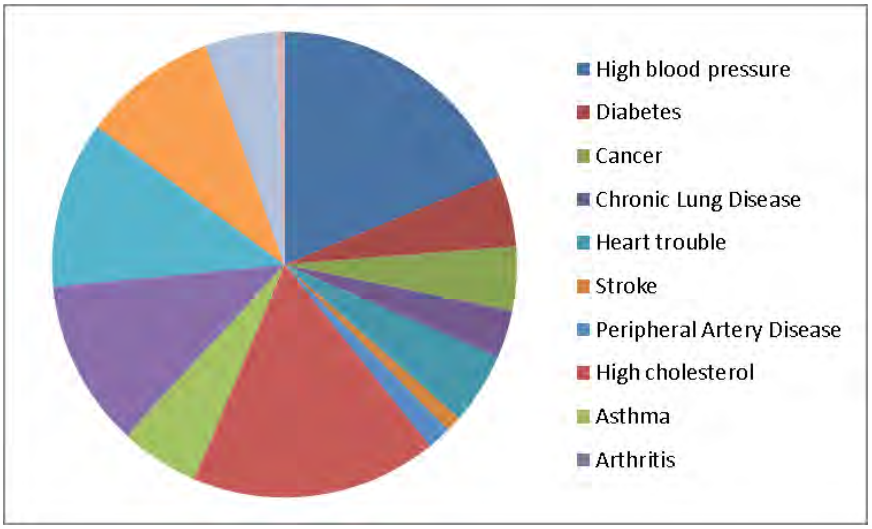


Figure 5.2

2016 Optimal Vascular Results for 2015 dates of service:

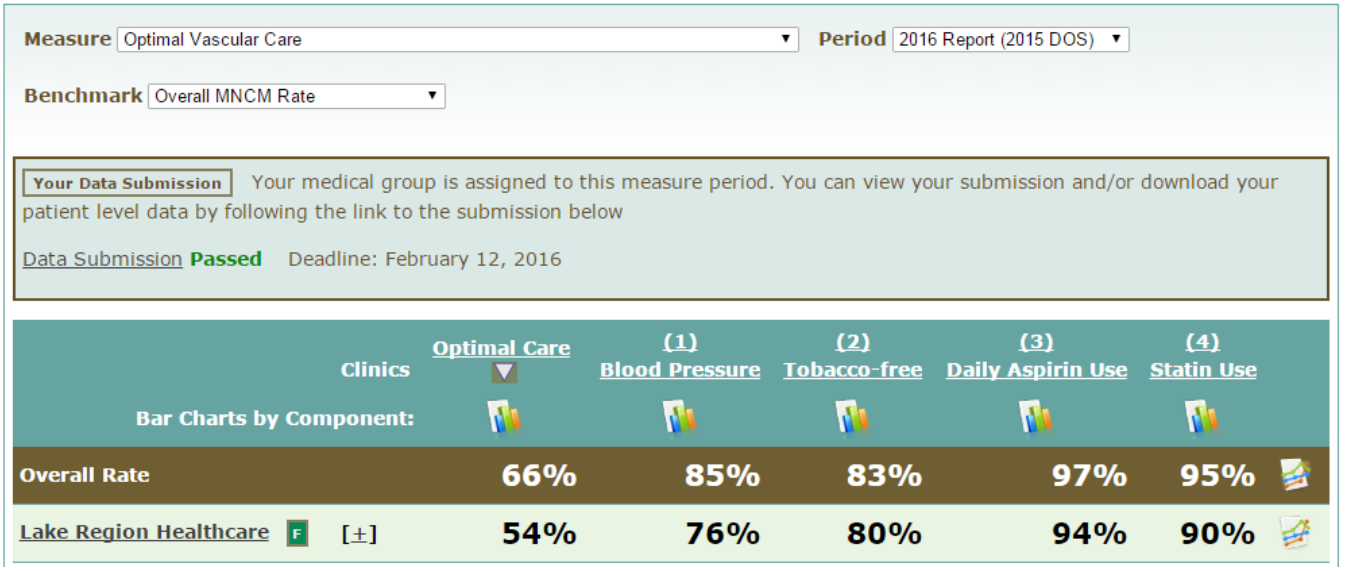


Figure 5.3

2016 Optimal Diabetes Results for 2015 dates of service:

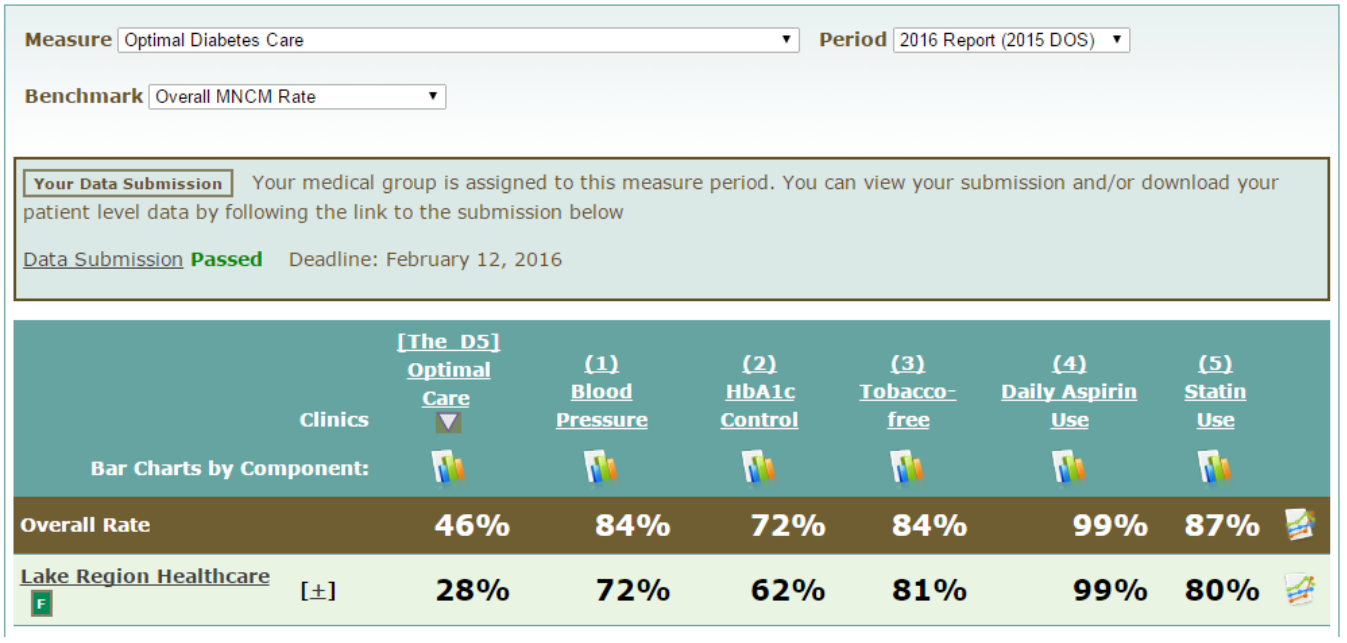


Figure 5.4

INITIATIVES AND STRATEGIES TO ADDRESS IDENTIFIED HEALTH NEEDS

An implementation strategy will be developed that focuses on addressing the prioritized needs of the community. This strategy is outlined in a separate document and will describe specific steps that will be taken to address the priority health needs of the community.

APPENDICES

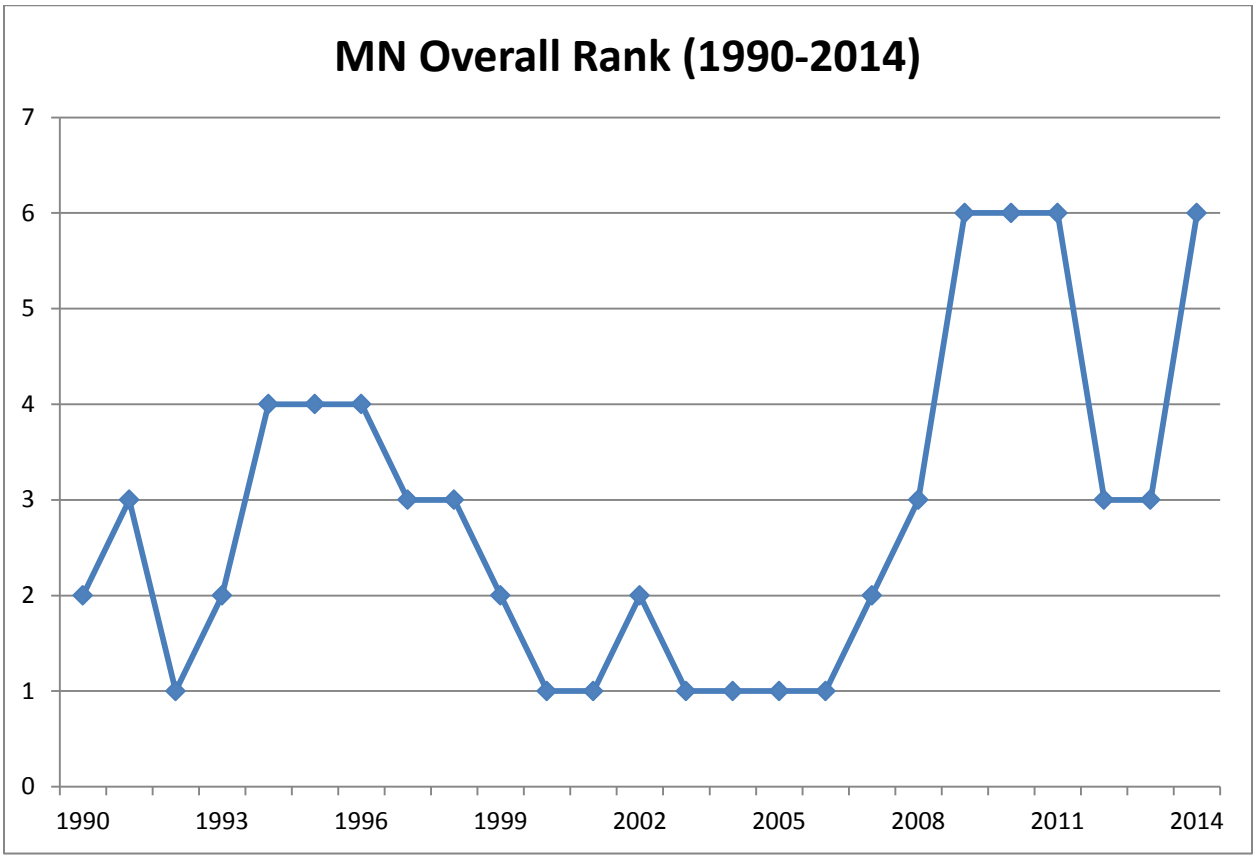
Appendix A

Otter Tail County 2015 adult survey				
Demographic Characteristic				
n=426		Unweighted Frequency	Unweighted Percent	Weighted Percent
Gender				
	Male	176	41.3%	49.7%
	Female	250	58.7%	50.3%
Age Group				
	18-34	28	6.6%	21.0%
	35-44	42	9.9%	12.9%
	45-54	39	9.2%	20.3%
	55-64	104	24.4%	19.0%
	65-74	116	27.2%	13.7%
	75+	97	22.8%	13.1%
White/Of color				
	White	420	98.6%	
	Not white	6	1.4%	
	Hispanic/Latino	3		
	American Indian	1		
	Asian or Pacific Islander	0		
	Black or African American or African	0		
	Other race	3		
Education				
	Less than HS	17	4.1%	5.7%
	HS grad/GED	114	27.2%	26.6%
	Trade/vocational school, some college or Associate degree	175	41.8%	42.3%
	Bachelors degree or more	113	27.0%	25.4%
Income				
	<$20,000	64	16.2%	11.0%
	$20,000-$39,999	90	22.8%	17.5%
	$40,000-$69,999	123	31.1%	30.7%
	$70,000-$119,999	80	20.3%	28.6%
	$120,000+	38	9.6%	12.1%
Employment status				
(These do not add up to 100% because respondents could choose more than one status)	Employed	164	38.9%	57.3%
	Self-employed/farmer	41	9.7%	12.8%
	Unemployed/out of work	5	1.2%	0.8%
	Homemaker/stay at home parent	17	4.0%	5.2%
	Student	4	0.9%	1.3%
	Retired	218	51.7%	28.8%
	Unable to work because of a disability	25	5.9%	5.2%
How long lived in community				
	Less than 2 years	22	5.2%	4.8%
	2 to 5 years	43	10.1%	12.7%
	More than 5 years	359	84.7%	82.5%
Own or rent home				
	Own	358	85.9%	87.4%
	Rent	49	11.8%	6.7%
	Other arrangement	10	2.4%	5.9%

Appendix B

General Health Status

Minnesota is one of the healthiest states in the country. The United Health Foundation has ranked states' health status since 1990 by taking into account many different aspects of overall health for evaluation; for the first 18 years, Minnesota ranked in the top five. From 2009 to 2011, Minnesota fell to a ranking of sixth, before reclaiming a top-five ranking in 2012.



According to the 2012 *America's Health Rankings*[i] report, Minnesota's strengths include:

- Low rate of premature death and deaths from cardiovascular disease (Rank: 1)
- Low prevalence of sedentary lifestyle (Rank: 8)
- Low prevalence of diabetes (Rank: 3)
- High rate of high school graduation (Rank: 3)

Challenges identified by the report include:

- Low rate of public health funding per capita (Rank: 48)
- High prevalence of binge drinking (Rank: 44)
- High incidence of infectious disease (Rank: 50)

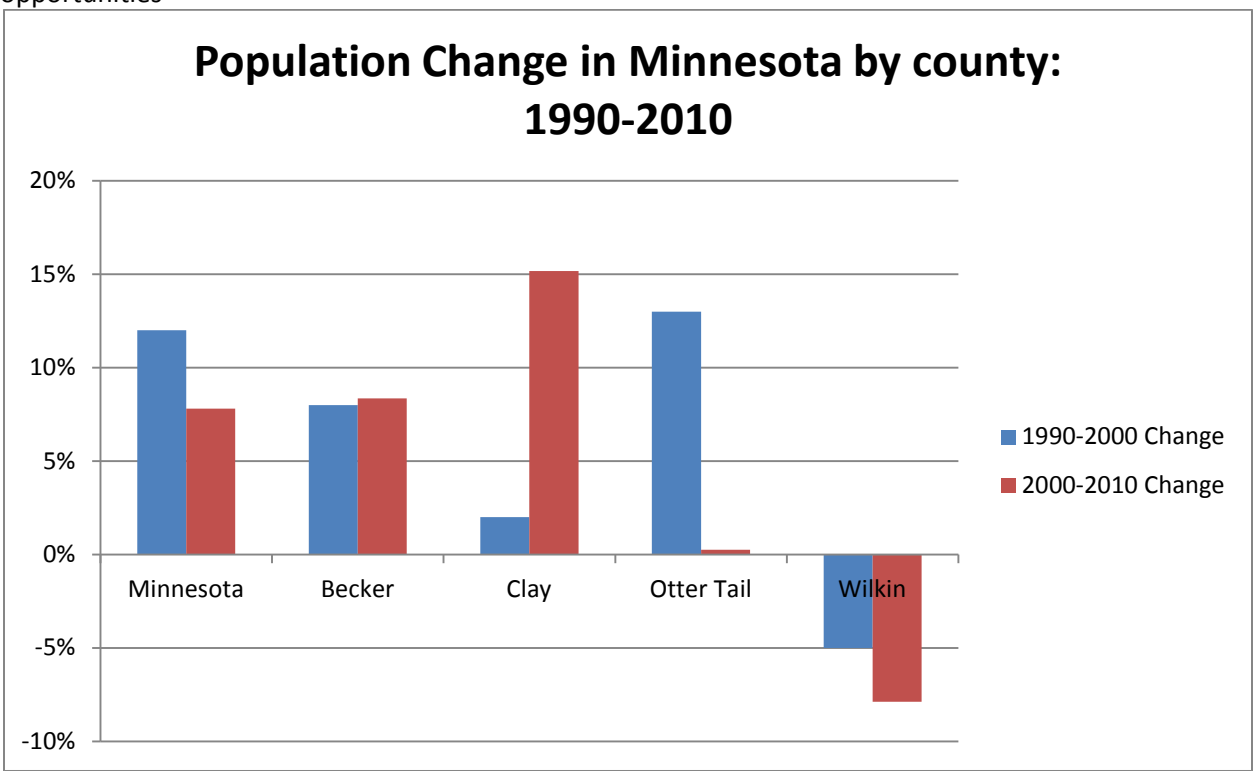
The report discovered that Minnesota has made improvements on health factors, such as immunization coverage and cardiovascular death rate, which could contribute to its raised health ranking. However, it still continues to rank lower on certain health factors as the increasing number of children in poverty and decreasing amount of public health funding become major concerns for the overall health of the state.

[i] *America's Health Rankings*. United Health Foundation, 2013. Retrieved from www.americashealthrankings.org/CustomReport.

Appendix C

Population Change

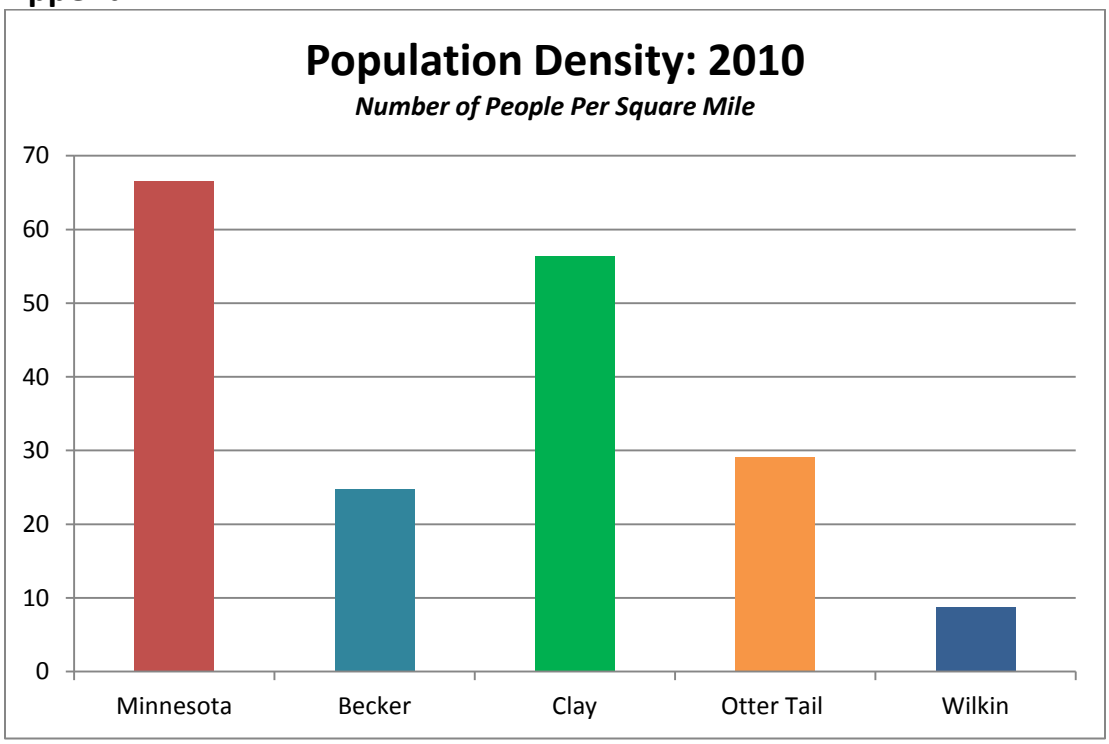
Minnesota is rapidly changing. Over time, Minnesota's racial and ethnic diversity has grown. Residents all over the state are re-examining what it means to be "Minnesotan". As new immigrants enter the state, and as the base population ages, Minnesota will face new challenges, and also encounter unique opportunities



Minnesota's population grew by 7.8 percent between 2000 and 2010 (at about the same rate as South Dakota, as but faster than North Dakota, Wisconsin, or Iowa). Urban areas continue to grow rapidly in Minnesota, while rural areas experience steady population loss.

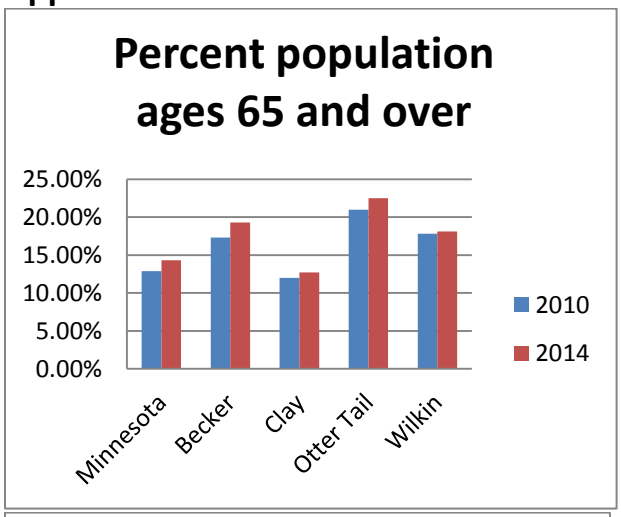
Becker, Clay, and Otter Tail counties have all experienced a positive percent population change since 1990. Clay has experienced more population change from 2000-2010 compared to the growth from 1990-2000. Otter Tail has experienced close to 0 percent population change from 2000-2010. Wilkin has experienced a steady decrease in population since 1990, decreasing by 5 percent from 1990-2000 and then again by 8 percent from 2000-2010.

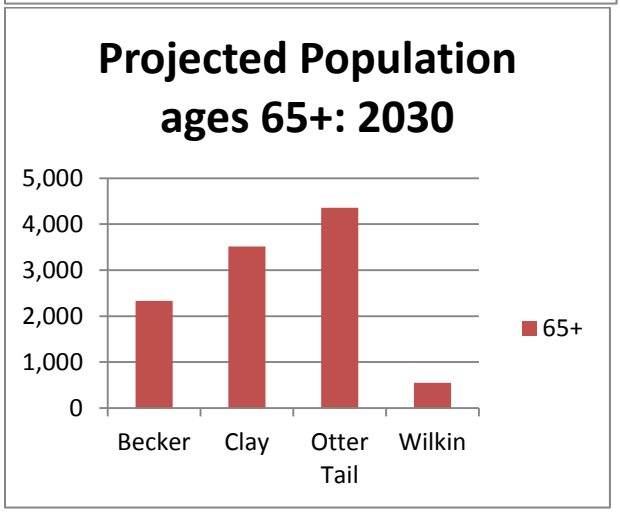
Appendix D



In 2010, Minnesota experienced a population density of 66.6 people per square mile. When compared to surrounding states, this population density is similar to that of Iowa, higher than South Dakota and North Dakota, and lower than Wisconsin. Of the four counties, Wilkin has the lowest population density with 8.8 people per square mile. Becker and Otter Tail are in the middle with 24.7 and 29.1 people per square mile respectively. Clay has the greatest population density and is close in numbers to the overall population density of the state with 56.4 people per square mile.

Appendix E



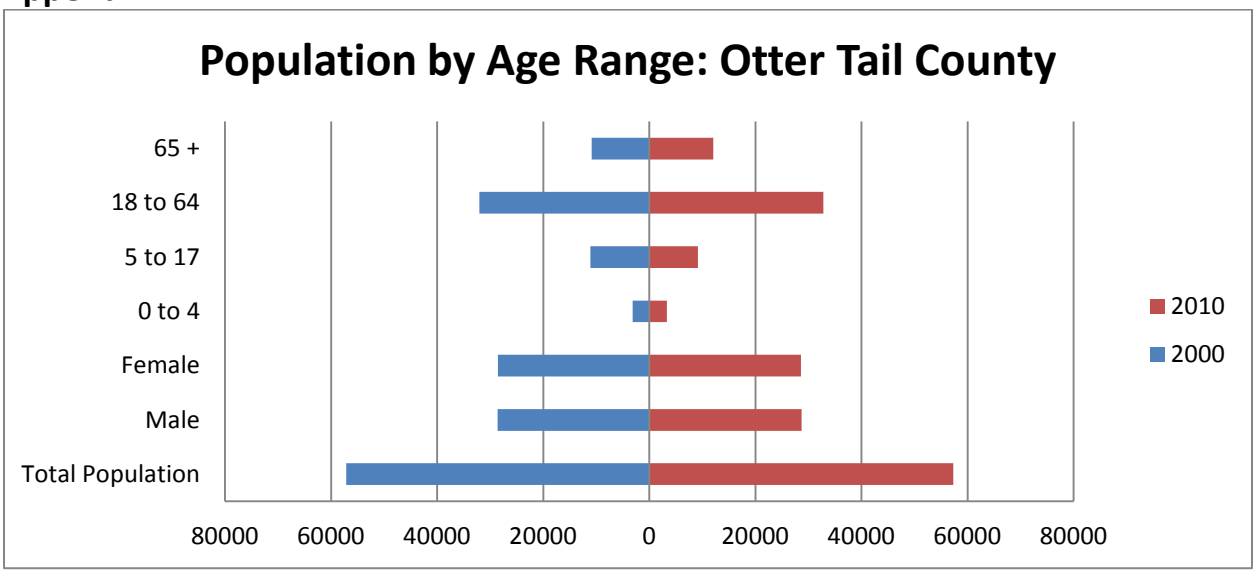


From the 2010 US Census data, Minnesota has a fairly low percentage of the population over the age of 65, with this age group only making up 12.9 percent. Clay has a slightly lower proportion of the population over the age of 65 compared to the state of Minnesota, and is the only county below the state average. Becker and Wilkin possess similar percentages, but Becker is instead slightly higher than the state average. Otter Tail is noticeably higher in the percentage of population over the age of 65 compared to the state of Minnesota.

In 2035, the individuals 65 years and older are expected to comprise an even greater percent of the total population in Becker, Clay, Otter Tail, and Wilkin counties, as well as the state of Minnesota. This will put considerable stress on the resources of the area. It should be noted that the projected number might also be inaccurate, as many families may choose to bring their older relatives to live nearby in long-term care facilities in these counties.

As our population ages, these small counties can expect new challenges; not only concerning health related issues, but economic effects as well. As these individuals age, go into retirement, and pass on, who will replace them? Will they remain in their small communities, or move to larger metropolitan centers with better health amenities? These are questions that should be considered by all communities, especially small towns where baby boomers or the future senior citizens are quite prevalent, when trying to improve their overall health.

Appendix F

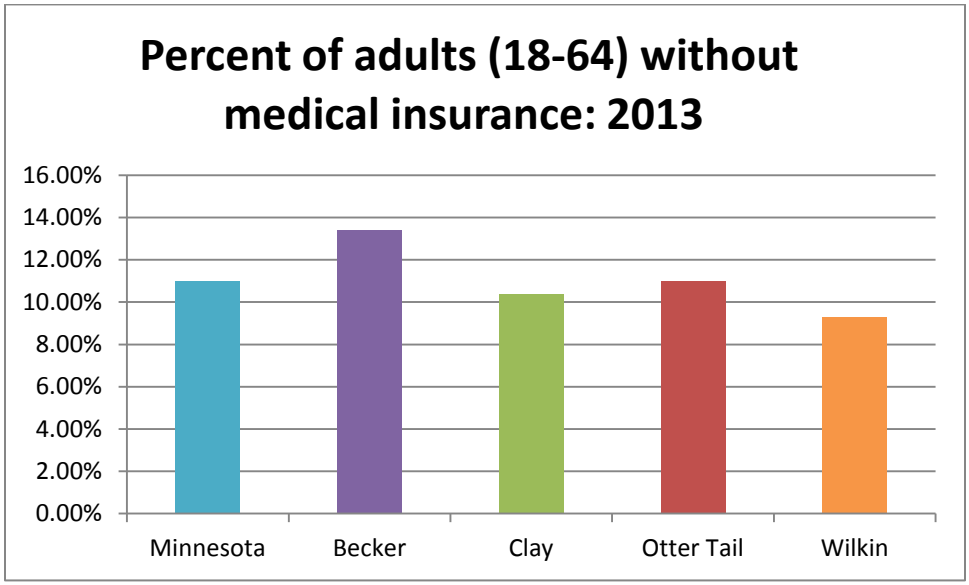


In 2000, the distribution of ages in each county shows a similar trend with a higher percent of 10-20 year olds, a lower percent of 20-35 year olds, and a higher percent of 35-50 year olds (representing the baby-boomer generation). However there are variations unique to each location. For example, nearly 15 percent of Clay's population is between 15 and 25, possibly because of the presence of colleges in that county. Otter Tail has only 8 percent of their population in the 20-30 age range, compared to 10 to 15 percent of the population in this age range for the other counties.

In 2010, the age distributions shift up as we'd expect since each of the citizens is now ten years older. However, there are some discrepancies. For example, 10-14 year olds made up more than 8 percent of Becker's population in 2000, but in 2010 20-24 year olds (the same group of people) composed less than 5 percent of the population, which would indicate people of this age group leaving Becker County. In Clay, 10-14 year olds made up about 7.5 percent of the population in 2000; this percentage nearly doubled by 2010, reaching more than 12 percent. This would indicate that Clay has a higher percentage of younger people than the other counties.

Appendix G

In 2011, 11.7 percent of adults in Minnesota and in Otter Tail County didn't have medical insurance. Becker was above the state average, with 14.4 percent. Clay and Wilkin were slightly below the state average, reporting 10.3 percent and 10.9 percent, respectively. There is a very small difference (only about 1 percent) between Minnesota, Clay, Otter Tail, and Wilkin.

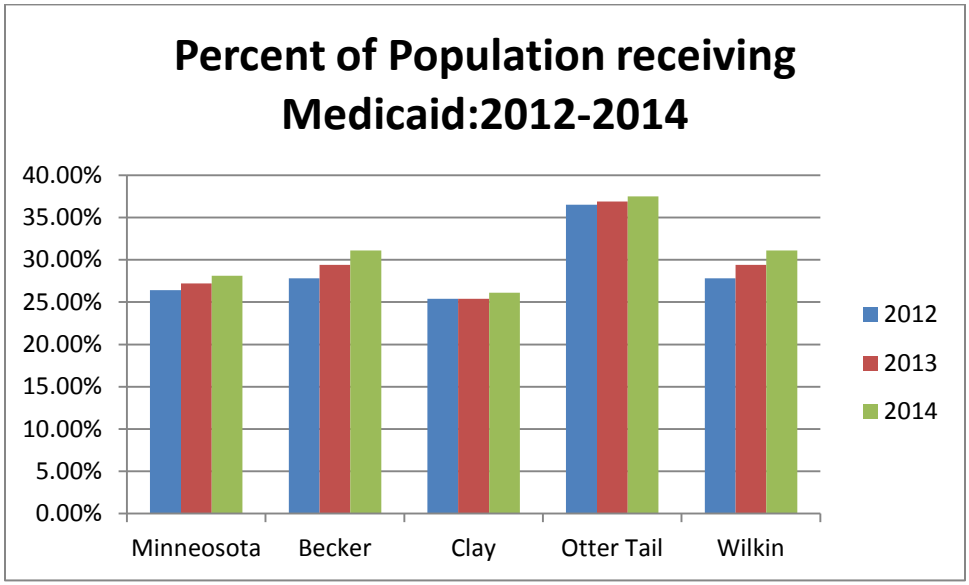


The percent of children without medical insurance in 2011 was again highest in Becker with 9.9 percent. The state of Minnesota reported 6.4 percent. Clay and Otter Tail were slightly above the state average with 6.6 percent and 7.0 percent respectively. Wilkin was slightly lower with 6.3 percent.

The data for the percent of children without medical insurance strongly follows the same trend as the percent of adults without medical insurance. This gives reason to conclude that the two are strongly correlated. From this, it is also reasonable to assume that the majority of adults without medical insurance are part of a family that collectively does not have health insurance. This would provide the same trend in the children data as shown. Therefore, it is possible that families face the largest issue or struggle in affording health insurance in these areas.

Appendix H

To take a different look at health insurance, we can look at the percent of the population receiving Medicaid. Medicaid is a federally and state-funded insurance for those with low income or resources.[i] Counties with a larger low-income, uninsured population are likely to have more receiving Medicaid.



For the percent of the population receiving Medicaid from 2009-2011, data for Wilkin was unavailable due to the small numbers reported. Becker had the greatest percent of population receiving Medicaid, reporting 20.1 percent; this county also had the largest percent of its population without medical insurance. The state of Minnesota reported 14 percent; this is 6 percent lower than Becker. Clay was slightly below the state average with 13.2 percent, and Otter Tail was slightly above with 16.4 percent.

The cost of health care can greatly impact the ability for individuals to receive proper health care due to the issue of affordability. To estimate this across the examined areas, the price-adjusted Medicare spending per enrollee within the area was used. It is hard to know what the "ideal" health care cost is, but the results can still be compared across counties and to the state (county health rankings).

All four counties have health care costs below the state of Minnesota. Otter Tail has the highest, with $7,604. Becker and Clay are about $100 lower, and Wilkin is about $400 lower, at $7,232.

[i] Centers for Medicare & Medicaid Services. (2014) Retrieved from www.medicaid.gov

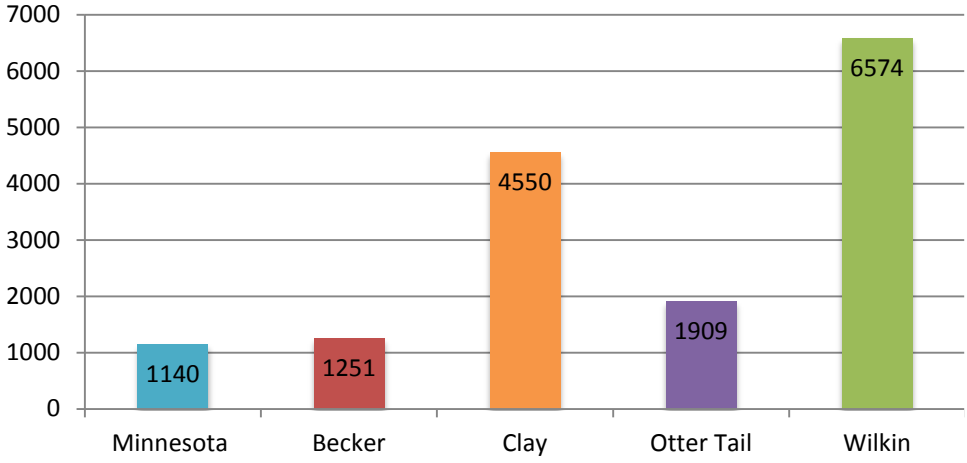
Appendix I

The health care workforce in Minnesota that carries out most routine and preventive care primarily consists of nurse practitioners, primary care physicians, and dentists. Access to primary care varies regionally. For example, southeast Minnesota (where the Mayo Health System largely resides) employs a relatively high proportion of providers for its population compared with the rest of the state; northwest Minnesota has access to a relatively smaller pool of providers.[i]

The state of Minnesota as a whole has 1140 residents to 1 primary care physician. This number is lower than all four counties, meaning the four counties have a smaller proportion of physicians to the population than the state of Minnesota. Wilkin has the greatest proportion of population to physicians with 6574 to 1. Clay is also fairly large with 4550 people to 1 physician. Becker and Otter Tail are slightly above the state average, with 1250 people to 1 physician and 1909 people to 1 physician respectively. Because Becker and Otter Tail are fairly close to the state average, it can be said that these counties have reasonable access to physicians. On the other hand, Wilkin and Clay have less access to health care than MN; these high ratios may correlate with increased distances traveled when seeking primary care.

Physicians in Minnesota: 2011-2012

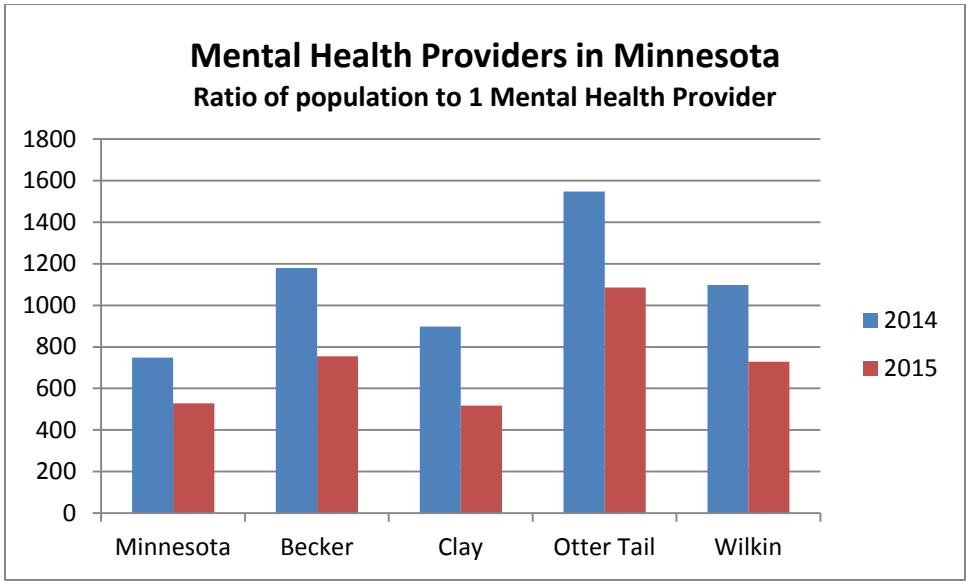
Ratio of population to 1 primary care physician



Source: County Health Rankings, HRSAA Area Resource File

[i] Minnesota Department of Health & Healthy Minnesota Partnership. (2012). *The Health of Minnesota: Statewide Health Assessment*

Appendix J

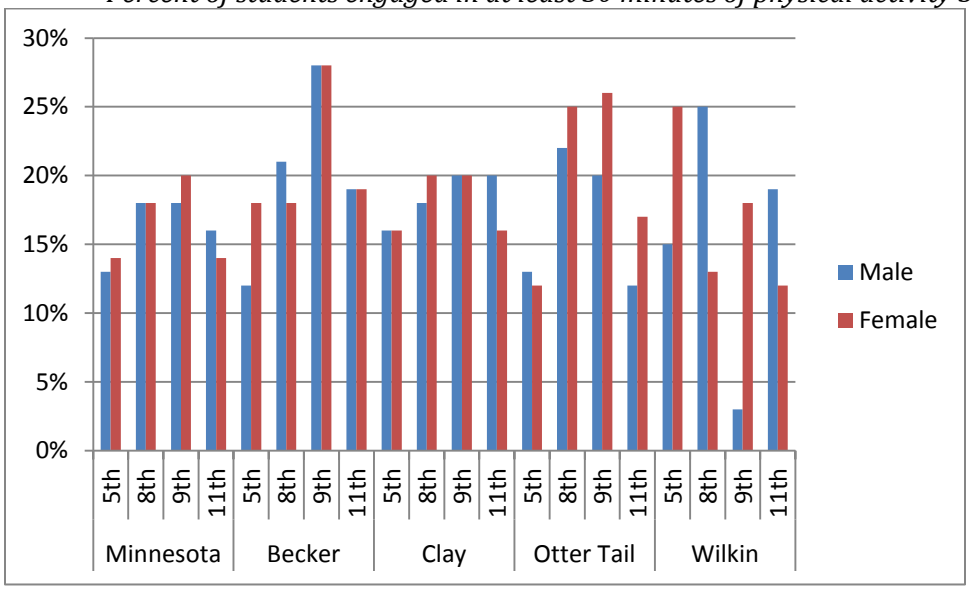


As expected, Minnesota reported the lowest ratio in this category with 1732 people to 1 mental health provider. Clay reported 3479 to 1 while Wilkin reported 3579 to 1; this is about 1750 more people to 1 mental health provider than the state of Minnesota. Becker and Wilkin reported lower and more similar numbers. Becker reported 2169 people to 1 and Wilkin reported 2191 people to 1. Becker and Wilkin have better access to mental health providers than Clay and Otter Tail.

Appendix K

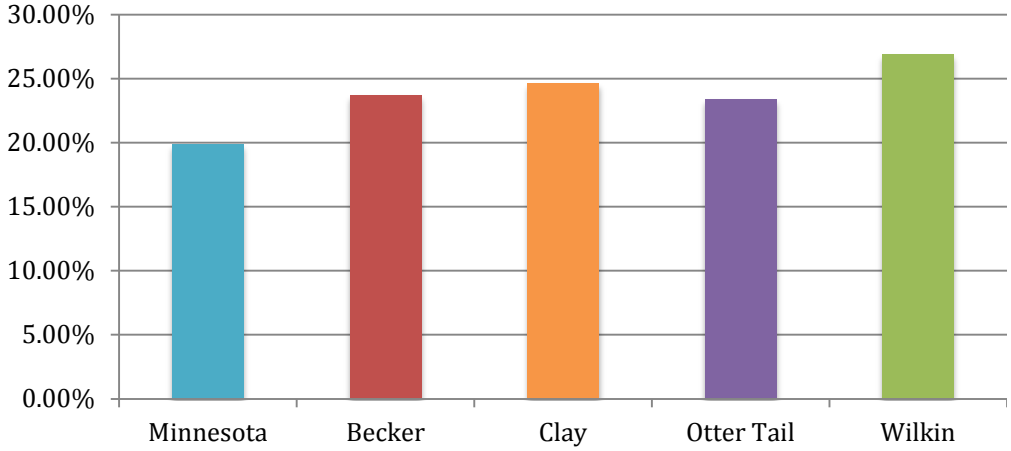
Physical activity in students: 2013

Percent of students engaged in at least 30 minutes of physical activity 5 days per week



The physical activity in students can be looked at more closely by focusing on the year 2010, shown here. In all areas, physical activity seems to peak in 9th grade. Becker, Clay, and Wilkin are above the state average for all grades, but not by any significant margin. Otter Tail is slightly below the state average for physical activity in 6th graders, but is above the state average for physical activity in 9th and 12th graders.

Percent of adults (ages 20+) with no leisure time physical activity: 2010



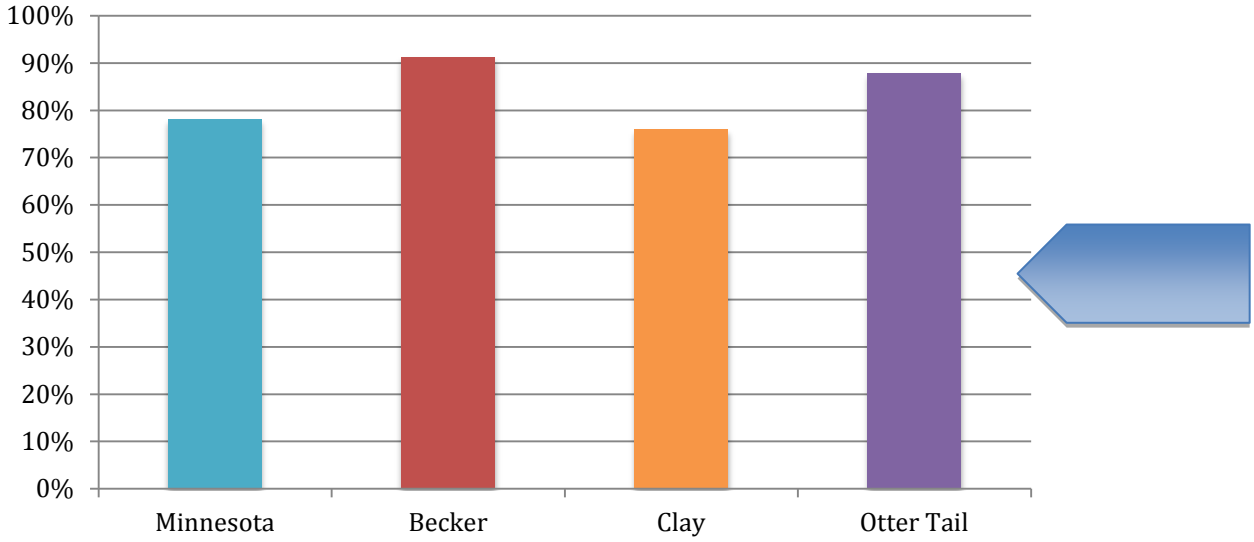
Source: Community Health Needs Assessment Community Commons, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Diabetes Atlas, 2010

Physical activity in adults was measured through the survey question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?"

Becker, Clay, Otter Tail, and Wilkin all reported physical inactivity levels above state average. Becker and Otter Tail both reported about 23.5 percent of adults with no leisure time physical activity. Clay reported 24.6 percent and Wilkin reported the highest percent of physical inactivity, with 26.9 percent.

Appendix L

Percent of the population with inadequate fruit & vegetable consumption: 2005-2009



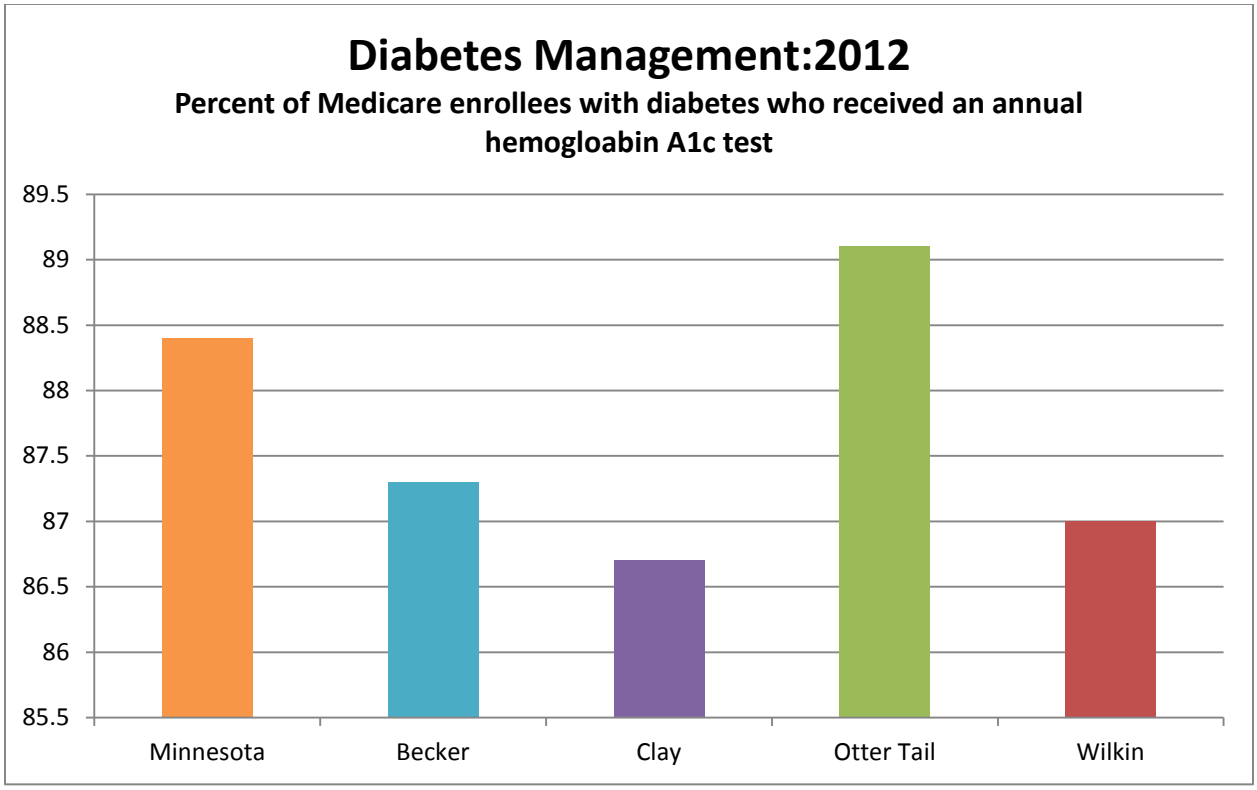
Data for Wilkin not available

Source: Community Health Needs Assessment Community Commons, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2005-2009

Inadequate fruit and vegetable consumption is defined as having less than 5 servings of fruit and vegetables each day. The data on fruit and vegetable consumption was averaged from 2005-2009 on the percentage of the population age 18 and over with inadequate consumption. Data for Wilkin was unavailable due to low numbers in relevance to the population.

The state of Minnesota reported 78.1 percent with inadequate consumption. Clay was slightly less than this, with 75.9 percent. Becker and Otter Tail reported the highest percentage, with 91.3 percent and 87.9 percent respectively. All areas reported high percentages, which means the adequate or proper fruit and vegetable consumption is an issue across the board in adults.

Appendix M



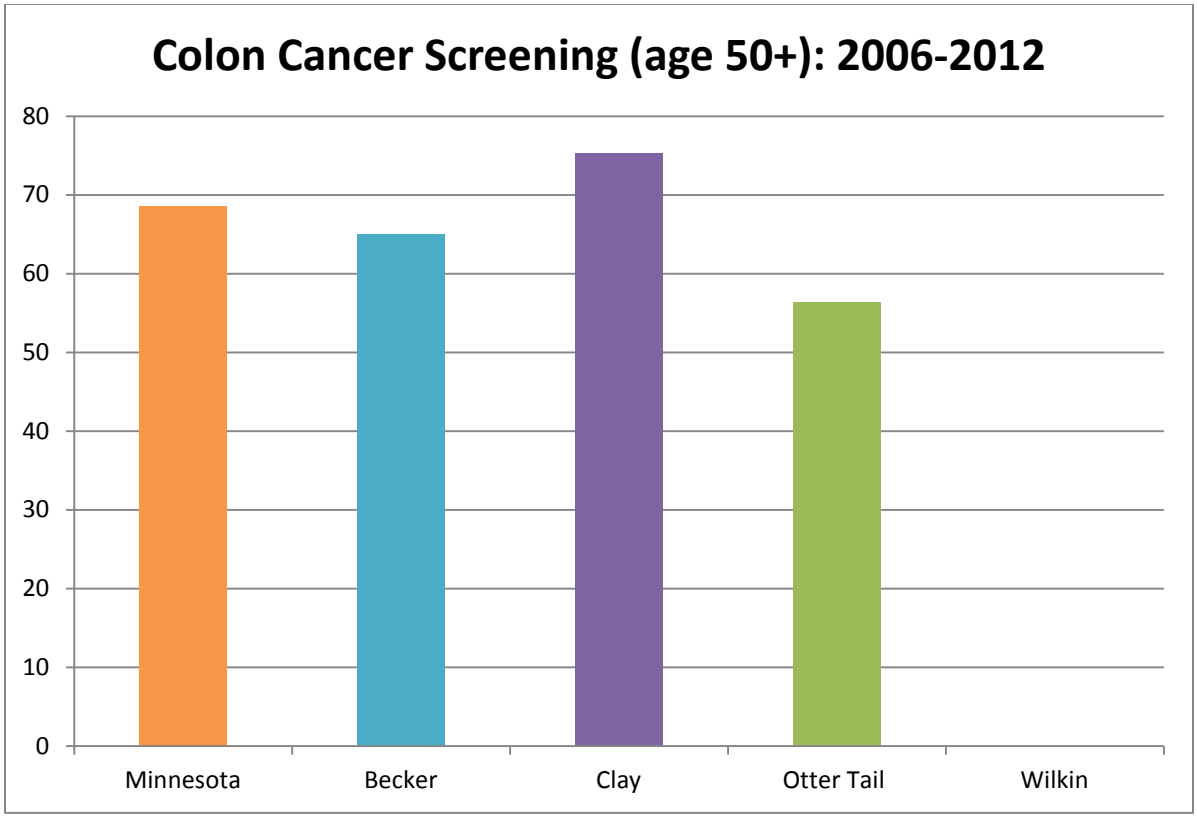
Source: Community Health Needs Assessment

Chronic health conditions, like diabetes and heart disease, are not necessarily preventable, but they can be more easily treated when caught earlier on.

All areas reported high percentages, meaning diabetes is well maintained across the board. Minnesota reported 87.8 percent. Becker, Clay, and Wilkin were all below the state average, with 86.8 percent, 84.6 percent, and 85.5 percent, respectively. Otter Tail was above the state average, with 90.5 percent of diabetic Medicare patients receiving a hemoglobin A1C test. However, all areas are fairly close, differing by only about 5 percent.

Source: Community Health Needs Assessment

Appendix N

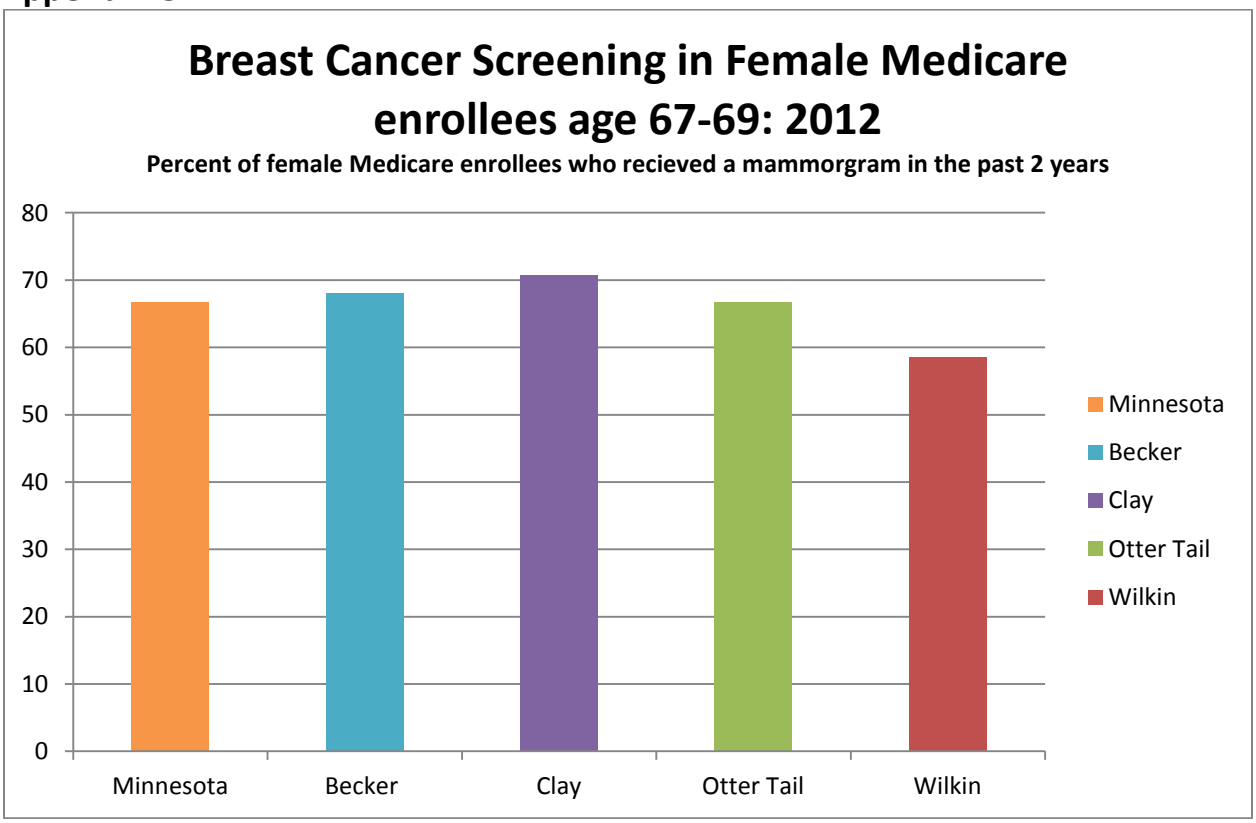


Source: Community Health Needs Assessment

With cancers, those who are regularly screened are more likely to survive a diagnosis. For example sigmoidoscopies or colonoscopies are screenings that may help men catch colon cancer early.

Becker and Wilkin had insufficient data, so neither is presented here. Minnesota reported 66.2 percent of men who had been screened, while Clay reported 74.3 percent and Otter Tail reported 54.1 percent.

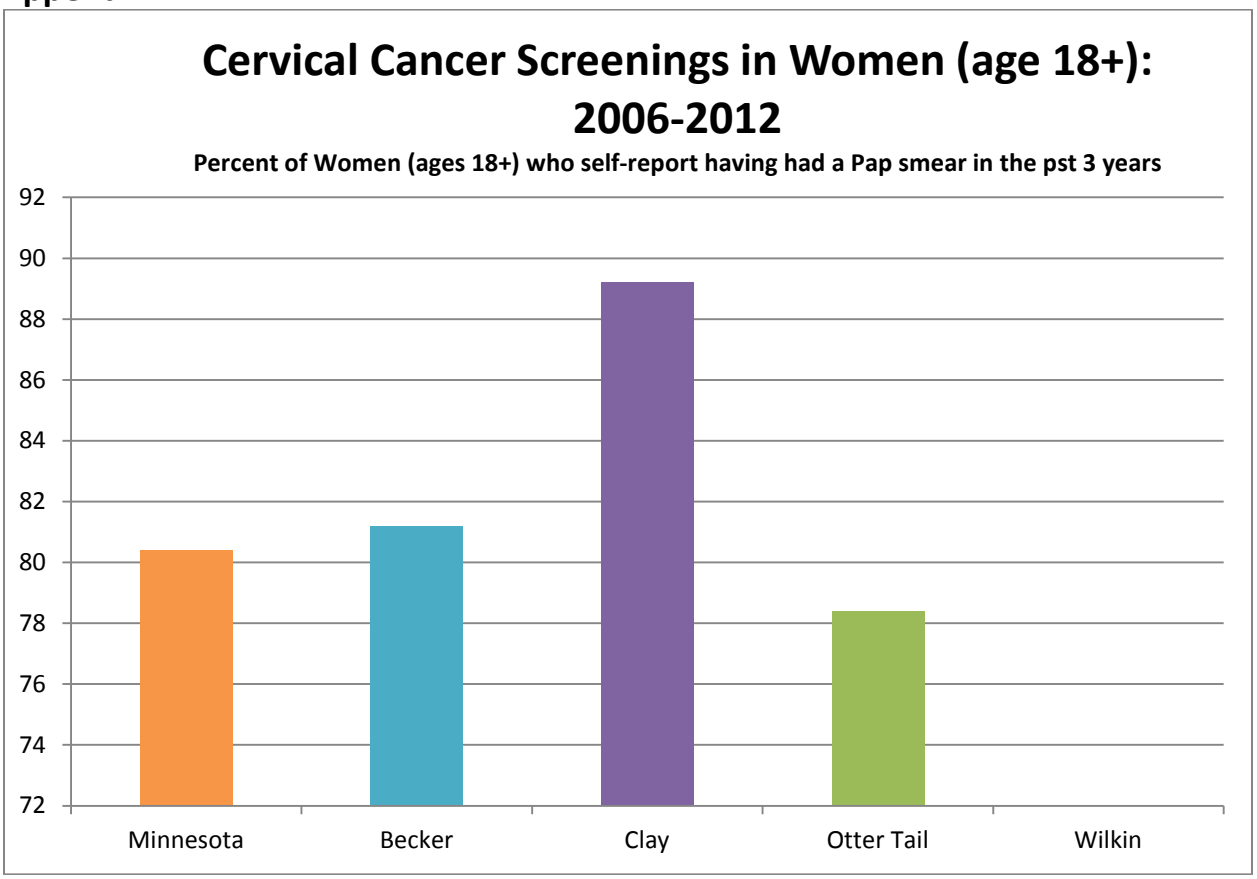
Appendix O



Receiving a mammogram annually or every 2 years is not only a positive practice of preventative behavior, but it increases the risk of breast cancer survival by detecting a tumor before it spreads.

All areas reported very similar percent of female Medicare enrollees receiving a mammogram in the past 2 years. Minnesota reported an average of 72.6 percent. Becker was very close to this with 72.7 percent. Clay was slightly higher than the state average, with 76.9 percent, and Otter Tail reported the greatest percentage, with 78.8 percent. Wilkin reported the lowest percentage, with 64.2 percent.

Appendix P



Each year in the United States about 12,000 women get cervical cancer.[i] Most cervical cancers can be detected early if a woman has routine Pap smears[ii] which can lead to better treatment options and outcomes for these women.

In Minnesota, 81.9 percent of women reported receiving a Pap smear in the past three years. Becker reported 84 percent, and Otter Tail reported 77 percent. Results were unavailable for Clay and Wilkin due to insufficient data.

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[i] Minnesota Department of Health & Healthy Minnesota Partnership. (2012). *The Health of Minnesota: Statewide Health Assessment*

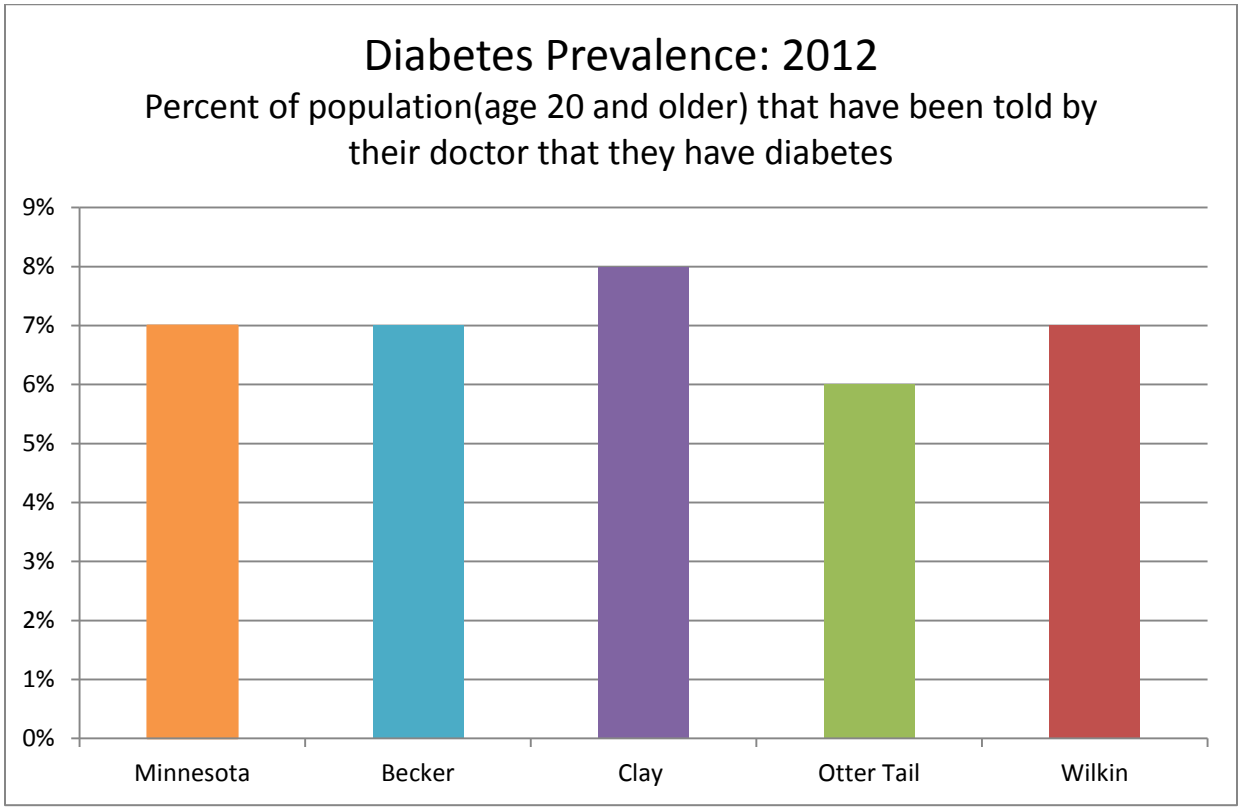
[ii] Saslow D, Solomon D, Lawson HW, et al. American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. *CA Cancer J Clin*. 2012; 62(3):147-72.

Appendix Q

Diabetes, Heart Disease, & Stroke

Obesity and being overweight are primary risk factors for diabetes, heart disease and stroke.[i] Diabetes limits daily activities, contributes to depression and also increases the incidence of heart disease and stroke.[ii] Those with diabetes are twice as likely to get heart disease, and two out of three people with diabetes die due to heart disease and stroke. Additionally, diabetes is a leading cause of death in Minnesota and is on the rise. It is the leading cause of blindness in adult Minnesotans, and the leading complication among mothers giving birth in the state.[iii]

Heart disease currently is the second leading cause of death in Minnesota. Minnesota consistently has one of the lowest rates of heart disease mortality in the nation—about 30 percent lower than the national average.[iv] Stroke is another major cause of death in Minnesota. In 2010, approximately 1.9 percent of adults in the state reported ever having had a stroke in their lifetime—a total of over 75,000 people.[v] Stroke kills more women than men and is disproportionately fatal those over the age of 75.[vi]



[i] Minnesota Department of Health, Minnesota Diabetes Program. Data and statistics. Retrieved March 22 2012 from www.health.state.mn.us/diabetes/data

[ii] Minnesota Department of Health, Minnesota Diabetes Program. (2010). Diabetes in Minnesota. Retrieved from www.health.state.mn.us/diabetes/pdf/FactSheet2010.pdf

[iii] Minnesota Department of Health, Minnesota Diabetes Program. (2010). Diabetes in Minnesota. Retrieved from www.health.state.mn.us/diabetes/pdf/FactSheet2010.pdf

[iv] Peacock, J.M., & Shanedling, S. (2011). Heart disease and stroke in Minnesota: 2011 burden report. Minnesota Department of Health, Heart Disease and Stroke Prevention Unit. Retrieved from www.health.state.mn.us/divs/hpcd/chp/cvh/pdfs/hdspBurdenRpt2011.pdf

[v] Peacock, J.M., & Shanedling, S. (2011). Heart disease and stroke in Minnesota: 2011 burden report. Minnesota Department of Health, Heart Disease and Stroke Prevention Unit. Retrieved from www.health.state.mn.us/divs/hpcd/chp/cvh/pdfs/hdspBurdenRpt2011.pdf

[vi] Minnesota Department of Health, Center for Health Statistics. (2011).

Appendix R

Mortality, Morbidity, & Disease Outcomes

Injury & Violence

In order to have a greater understanding of why certain mortality and morbidity statistics are the way they are, we can look at the leading causes of death in Minnesota in each of many age groups. For all ages, cancer and heart disease are the leading causes of death in Minnesota by a wide margin. Stroke, unintentional injury, and chronic lower respiratory disease reported the next highest number of deaths. The leading cause of death for those over 65 was heart disease, and for those ages 25 to 64 it was cancer; Unintentional injuries were the leading cause of death in Minnesota for those ages 5 to 24.

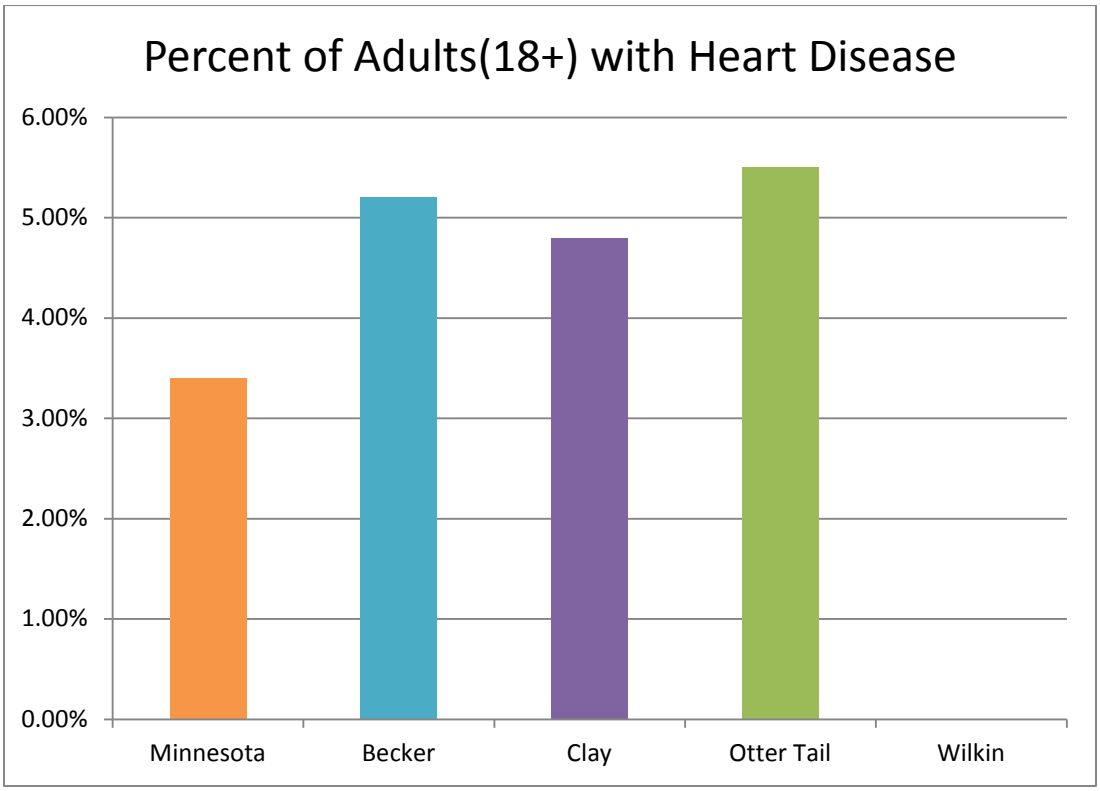
Leading causes of death in Minnesota, 2010

Leading causes of death in Minnesota: 2010

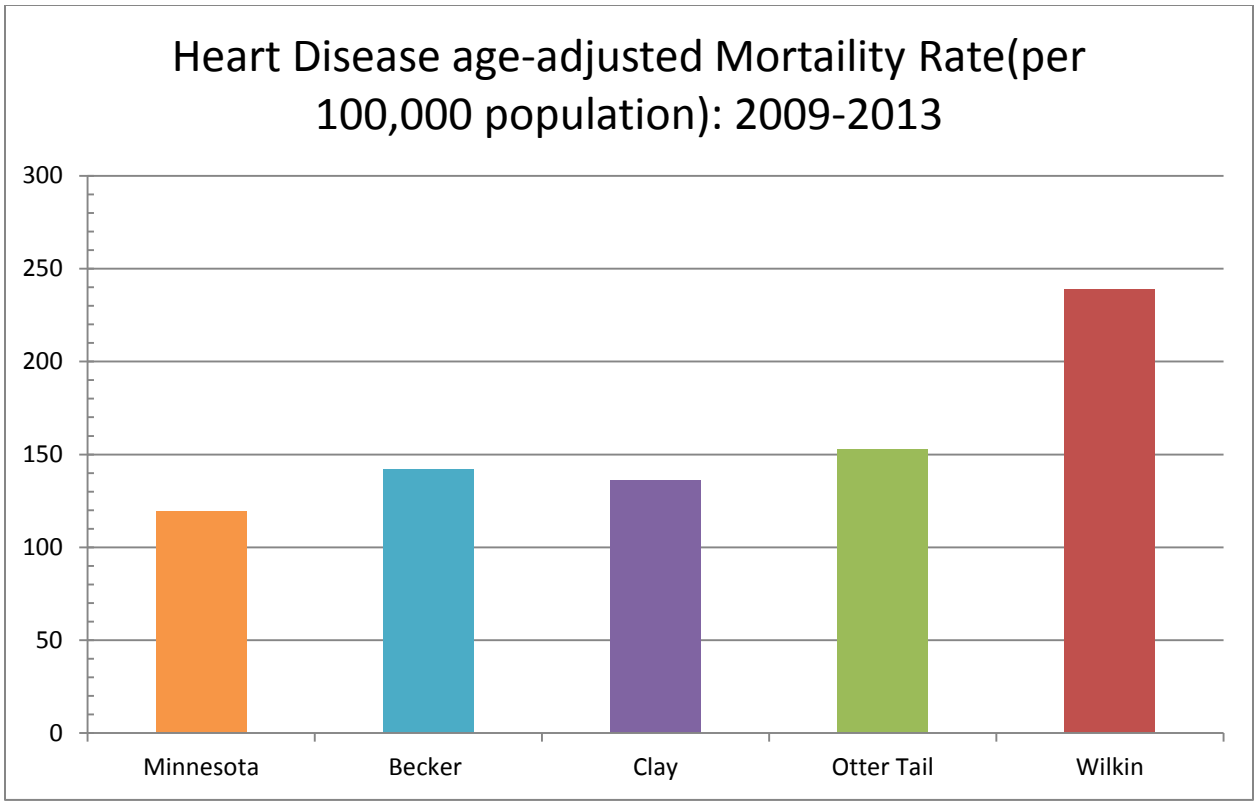
Cause of Death	Count	Age-Adjusted Rate *
Cancer	9,599	166.9
Heart Disease	7,144	118.7
Unintentional Injury	2,087	36.4
Stroke	2,154	35.8
Chronic Lower Respiratory Disease	2,012	35.1
Alzheimer's Disease	1,450	23.4
Diabetes	1,036	17.7
Nephritis	895	15.0
Suicide	599	11.1
Pneumonia and Influenza	591	9.7
Cirrhosis	412	7.0
Septicemia	337	5.8
Congenital Anomalies	190	3.6
Perinatal Conditions	140	2.7
Homicide	111	2.1

** Rate per 100,000. Source: Minnesota Department of Health, Center for Health Statistics. (2012).*[2]

Appendix S



Source: Center for Health Statistics



The age-adjusted mortality rate for heart disease is the number of deaths per 100,000 people with adjustments made for the effects of age group. A mortality rate provides a way to compare deaths among the different populations of the counties. Becker, Clay, Otter Tail, and Minnesota all followed similar decreasing trends in the heart disease mortality rate from 1995 to 2011. Wilkin, due to the small population and fluctuating numbers, did not show any clear or comparable trend in mortality rate. The decreasing trend in mortality rate is likely attributed to improvements in the quality of health care and the ability to treat heart disease.

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