



**COMMUNITY HEALTH ASSESSMENT**

**June 2017**

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**Community Health Vision**

The community health vision was developed by the Five County Community Partnership Team Steering Committee.

**Our shared vision of a healthy community includes:**

***Having a community*** that supports inclusion and acceptance of ALL people.

***Having a community*** where each person feels supported and valued.

***Having a community*** that feels, and is, safe.

***Having a community*** that utilizes resources that are collaborative in nature, promoting access to services for people when they need them.

***Having a community*** with increased outdoor functions and recreation to get people out of the house and active; having a chance to be physically active.

***Having a community*** that has places for kids to “hang out.”

***Having a community*** where peoples’ needs are met in a reasonable amount of time.

***Having a community*** where people can access healthy foods.

***Having a community*** that understands poverty and the culture of poverty.

***Having a community*** that is actively engaged and educated on issues affecting the health and well-being of the community.

***Having a community*** where people feel connected and are supported.

***Having a community*** that has and/or creates opportunities to attract and retain young adults.

***Having a community*** with formal and informal resources to support single-parent families.

***Having a community*** that has easily accessible resources for people, including resources for people to remain living where they are.

***Having a community*** that can bridge the gap between technology, where people can navigate, or can receive assistance with, technology.

***Having a community*** that provides the opportunity for, and promotes the development of, intergenerational relationships with community members.

***Having a community*** that is striving towards improved transportation and the ability for people to get to where they need to be.

***Having a community*** where businesses and organizations promote volunteer options to support the community

***Having a community*** where there are adequate childcare options and supports for families.

***Having a community*** that supports children and young families to build stronger relationships with one another.

***Having a community*** that sets children up for success through supportive and nurturing family and community support systems.

***Having a community*** where healthcare services and peoples’ healthcare needs are financially supported.

***Having a community*** that supports the opportunity for people to work in the town that they live in, allowing for more time with their family and friends.

***Having a community*** that has an improved awareness of, and possibly positive changes in, their eating habits.

***Having a community*** that has reduced chemical and alcohol use/abuse in children and adults.

***Having a community*** where people help each other.

***Having a community*** that is aware of and understanding mental health and mental illness and works to support the needs of the community members.

***Having a community*** where there is respect for the environment and our natural resources.

Community Health Assessment

*The data within this document was analyzed in collaboration with Members of the Five County Community Partnership Team Steering Committee*

**Limitations**

Within the process of completing a community health assessment, there are many important issues and topics that come to light. However, it is important to note that not every possible issue can be addressed. Through the community partnership team, there were a plethora of areas and/or potential issues that were identified, which required further exploration. Through the utilization of a 5-County Steering Committee, a broad and diverse range of perspectives from the community were gathered.

**Process**

The 2017-2021 Horizon Public Health Community Health Assessment (CHA) was conducted to identify priority health issues and the current health status and needs of the community. The identification and sharing of this information was utilized to make a positive impact on the health of the Horizon Public Health communities and towards developing a more comprehensive plan for community health improvement.

The process was originally initiated with the formulation of the 5-County Community Partnership Team (CPT) in early January 2017. This partnership team was comprised of community members, leaders, providers, and partners. In collaboration, the CPT conducted a high-quality Community Health Assessment that built on the foundational history of cross-sector partnerships and collaboration. Partnerships were deepened and expanded across a five county region and improved and enhanced the capacity to collectively work together towards a common goal.

**Model**

Planning for this assessment began in the fall of 2016. This assessment followed an evidence-based model, known as Mobilizing for Action through Planning and Partnerships (MAPP). This model includes four assessments: (1) Community Health Systems Assessment; (2) Community Themes and Strengths Assessment; (3) Forces of Change Assessment; and (4) Local Public Health System Assessment. This assessment process was utilized to promote the gathering of data from multiple assessment modalities. This process allowed for community involvement to build on the foundation of the assessment through additional analysis and perspective of available data about the community.

Through a series of three meetings and online communication, the CPT has worked through a modified version of the MAPP model in order to complete the assessment. Following the completion of the fourth meeting, strategic issues will be identified utilizing a two phase prioritization process. These will include the Hanlon method and a multi-voting process. The Hanlon method utilizes an unbiased, objective perspective which uses a set of scoring criteria to identify areas of focus. The multi-voting prioritization process will also be used to help narrow down the scope of the number of identified issues available. The combination of the two prioritization processes will lead to a more strategic approach in identifying issues that are collectively impacting the five county Horizon communities.

**Data Collection**

Data collection for the Community Health Assessment has come through a plethora of methods, both quantitative and qualitative through the utilization of the MAPP process. Some of these methods included gathering data through online, publicly available data sources, key informant interviews, surveys, open forums, and focus groups. The people, organizations or groups that were contacted for qualitative information included:

Key Informant Interviews: Social Services; UMM Community Engagement; Early Childhood Initiative; Center-based childcare; Law Enforcement, Hospital Emergency Room

Open Forums: Family childcare providers; Region IV Mental Health Consortium “Conversations” group

Focus Groups: Conexiones group

Surveys: 5-County community survey; aging and disability survey

**Public Input and Distribution**

Public input from the community has been encouraged throughout the timespan of February through May 2017. The Horizon Public Health website has made available contact information to provide any pertinent information to public health to share and discuss at community partnership team meetings. The finalized community health assessment document will also be distributed to the members of the Community Partnership Team. Horizon Public Health will encourage further distribution, as applicable, by Community Partnership members.

June 2017

Review Frequency: Annual

Introduction

Minnesota is a great place to live as lakes, fields, forests, and rivers in the state provide a beautiful backdrop for everyday activities. Minnesotans are on average among the healthiest people in the nation and many individuals and organizations throughout the state share the mission of protecting, maintaining, and improving the health and conditions of the state and its inhabitants.

The goal of this report is to present an assessment of health for five local counties: Douglas, Grant, Pope, Stevens, and Traverse. As a whole, these counties are identified as the Horizon Community Health Board (abbreviated Horizon in some of the following charts and graphs). This assessment will also be compared to the state of Minnesota in order to assess any county-level variation from the state health indicators. Health is defined by the World Health Organization as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”[[1]](#endnote-1) By this definition, health protection and improvement must be seen as a holistic, multi-faceted web of conditions, including how people interact with their families, systems, and environment. Prevention is as important as healing and reflects the 1988 Institute of Medicine mission of public health, “fulfilling society’s interest in *assuring the conditions* in which people can be healthy.”[[2]](#endnote-2)

This report attempts to fulfill this definition of health by providing a variety of health indicators and information about the conditions and factors affecting health and health status. This framework is modeled after the Minnesota Statewide Health Assessment Report developed by the Minnesota Department of Health. This report will additionally provide information about physical, social, and behavioral factors for health within the 5 counties served by the Horizon Community Health Board, in addition to health outcomes, disease, and injury.

People and Place

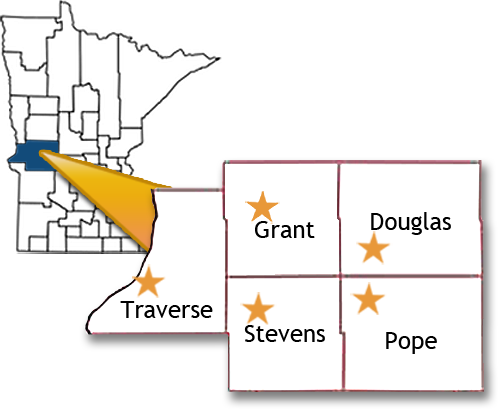
Minnesotans symbolize every populated continent on the globe, and our faces reflect that diversity. Minnesota’s geography is also diverse, and includes prairies, bluffs, forests, lakes, and rivers, including the mighty Mississippi. Minnesotans share an appreciation for the beauty of their state and resourcefulness of their communities. This section, *People and Place*, discusses populations trends; immigration and the increasing diversity of not only the state’s population, but the local counties; Minnesota’s and the Horizon Community Health Board’s changing age profile; and the water, weather, and air for the area.

**Population Trends**

Geographically, Minnesota is largely a rural state despite the fact that more than half of the state’s population resides in the Twin Cities metropolitan areas in the east-central region of the state. The Horizon Community Health Board aligns with Minnesota’s geography, encompassing 5 rural counties comprised of many small communities. As of July 2015, the Horizon CHB has an estimated aggregate population of 67,200 people. The population breakdown by county includes:

* Douglas County 37,103
* Grant County 5,872
* Pope County 11,016
* Stevens County 9,804
* Traverse County 3,405

Once a very demographically homogenous state, Minnesota’s racial and ethnic diversity is increasing rapidly in some areas as can be identified by the chart below. Although there was not as high of percent change in population from 2000 to 2010 as there was in 1990 to 2000, there was still a 7.8% increase in population size for Minnesota. Among that increase in population size for the state, 16.9% of the population is considered minority based on 2010 Census data.

Taking a closer look at the five individual counties that make up the Horizon Community Health Board, you will notice Douglas County had a positive percent change in population size of 9.7%. However, the remaining four counties actually had a decrease in population size ranging from 2.1% to 13.9%. Among the five counties, Stevens County has the highest percent minority *(not % change)* living within the county with 8.2% of its total population identified as minority.

***Population change in Minnesota by county: 1990-2010***

The following chart shows the population distribution for Minnesota and the five individual counties in 2015. The state of Minnesota in comparison to the Horizon CHB counties, has less disparity in age groups as evidenced by the graph below. The graph for the Stevens County population disbursement, however, does highlight some slightly different trends. Stevens County primarily shows a younger population in the 15-24 year old age range, which is most likely correlated with the presence of the University of Minnesota, Morris.

***Population Distribution in Horizon CHB counties, Year 2015***

(United States Census Bureau, 2015).

As demonstrated in the following graphs, age and gender is disbursed fairly evenly in each county. As a result of the presence of the University of Minnesota located in Morris, Stevens County has a greater proportion of young adults between the ages of 15-19 and 20-24 compared to the five county service area.

***Population distribution in Horizon CHB service area by age and gender, 2015***

***Population distribution in Douglas County by age and gender, 2015***

***Population distribution in Grant County by age and gender, 2015***

***Population distribution in Pope County by age and gender, 2015***

***Population distribution in Stevens County by age and gender, 2015***

***Population distribution in Traverse County by age and gender, 2015***

Source: U.S. Census Bureau, 2015.

**Immigration and Growing Diversity**

While Minnesota is still far from the most diverse state in the United States, recent trends indicate this may be changing. In Minnesota, there is greater than 80% of the population that is comprised of a non-Hispanic white population. However, between years 2000 to 2014, the non-Hispanic white population grew by only 2% (107,000 people) and all other populations of color grew by 74% (430,700 people). [[3]](#endnote-3)

Shown below is a table that lists the populations of certain ethnicities as a proportion of Minnesota’s and the five county area’s total population (County Health Rankings, 2015).

Minnesota has 81.4% of its population classified as White, and the five counties all have over 90% of their populations classified as White. Stevens County has the highest percentage of Black or African Americans, Asian, Hispanic or Latino Origin, and Native Hawaiian and Other Pacific Islander population compared to the other four counties within the Horizon Community Health Board Region. Traverse County, however, has the highest percentage of American Indian or Alaskan Native residents.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Minnesota** | **Douglas** | **Grant** | **Pope** | **Stevens** | **Traverse** |
| **White** | 81.4% | 98.8% | 98.8% | 98.2% | 95.0% | 94.8 % |
| **Black or African American** | 5.7% | 0.9% | 0.2% | 0.8% | 1.3% | 1.0% |
| **American Indian or Alaskan Native** | 1.3% | 0.6% | 1.3% | 0.6% | 2.3% | 6.1% |
| **Asian** | 4.7% | 0.7% | 0.5% | 0.6% | 2.2% | 0.5% |
| **Hispanic or Latino Origin** | 5.1% | 1.3% | 1.8% | 1.1% | 4.1% | 2.0% |
| **Native Hawaiian and Other Pacific Islander** | 0.1% | 0% | 0% | 0% | 0.2% | 0% |

Some of the largest demographic changes seen in the Horizon region are the influx of Hispanic and Latino populations within each county. This is increasing the diversity as people are immigrating to West Central MN to work within labor industries in the 5-county area or joining family members who previously immigrated, while others are moving to West Central MN to attend school.

Additionally below is a table and chart showing these changes since 1990. Even though Douglas County has the largest number of Hispanic and Latino residents, Stevens County has, by far, the highest percentage out of the total population.

While the primary language spoken at home is not always an indicator that an individual has immigrant status, it may suggest that the student is a recent immigrant and/or that their parents were immigrants. Language spoken at home also suggests the students’ likelihood of having to navigate through a school system while utilizing at least two languages.

**Aging and Retirement**

The United States, along with Minnesota and its counties, have aging populations. According to the 2010 U.S. Census, there are 683,121 people 65 years of age or older living in Minnesota, equivalent to 13% of the state’s population. The following chart shows the population distribution for Minnesota and the 5 individual Horizon counties for 2015. Currently, the Horizon CHB counties, with the exception of Stevens County, have over 20% of their respective populations comprised of individuals that are 65 years of age or older. In comparing the Horizon counties to Minnesota, the population age 65 and older is substantially higher, with 21.8% of the current population over 65 years of age. With these aging populations, communities will be confronted with challenges, as well as opportunities to identify innovative approaches to meet the unique and diverse needs of aging Minnesotans.

*Source: Minnesota Department of Health Count Health Tables, 2015*

Population Projections

Due to the aging population, it is important to look at future population projections. The following chart below projects the population of Minnesota and the five individual counties’ populations for all individuals from 2015 to 2045. The five county Horizon CHB service area is overall projected to gain 1,918 people over the next three decades. However, as the graphs below indicate, there will be a rise up until year 2030, with a subsequent decline in population following this. The overall population projections for 2025 and 2045 are currently expected to be very similar with population totals around 70,000 people.

***Projected Population in Minnesota: 2015 to 2045***

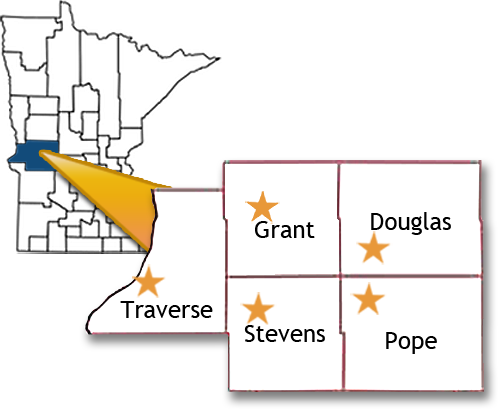
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **County** | **2015** | **2020** | **2025** | **2030** | **2035** | **2040** | **2045** |
| Douglas | 37,960 | 38,913 | 39,400 | 39,429 | 39,237 | 39,091 | 39,014 |
| Grant | 6,262 | 6,362 | 6,392 | 6,378 | 6,340 | 6,299 | 6,266 |
| Pope | 11,504 | 11,691 | 11,758 | 11,710 | 11,603 | 11,486 | 11,376 |
| Stevens | 9,648 | 9,782 | 10,002 | 9,993 | 10,095 | 10,168 | 10,285 |
| Traverse | 3,603 | 3,564 | 3,554 | 3,549 | 3,539 | 3,518 | 3,508 |

Source: Minnesota State Demographic Center, 2014

Horizon Community Health Board Projected Population from 2015 to 2045

Source: [[4]](#endnote-4)

**Land Area**

The Horizon Community Health Board (CHB) is comprised of five counties in West Central MN including Douglas, Grant, Pope, Stevens, and Traverse. These counties are located in the Midwestern region of Minnesota; an area that spans a geographic area of 2,987 square miles. Shown below is a chart that lists the total land area in square miles for each designated county in 2014. It also lists the person per square mile ratio according to 2014 data. Pope County is geographically the largest county at 670 square miles, while Grant County is the smallest at 547 square miles. Population density is approximately 22.4 persons per square mile, which is lower than the statewide average of 68.5. Douglas County has the highest people per square mile of the Horizon Community Health Board area at 58 people per square mile. Traverse County has the lowest ratio of 5.9 people per square mile preceded by Grant County with a ratio of 10.9 people per square mile.

***Total Land area of Minnesota, CHB service area, and the five individual county areas:***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Minnesota** | **CHB** | **Douglas** | **Grant** | **Pope** | **Stevens** | **Traverse** |
| Land area in square miles, 2014 | 79,617 | 2,987 | 634 | 547 | 670 | 562 | 574 |
| Persons per square mile, 2014 | 68.5 | 22.4 | 58 | 10.9 | 16.4 | 17.4 | 5.9 |

*Source: U.S. Census Bureau, 2014*

The Opportunity for Health

The opportunity for health for many Minnesotans begins with their families, neighborhoods, workplaces, and schools – where Minnesotans live, love, worship, play, work, and learn.

**Education and Employment**

Education is an important predictor of health because it can shape and positively impact a person’s life. Investment in education can be “the single most effective intervention we can make to improve health outcomes and tackle inequities.”[[5]](#endnote-5)

Health can affect learning at all ages, from early childhood through adolescence, to adulthood. “Early reading and literacy stimulate brain development in young learners, help develop their analytical and communication skills, and influence their intellect and behavioral patterns.”[[6]](#endnote-6) These events then can construct future opportunities and achievements for individuals.

Overall, there are a higher percentage of high school students graduating on time within the Horizon CHB counties as compared to Minnesota as a whole from 2010 to 2013 graduating years. In 2013, Minnesota had 78.4% of its high school student population graduate on time. In this same year, Grant County had 97.4% of its high school student population graduate on time. The county with the lowest percent of high school students graduating on time was Douglas County with 79.9%. However, despite Douglas County having the lowest percentage of the 5 counties, its graduation rate was still higher than the state percentage of high school graduates.

***Students Graduating on Time***

*Source: Minnesota Center for Health Statistics, 1994-2013*

*Data unavailable for Traverse County for 2010-2012 school year and CHB service area for 2010-2011 school year*

The percent of students receiving special education throughout the state of Minnesota and the Horizon Community Health Board area has remained fairly constant throughout the years. Pope County has the highest percentage of students receiving special education with 22.7 percent receiving special education during the 2013-2014 school year. Grant and Douglas Counties have the lowest percentage of students receiving special education – 12.5% and 17.1% respectively.

***Students receiving special education: 2010-2014***

*Source: Minnesota Department of Health, Center for Health Statistics*

The average annual unemployment percentages in the Horizon Community Health Board area do vary. Grant County has the highest annual unemployment rate of the 5 counties at 4.9% in 2015, which was down from 8.8% in 2008. Stevens has the lowest annual unemployment rate with just a 3.2% annual unemployment rate in 2015, down from 5.6% in 2008. Overall, unemployment rates have gone down in all five counties when compared to 2008 rates.

***Percent of Individuals Unemployed in CHB Region and Minnesota***

*Source: Minnesota Department of Employment and Economic Development*

**Income and Poverty**

Income involves more than just money earned from a job. Income includes assets, like a bank account or equity in an owned home or property, as well as access to a variety of economic resources. Income influences the choices people make on where to live, what to purchase for food, what to participate in, such as physical activities, especially those that require fees or special equipment, and what to do in leisure time.

Minnesota has a much higher median income when compared to the Horizon Community Health Board area; however, this is attributed to metro area counties which have significantly higher per capita incomes. It is also important to keep in mind that the cost of living in these metropolitan areas is significantly higher than rural counties. When comparing the five individual counties to the combined Horizon Community Health Board combined average, they seem fairly consistent. Over the years, the median income has increased due to inflation of the economy.

***Median income in Minnesota and the Horizon Community Health Board area***

*Source: US Department of Commerce, Bureau of Economic Analysis*

Poverty decreases opportunities in education, employment and living conditions. It can be a reason behind obesity by forcing individuals and families to rely on cheap sources of food, which tend to be high in calories and low in nutritional value.

The chart shown below identifies the percentage of people less than 18 years of age living in poverty. Traverse County has the highest percentage of people under the age of 18 living in poverty, while Stevens County has the lowest percentage. Throughout the years, Minnesota and the Horizon Community Health Board area have remained similar in percentage with the number of individuals under the age of 18 years living in poverty.

***Percent of people under 18 years living in poverty: 2006-2010***

*Source: US Census, Poverty estimates and median household income*

**Housing and Home Ownership**

A person’s built environment, including their housing, is a key component in health. Certain building components, which could include lead-based paint, lead solder in the plumbing, in addition to soil, mold, and asbestos, can threaten the health of individuals. Additionally, other building components or components in the home such as window sashes, doors, balusters, tin panels, lead crystal, hardware, jewelry, toys, and furniture could contain lead, from buildings that were constructed prior to 1978. If these are ingested or inhaled, high levels could cause lead poisoning. Some potential ramifications of high lead levels include delayed mental development, change in behavioral patterns, high blood pressure, kidney damage, digestive problems, and fertility problems, to name a few. It is important for individuals and families to have a conscientious awareness of how to maintain their home and mitigate or decrease health risks.[[7]](#endnote-7)

**Social Connectedness**

To promote optimum health, people at all stages of life need to have social connections. These social connections can come through healthy relationships with family, friends, or neighbors and can positively impact and improve their quality of life. In addition to social connections, the physical environment can also promote or mitigate social connectedness. When these physical environments are supportive and healthy, this can promote and strengthen the ability of individuals and communities to come together.

The trend in the Horizon CHB area for a child being raised in a single-parent family is graphed below. From 2015 to 2017, there has overall been a decrease in the percentage of households with single-parents. Grant County has the higher percentage of households with single-parents in 2017. Stevens County has the lowest percentage of households with single parents.

With these statistics, it is important to realize the importance and potential ramifications for the child (ren) and parent who live in a single-parent family unit. They are at increased risk for adverse health outcomes and unhealthy behaviors. Some of the additional challenges that these parents and children may face include less access to resources, increased reliance on county assistance, as well as increased economic factors and stress.[[8]](#endnote-8)

***Percent of children in single-parent families***

*Source: County Health Rankings, 2017*

**Community and Personal Safety**

Factors including income, employment, and education can influence where people live and the opportunity they have to be healthy. These factors can also be linked to individuals and their experience of violence within their life. Violence is not randomly distributed; some regions are more affected by crime than others.

While crime rates across the Horizon CHB are not particularly high, it is imperative for violence and personal safety to be addressed due to the growing diversity of issues. When community members do not feel safe, this can affect relationships and social connections that are made. Some communities have implemented neighborhood crime watches to help increase awareness of different issues in the community, while bringing the community together.

Additionally, social services has indicated that a growing number of adult protection cases are related to self neglect and financial exploitation. Self neglect can be mitigated when there is adequate informal and formal social support and services for the individual. Financial exploitation also is a growing concern, which can interfere with an individual’s safety.

Within the Minnesota Student Survey, there were questions asked to students regarding their feelings of safety. Over 75% of students in the Horizon CHB service area either strongly agreed or agreed with statements regarding their safety in and around school, as well as at their home. [[9]](#endnote-9)

**Access to Health Care**

A number of factors that shape the opportunity for health in Minnesota and the Horizon Community Health Board area include education, employment, and transportation. These, as well as many other factors, can also affect access to health care. In addition, the health care workforce and the ability to acquire health insurance also have an effect on the ability to receive health care. Access to healthcare services varies by state and region and additional challenges occur related to the geographic and rural locations of the Horizon CHB service area.

In comparison with dentists, Stevens County has the lowest ratio of one dentist to every 1,400 patients. Additionally, Pope County has the highest ratio, with one dentist to every 3,660 patients. Douglas and Stevens County sit below the Minnesota ratio for dentists, indicating that there are a proportionate number of dentists to patients.

The relatively low presence of dentists in the Horizon CHB area does impair the ability of Horizon residents to easily find a dentist that does not require them to drive to other communities, which may be 30 minutes to greater than one hour. This primarily increases the struggles encountered for those individuals who receive Medicaid as their health insurance option as reimbursement percentages are lower, increasing the inequities and barriers for dentists who accept individuals with Medicaid.

|  |  |
| --- | --- |
|  | Patient to Dentist Ratio |
| Douglas | 1,470:1 |
| Grant | 2,980:1 |
| Pope | 3,660:1 |
| Stevens | 1,400:1 |
| Traverse | 3,390:1 |
| Minnesota | 1,500:1 |

**Dentists in Minnesota: 2013**

**[[10]](#endnote-10)**

People who are uninsured or underinsured receive less medical care than their insured counterparts. When they do receive care, it has often been significantly delayed and their condition and final outcome is frequently worse than if they had received care right away. In this way, the lack of health insurance creates a financial risk and a burden when care is received. Hospital-based charity care helps uninsured and underinsured Minnesotans, but does not compensate for gaps in health insurance coverage. Below is a chart that shows the percent of Minnesotans and people within the Horizon Community Health Board area who are uninsured based on 2012-2015 data. Douglas County has the highest percentage of individuals who are uninsured at 5.9 percent. Traverse County has the lowest percentage at 4 percent. All five counties sit at least one percentage point below the Minnesota average. The trend shows that from the years 2013 to 2015, rates of insured individuals have been decreasing. It is also important to note that Medicaid numbers have also increased in relation to Minnesota voluntarily expanding its Medicaid services as a result of the Affordable Care Act (ACA).

***Percent of Individuals Uninsured***

Source: U.S. Census Bureau, 2015; County Health Rankings, 2017

The lack of adequate transportation services for individuals who do not have a personal vehicle to use, is also a barrier for many people, especially in Horizon’s rural communities. The lack of adequate transportation interferes with people meeting basic personal needs, as well as healthcare needs, particularly those that are non-emergency medical appointments. Two of the five counties, Douglas and Stevens, have a taxi service. Stevens County has a curb to curb transit system. Not all counties have a public transportation system. Rainbow Rider is available in all five counties for medical transportation, but this availability is often based on volunteer drivers, which is also an ongoing issue related to recruiting adequate volunteer drivers.

**Public Health Infrastructure**

Public health departments in Minnesota are collectively working together to promote, protect, and improve the health of the communities they serve. Public health departments and their respective community health boards, in partnership with community partners and providers, help support the health of the community, by providing the 10 essential public health services. These include monitoring the health status of the community; diagnosing and investigating health problems and health hazards; informing, educating, and empowering people about health issues; mobilizing community partnerships and action to identify and solve health problems; developing policies and plans which support individual and community health efforts; enforcing laws and regulations that protect the community’s health and safety; linking people to needed personal health services; assuring a competent public and personal healthcare workforce; evaluating effectiveness, accessibility, and quality of personal and population-based health services; and completing research for new insights and innovative solutions to health problems.

The Public Health Accreditation Board (PHAB) released voluntary accreditation performance standards in 2011. This voluntary accreditation option is intended to assure that state, tribal, and local public health departments have the capacity to meet these 10 essential public health functions. Horizon Public Health is currently taking steps in preparation for seeking national public health accreditation. The Minnesota Department of Health is also currently accredited by PHAB. [[11]](#endnote-11)

1. Healthy Living in Minnesota

The issues described in this section include what are typically considered healthy behaviors for an individual, such as engaging in physical activity, having healthy eating habits, and the appropriate use of alcohol, tobacco and prescription drugs. It also identifies and describes ways in which people protect and promote health for others: assuring a healthy start for children; preventing and managing chronic conditions; preventing disease and injury; and promoting mental health.

**A Healthy Start for Children**

The access and utilization of prenatal care helps in ensuring a healthy pregnancy by preventing premature births and low birth rates, both of which can contribute to infant mortality and high costs of care. The concept of prenatal care encompasses several measures including discussing a mother’s healthy choices and body changes; prenatal testing and counseling; treating potential medical complications such as gestational hypertension, diabetes and anemia; promoting optimal weight gain; testing for sexually transmitted infections; oral health assessment and treatment; and maternal mental health and substance abuse screening.

Below is a chart that shows the percentage of mothers receiving prenatal care in the first trimester averaged over a five year period. Overall, the percentages have been increasing, except for Grant County, which has been decreasing throughout the years.

***Percent of mothers receiving prenatal care in the 1st trimester***

*Source: Minnesota Department of Health, Center for Health Statistics*

Smoking during pregnancy is the single most preventable cause of maternal and infant illness and death. Smoking during pregnancy increases the risk of stillbirth, low birth weight, sudden infant death syndrome (SIDS), preterm birth, cognitive and behavioral problems, and respiratory problems in both mother and child. Children exposed to tobacco in utero are more than twice as likely to become regular smokers themselves later in life, compared with children not exposed to tobacco in utero. The chart on the following page shows the percentage of mothers who smoked during pregnancy through the years 1994 to 2013. Overall, the trend shows decreasing percentages of mothers who smoked while pregnant in Douglas, Grant, and Pope County, while Traverse and Stevens Counties show slightly increasing rates.

***Percent of mothers who smoked during pregnancy***

*Source: Minnesota Department of Health, Center for Health Statistics*

Drinking alcohol while pregnant can lead to a number of complications such as miscarriage, still birth, and a range of lifelong disorders for the child, known more specifically as fetal alcohol spectrum disorders (FASDs). Children with FASDs can have a number of problems, including poor coordination, hyperactive behavior, difficulty paying attention, poor memory, difficulty in school, learning disabilities, speech and language delays, poor reasoning and judgment skills, vision or hearing problems and problems with the heart, kidney or bones.

There was no data that could be collected at the county level as far as mothers who drank alcohol while pregnant. However, it is an important health factor that should be recognized.

Premature births can occur as a result of many different factors. However, premature birth factors may increase for women who are pregnancy with more than one child, have poor nutrition, have certain health conditions such as high blood pressure and diabetes, as well as if they have had physical injury or trauma. Premature births are births that occur prior to 37 weeks of pregnancy, with the normal duration of pregnancy being between 37 and 40 weeks. The results of premature births can lead to both short and long-term health issues. These conditions can cause chronic health conditions, as well as an increased likelihood for behavioral and psychological problems.[[12]](#endnote-12)

The graph below indicates the percentage of premature births in Minnesota and by county. As the graph indicates, the overall trend is showing a progressive increase. In comparison to the Minnesota average, however, all five of the counties are below this percentage from 2009-2013. Pope county has the highest percentage of premature births at 9.2% and Grant County has the lowest number of premature births from 2009-2013.

***Percentage of premature births in Minnesota and by County***

*Source: Minnesota Center for Health Statistics, 2015*

Children who are born to unmarried mothers are more likely to grow up in a single-parent household, experience instable living arrangements, live in poverty, as well as have socio-emotional problems.[[13]](#endnote-13)

As evidenced by the graph below, in 5 year increments, it identifies that the number of births to unmarried women has been growing. Traverse County has the highest percentage of births to unmarried women at 34.3% and Stevens County has the lowest percentage at 22.2% during the 2009-2013 time periods.

***Percentage of Births to Unmarried Women***

*Source: Minnesota Center for Health Statistics, 2013*

It is known that childcare is critical to promoting livable communities, however, without adequate and affordable childcare options, parents can face financial and social barriers. In addition to parents’ potential barriers for not having childcare, children also have educational and developmental needs that can be met through childcare. Through key informant interviews and open forums with both family and center-based childcare providers in the Horizon community, it is noted that childcare gaps exist in availability, particularly for the infant and toddler age groups in the Horizon communities. It is also evident that trends over the years show a decreasing number of childcare providers, particularly family-based, as well as an ongoing and growing need for childcare. Additional concerns for childcare include the reimbursement rates for infants, toddlers, and preschoolers, as well as reimbursement from food support. There has been additional conversation with some employers about offering employer-sponsored child care centers. These efforts have been considered based on the benefits of reducing turnover, absenteeism, and recruitment costs, ultimately improving parents’ abilities to contribute to their family income, while supporting local employers. [[14]](#endnote-14)

One factor that has been shown to affect a young person’s mental health is the amounts and type of trauma they experience in their life. This is known as adverse childhood experiences. These experiences include events such as their parents or guardians being in jail or prison, drug abuse, alcohol abuse, verbal abuse or physical abuse by someone they live with, witnessing domestic violence or experiencing sexual abuse. The increased number of adverse childhood experiences, the more likely they are to have additional stress or other mental health issues.

According to social services staff within the five counties, child maltreatment referrals have been rising. This is noted to be important as this makes apparent the increased awareness that the community has regarding knowledge for noticing maltreatment, as well as when and how to report. One beneficial aspect that has recently changed in statute in the past few years is that social services is required to cross-report to law enforcement of all child protection cases.

**Community Involvement**

Civic and community engagement, as well as community involvement are all important for individual, family, and community health. Additionally, research on adolescent brain development supports the need for youth to learn how to become part of the broader community, and to explore their unique contributions within that community. Positive experiences in the community can help individuals have social learning experiences and help them develop a healthy social identity.

Through the community partnership team discussion, key informant interviews, and open forum, social support and social associations were identified as important for overall health. Poor family support, decreased social interactions, as well as limited involvement in the community can be associated with increased morbidity, as well as early mortality.[[15]](#endnote-15)

Community engagement is a vital aspect that promotes interactions with other community members in a meaningful way. The University of Minnesota, Morris promotes community engagement between students and the community. Another group, known as Conexiones, is a non-profit organization that was recently formulated to help meet the needs of the Latino Population in the Stevens County community. One of their goals is to work with other community partners and providers to help bring people together and increase community engagement opportunities for individuals and their families to feel a part of the community. It was also noted that there is a need for increased physical activity opportunities, such as having places to dance, to engage more families in the community.

The graph below indicates the number of associations by county (per 10,000 people). Associations can include, but are not limited to, civic organizations, bowling leagues, golf clubs, fitness centers, sports organizations, religious organizations, political, and professional organizations. These numbers have remained fairly consistent in numbers of the years, but the number of participants has changed.

***Number of Social Associations by County***

**Physical Activity and Eating Habits**

Regular physical activity helps improve overall health and wellness, reduces risk for obesity, and lessens the likelihood of developing many chronic diseases like cancer and heart disease.[[16]](#footnote-1) The national physical activity guidelines recommend that children engage in at least 60 minutes of physical activity each day, including aerobic, muscle strengthening, and bone strengthening activity. Adults need at least two hours of moderate to vigorous-level activity every week, and muscle-strengthening activities on two or more days a week.[[17]](#endnote-16)

The Minnesota Student Survey asked students in all grades who participated to report on how many days they were physically active for at least 60 minutes per day. The graphs below show the percentage of students, separated by gender, who reported that they got at least 60 minutes of physical activity on five or more days in the last seven days. As a result of some of the survey numbers being smaller in some counties, some of the counties were aggregate totals, while others were broken down by gender. Of these findings, 50% or more of 5th graders are getting the recommended physical exercise they need five or more days per week. Traverse County 5th graders did fall below this level at 47%, Douglas County girls only met this 38% of the time. The fifth grade males in Pope County were the most active at 76% of time.

In comparison to the 5th graders, 11th graders were more often to have lower rates than this. Pope County 11th graders continued to have higher rates in comparison to all other 11th graders in the five counties.

***Percent of students by grade and gender in Douglas County who report they got at least 60 minutes of physical activity five or more days in the last seven days***

***Percent of students by grade in Grant County who report they got at least 60 minutes of physical activity five or more days in the last seven days***

***Percent of students by grade and gender in Pope County who report they got at least 60 minutes of physical activity five or more days in the last seven days***

***Percent of students by grade and gender in Stevens County who report they got at least 60 minutes of physical activity five or more days in the last seven days***

***Percent of students by grade in Traverse County who report they got at least 60 minutes of physical activity five or more days in the last seven days***

Source: Minnesota Student Survey, 2016[[18]](#endnote-17)

More than 80% of adults nationwide are not meeting the recommended guidelines for aerobic and muscle-strengthening activities.[[19]](#endnote-18) Below is a chart that shows the percent of adults who were physically inactive in 2015 following a random survey distributed by the Statewide Health Improvement Partnership (SHIP). The percentages indicate an area for improvement for physical activity opportunities.

***Percent of physical Activity Rates for Adults in Horizon CHB Area***

Source: SHIP Survey, 2015

**Eating Habits**

Food directly affects a person’s mental, emotional, and physical wellbeing. It affects a person’s health and growth as an individual. Eating a balanced diet is essential for maintaining a healthy lifestyle.

Below is a graph that shows the percent of students who ate five or more servings of fruits, or vegetables yesterday. The recommended portion of fruits and vegetables is two to four and three to five servings respectively according to the US Department of Agriculture.

The percentages of individuals who eat two four servings of fruit accounts for approximately 75 percent of the surveyed population. In comparison, individuals surveyed consumed under 22 percent of the recommended vegetable intake. These two graphs may imply that individuals are more likely to consume fruits than vegetables, which may be related to cost, accessibility, and availability of the foods.

***Percent of solid fruit servings consumed yesterday***

***Percent of solid vegetable servings consumed yesterday***

*Source: Horizon Public Health SHIP Survey, 2015.*

**Use of Alcohol, Tobacco, and Prescription Drugs**

Alcohol is the most common consumed drug across America – even more than tobacco. It can be consumed appropriately and responsibly at certain levels for individuals; however problems occur when individuals over-consume alcohol. These problems can include injury, unplanned pregnancy, poor birth outcomes and child development, violence, infectious diseases, and chronic diseases. The younger a person begins drinking regularly, the greater the chance that individual will obtain alcoholism, a clinically defined alcohol disorder. “Additionally, youth who started drinking before age 15, compared to those who waited until they were 21, were 12 times more likely to be unintentionally injured while under the influence of alcohol, seven times more likely to be in a motor vehicle crash after drinking, and 10 times more likely to have been in a physical fight after drinking.”[[20]](#endnote-19)

Binge drinking is defined by the National Institute on Alcohol Abuse and Alcoholism as, “a pattern of drinking that brings a person’s blood alcohol concentration (BAC) to 0.08 grams percent or above.”[[21]](#endnote-20) Below is a chart that shows the percentage of individuals who have drank alcohol in the past 30 days. This data was gathered through the SHIP survey, which was distributed to residents in the five counties in 2015. The findings indicate that over 75 percent of the population did drink alcohol in the past 30 days.

***Percentage of Individuals who used alcohol in the Past 30 days***

The additional chart below shows the number of individuals who have been binge drinking in the past 30 days, which was also distributed to a random selection of community members in all five of the counties . This chart implies that over 25% of the surveyed population from the SHIP survey consumed four or more drinks for females and five or more drinks for males on one occasion.

***Binge Drinking in the past 30 days***

*Source: Horizon Public Health SHIP Survey, 2015*

Smoking and tobacco use are the single greatest preventable cause of death in the United States. Over 440,000 people die each year from smoking.[[22]](#endnote-21) Below is a chart that shows the percent of adult smokers for the Horizon Community Health Board area from the SHIP survey completed in 2015. When these are broken down by county, Traverse County had the highest rates at 13.4% of the surveyed population, while Grant County had the lowest smoking rates at 7.5%. These rates all sit below the 16% Minnesota average in comparison to the 2015 year.

***Current Tobacco Use among Adults***

*Source: SHIP Survey, 2015*

**Prescription Drug Use**

A growing concern in Minnesota and nationwide is the rising rates of improper prescription use. As a result of these rates, there are an increased number of accidental overdoses of prescription drugs and painkillers.

Through key informant interviews with two of the law enforcement departments and one hospital ER department within the five counties, prescription drug use was discussed and the growing issue this has become. Many youth are finding prescription drugs as a source of income, where they are selling their prescription pills to others, or they are stealing from family or friends as a form of income. Additionally, of the substance and chemical abuse and misuse that is occurring, law enforcement indicated that prescription pills, along with meth, are the top two issues they are seeing within the Horizon CHB area. Knowing this information, it is important that the local public health system be consciously aware of these conditions and work towards health in all policies to address these growing issues.

**Promoting Mental Health**

When a person experiences mental or emotional health issues, it can affect his or her everyday functioning. Mental and emotional health struggles can place significant strains on relationships, affect the ability to work, and lead to self-harm. Depression and anxiety can affect a person’s ability to participate in health-promoting activities, such as physical activity, and can also disrupt connections to helpful social supports.

Adolescents who experience emotional distress can have a decreased ability to develop, learn, and make decisions. In Minnesota, reports indicate that American Indian and Hispanic students experience higher levels of stress than their peers. Additionally, females report higher rates of emotional stress across all races and ethnic groups in comparison to their male counterparts.

It is important for youth and adults to have a positive mental health and well-being. This can occur through social interactions, parent-child relationships, access to resources, as well as early identification and treatment.

Within the Horizon CHB service area, there is a mental health consortium group known as “Conversations.” This group is comprised of many different stakeholders including individuals receiving mental health services, mental health providers, and case managers. Through the utilization and participation of an open forum with this group, there were several key challenges noted within the region regarding mental health awareness and services. Some of these identified barriers included: transportation, housing, community awareness and understanding of mental health and mental illness, lack of providers and access to treatment, as well as the need for children and families to be able to talk openly about mental health and mental illness to improve overall understanding and acceptance.

The chart below demonstrates the ratio of mental health providers to patients by county and in Minnesota. All counties within the Horizon CHB service area sit below the Minnesota average of 490 patients to one mental health provider. Conversations have indicated that wait times between identified need of mental health services and time they are actually seen can be many months out. This delays adequate treatment from initial symptoms or diagnosis.

***Mental Health Providers in Minnesota, 2013***

|  |  |
| --- | --- |
|  | Patient to Mental Health Provider ratio by County |
| Douglas | 670:1 |
| Grant | 5,960:1 |
| Pope | 1,570:1 |
| Stevens | 750:1 |
| Traverse | Na |
| Minnesota | 490:1 |

Additionally, the next graph shows the percentage of students in 9th and 11th grades that were asked to score the statement “I feel good about myself.” The graph indicates those students who responded to this question with a “not at all or rarely” or “somewhat or sometimes.” Females were more likely in both age groups to answer that they do not feel good about themselves. Additionally, 9th graders, both male and female feel better about themselves more often than their 11th grade peers.

***Percent of 9th grade students that responded to the statement “I feel good about myself” with an answer of “not at all or rarely or “somewhat or sometimes”***

Source: Minnesota Student Survey, 2016. Data as aggregate total for Grant and Traverse County; not available by breakdown of male and female.

***Percent of 11th grade students that responded to the statement “I feel good about myself” with an answer of “not at all or rarely or “somewhat or sometimes”***

Source: Minnesota Student Survey, 2016.

**Preventing Disease and Injury**

Many chronic diseases, such as heart disease, stroke, or diabetes, are preventable health conditions that are often linked to poor diet or lifestyle choices, which are environmental rather than genetic factors. These chronic diseases can compromise a person’s quality of life and can lead to disability or death. Some of the ways that individuals in the Horizon community can work towards preventing chronic disease include staying physically active, maintaining a healthy weight, avoiding tobacco use, and eating a health diet. [[23]](#endnote-22)

Additionally, when looking at preventing disease, it is important to view and understand safe sex practices. The most effective way to avoid transmission of sexually transmitted infections and unplanned pregnancies is to teach youth about abstinence and prevention. If youth do engage in sexual activity, they are at an increased risk and become more vulnerable when they fail to use condoms or another form of birth control consistently. Below are charts that show the percentage of students who are sexually active and those students who used a condom the last time they had sex. Due to the small size of some of the schools within the counties, some totals are aggregate of males and females, rather than broken down separately.

Pope County has the highest percentage of eleventh grade males and females who use a condom; 94 percent and 83 percent respectively. Douglas County has the lowest percentages for males and females; 65 percent respectively. Additionally, the percent of ninth graders who use a condom is higher than the percentage of eleventh graders.

***Percent of 11th grade students who are sexually active***

***Percent of 11th grade students who used a condom the last time they had sex***

*Source: Minnesota Student Survey, 2016*

Unintentional injuries can sometimes be prevented by assessing your environment, lifestyle, and risks. Although unintentional injuries are relatively low in the Horizon communities, the community partnership team discussed concerns regarding injuries that could be avoided. In 2016, vehicle crashes were often occurring in the 20-29 year old population as a result of failing to yield or due to being chemically impaired. These are both preventable types of motor vehicle accidents that can occur with assessing your environment and situation more closely.

## Leading Causes of Death and Mortality in Minnesota

In the line chart shown below, the age adjusted death rate per 100,000 individuals is tracked from 1991 to 2010. The Horizon Community Health Board area has remained lower in cancer death rate compared to Minnesota as a whole, and the rates for both Minnesota and the Horizon Community Health Board area has declined throughout the years. As for heart disease, the Horizon Community Health Board area has had a higher rate by 20 deaths compared to Minnesota.

There has been a decrease in death due to heart disease in both Minnesota and the Horizon Community Health Board area throughout the years. The difference between the Horizon Community Health Board area and Minnesota has been decreasing; in 1991-1995 there was a rate difference of 22 deaths between the Horizon counties and Minnesota, and in 2006-2010 the rate difference declined to nine deaths.

The death rate for strokes has slightly declined throughout the years – Minnesota has had a rate decline of 30 deaths and the Horizon Community Health Board area has had a rate decline of 20 deaths. The Horizon Community Health Board area rate of death caused by strokes has remained lower than the state of Minnesota throughout the past few decades by an average of 5 deaths per 100,000 residents.

***Leading Causes of Death in Minnesota***

The following tables provide the leading causes of death by age group from 2003 – 2010. Cancer, heart disease, and stroke are the leading causes of death in Minnesota through the years 2003 to 2010. This trend is similar for the Horizon Community Health Board area – cancer, heart disease and stroke lead in the causes of death through the years 2003 and 2010. Cancer and heart disease lead stroke in the number of deaths by 1,000 deaths, and heart disease leads cancer by approximately 100 deaths.

***Leading causes of death by age group: 2003-2010***

*Source: Minnesota Department of Health, Center for Health Statistics*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Minnesota** | Age Groups | | | | | | | |
| **Cause** | **0-4** | **5-14** | **15-24** | **25-44** | **45-64** | **65-74** | **75+** | **All Ages** |
| AIDS/HIV | 1 | 0 | 4 | 167 | 198 | 26 | 2 | 400 |
| Alzheimer's Disease | 0 | 0 | 1 | 1 | 133 | 453 | 9,854 | 10,426 |
| Atherosclerosis | 0 | 0 | 0 | 2 | 46 | 60 | 588 | 697 |
| Cancer | 64 | 121 | 215 | 2,006 | 18,231 | 17,423 | 35,882 | 73,937 |
| Cirrhosis | 1 | 0 | 7 | 311 | 1,545 | 512 | 509 | 2,884 |
| Congenital Anomalies | 833 | 51 | 53 | 137 | 257 | 65 | 114 | 1,508 |
| Chronic Lower Respiratory Disease | 10 | 13 | 19 | 99 | 1,489 | 3,095 | 10,472 | 15,193 |
| Diabetes | 2 | 6 | 15 | 262 | 1,666 | 1,639 | 5,456 | 9,043 |
| Heart Disease | 61 | 24 | 109 | 1,275 | 8,277 | 7,364 | 43,761 | 60,863 |
| Homicide | 64 | 24 | 303 | 361 | 175 | 27 | 23 | 977 |
| Hypertension | 0 | 0 | 2 | 36 | 390 | 514 | 2,849 | 3,789 |
| Nephritis | 13 | 5 | 7 | 65 | 472 | 700 | 4,705 | 5,972 |
| Perinatal Conditions | 1,238 | 10 | 6 | 2 | 3 | 1 | 3 | 1,264 |
| Pneumonia and Influenza | 41 | 8 | 10 | 91 | 368 | 395 | 4,698 | 5,609 |
| Septicemia | 18 | 3 | 9 | 80 | 426 | 388 | 1,477 | 2,399 |
| SIDS | 272 | 0 | 1 | 0 | 0 | 0 | 0 | 273 |
| Stroke | 26 | 10 | 31 | 253 | 1,466 | 1,919 | 14,316 | 18,027 |
| Suicide | 0 | 53 | 687 | 1,592 | 1,582 | 233 | 317 | 4,457 |
| Unintentional Injury | 315 | 256 | 1,527 | 2,872 | 3,430 | 1,097 | 6,276 | 15,776 |
| Other | 427 | 162 | 389 | 1,919 | 7,921 | 7,400 | 49,505 | 67,757 |
| **Total** | 3,386 | 746 | 3,395 | 11,531 | 48,075 | 43,311 | 190,807 | 301,251 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Horizon Comm. Health Board** | Age Groups | | | | | | | |
| **Cause** | **0-4** | **5-14** | **15-24** | **25-44** | **45-64** | **65-74** | **75+** | **All Ages** |
| AIDS/HIV | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 |
| Alzheimer's Disease | 0 | 0 | 0 | 0 | 1 | 10 | 218 | 229 |
| Atherosclerosis | 0 | 0 | 0 | 0 | 2 | 2 | 17 | 21 |
| Cancer | 1 | 1 | 8 | 21 | 259 | 294 | 745 | 1,326 |
| Cirrhosis | 0 | 0 | 0 | 3 | 13 | 6 | 9 | 32 |
| Congenital Anomalies | 6 | 0 | 0 | 2 | 3 | 1 | 3 | 15 |
| Chronic Lower Respiratory Disease | 1 | 0 | 0 | 1 | 19 | 46 | 193 | 259 |
| Diabetes | 0 | 0 | 0 | 3 | 10 | 18 | 114 | 146 |
| Heart Disease | 1 | 0 | 1 | 13 | 118 | 150 | 1,138 | 1,421 |
| Homicide | 2 | 0 | 1 | 1 | 2 | 0 | 1 | 8 |
| Hypertension | 0 | 0 | 0 | 0 | 4 | 9 | 49 | 62 |
| Nephritis | 0 | 0 | 0 | 1 | 3 | 10 | 82 | 95 |
| Perinatal Conditions | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Pneumonia and Influenza | 0 | 0 | 0 | 0 | 6 | 7 | 132 | 145 |
| Septicemia | 0 | 0 | 0 | 2 | 6 | 9 | 34 | 51 |
| SIDS | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Stroke | 0 | 0 | 0 | 3 | 24 | 34 | 318 | 379 |
| Suicide | 0 | 1 | 5 | 22 | 12 | 3 | 4 | 47 |
| Unintentional Injury | 1 | 5 | 26 | 45 | 38 | 12 | 103 | 232 |
| Other | 3 | 3 | 9 | 21 | 84 | 104 | 888 | 1,111 |
| **Total** | **34** | **10** | **50** | **138** | **608** | **716** | **4,048** | **5,603** |

## Mortality in the Horizon Community Health Board area

In the graphs below, death rates were broken down further for the five individual counties in the Horizon Community Health Board area. Rates based on 20 or fewer deaths were not produced in these charts.

The heart disease mortality rate in all five counties has decreased with time. Traverse County has had the leading rate of death due to heart disease except within the last six years when Pope County had the highest rate.

The cancer mortality rate in Stevens and Traverse Counties has had less than 20 deaths per year through the years 1990-2010. Douglas and Pope Counties have had an average between 150 and 200 deaths per 100,000 residents (approximately 80 deaths per year in Douglas County and 30 deaths per year in Pope County).

The mortality rate for strokes within the five individual counties is not provided due to the majority of the counties having a rate of less than 20 deaths per year. In substitution, a graph is provided showing the total number of mortalities due to strokes within the five counties. The number of strokes within the Horizon Community Health Region has remained the same with a slight decline in numbers as mentioned previously; Douglas County has shown the greatest decline in deaths due to stroke among the five counties.

***Heart Disease Mortality Rate Cancer Mortality Rate***

***Stroke Mortality Number***

Cancer

As of 2010, cancer was the leading cause of death in Minnesota. It is the second leading cause of death in the Horizon Community Health Board area, followed by heart disease.

Cancer can be caused by both external factors (tobacco, infectious organisms, chemicals, and radiation) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). It can be caused from a single factor or a variety of factors mentioned above. The American Cancer Society estimates there will be 28,000 new cases of selected cancers and 10,000 deaths from selected cancers in the year 2013 within Minnesota.[[24]](#endnote-23) The Minnesota Department of Health states within its Statewide Health Assessment, *"According to the American Cancer Society, the risk of death from cancer is influenced by poverty more than by race. People in poverty are more likely to smoke and to be obese, two major risk factors for cancer. In addition, poverty may expose people to unhealthy environments, limit awareness of health promotion messages and lead to seeking medical care at a later stage of illness, when treatment options are limited and the potential for death is much higher."[[25]](#endnote-24)*

Breast cancer is the most common cancer found in women. According to the National Breast Cancer Foundation, 1 out of 8 women will be diagnosed with breast cancer within their lifetime.[[26]](#endnote-25) Luckily, with early detection and treatment, most people will continue a normal life. Graphs shown below identify 15 percent of cancer deaths were breast cancer within Minnesota from 2000 to 2008. The Horizon Community Health Region averaged 13 percent of cancer deaths being identified as breast cancer. Stevens County had six percent of cancer deaths attributed to breast cancer in 2000 to 2002; it increased in 2003 to 2005 to seven percent and jumped to 27 percent in 2006 to 2008. The sudden increase is due to the number of women who have died due to breast cancer – from two in 2000-2002 to seven in 2006-2008. Also, the sudden increase is due to the total number of women dying from cancer decreasing throughout the years. Traverse County on the other hand has seen a decrease in the percent of deaths due to breast cancer with zero deaths in the years 2006-2008.

Colon and rectal cancer have remained at a steady 10 percent of cancer deaths for Minnesota and the Horizon Community Health Region. Traverse County has the highest range of colon and rectal cancer deaths, ranging from five percent in 2003 to 2005 to 25 percent in 2006 to 2008. Once again, while looking at the actual number of deaths for men and women combined, in 2000-2002 there were 10 deaths due to colon and rectal cancer. In 2003-2005 there were two deaths, and in 2006-2008 there were 9 deaths. These numbers are small leaving the percentages to appear to be more drastic than in actuality.

The percent of lung cancer deaths among men and women have remained pretty much constant; around 25 percent or one fourth of the total deaths by a certain type of cancer.

According to the Center for Disease Control, prostate cancer is the most common cancer among men, no matter their race or ethnicity.[[27]](#endnote-26) Twelve percent of cancer deaths are from prostate cancer in men in Minnesota and the Horizon Community Health Board area as a whole. Overall, the percentage of deaths due to prostate cancer among men has declined.

***Breast cancer deaths for women***

***Colon and Rectum deaths for men and women***

|  |  |
| --- | --- |
|  | **Minnesota** |
|  | **Horizon** |
|  | **Douglas** |
|  | **Grant** |
|  | **Pope** |
|  | **Stevens** |
|  | **Traverse** |

*Source: Minnesota Department of Health, Minnesota Cancer Surveillance System*

\*Percent = # diagnosed for county (or state) / total cancer cases for county (or state)

## Obesity

Obesity places people at a higher risk for obtaining a variety of chronic diseases and health conditions. The Minnesota Department of Health lists that hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, depression, osteoarthritis, sleep apnea and respiratory problems, and even some cancers (endometrial, breast, and colon) as a few of the chronic diseases and health conditions one can obtain while being overweight or obese.[[28]](#endnote-27) Along with health effects, obesity can cause social and emotional effects to people. Children and teenagers can be teased or ostracized at school or among social groups. Adults can be discriminated in the workplace or in public.

Charts below show that the percent of Minnesotans overweight or obese has risen throughout the years. Starting in 1995 50.6 percent of its total population was overweight or obese and it has risen to 63.1 percent in 2010 – a 12.5 percent increase. Based on Minnesota's population in 2010, an additional 662,000 individuals became overweight or obese within that 15 year span. Within the Horizon Community Health Board area, the percentage of individuals overweight or obese is equal to that of the state of Minnesota. Based on the population size of the Horizon Community Health Board area in 2010, approximately 8,300 individuals became overweight or obese within the 15 year span.

The chart showing the percent of overweight Horizon residents reveals a dramatic decrease since 2003. However, this is misleading due to the fact that in the years 2003 to 2005 overweight and obesity percentages were combined. In 2006 the two categories were separated. If the two charts were added together the percentages would show a similar increase as what was found for Minnesota as a whole. Stevens County has the smallest amount of individuals overweight or obese when compared to Minnesota and the other neighboring counties. This could be due to the University of Minnesota, Morris being located within the county. The students of the University are counted as residents and many are athletes for the school or participate in intramurals or various sports related clubs. This is a factor that helps explain the decreasing percentage of the individuals overweight or obese within Stevens County.

The increase in the amount of individuals becoming overweight or obese is partially due to the increase in the percentage of Minnesotans and Horizon residents not exercising. In 2004, the average percentage of individuals not exercising was 16 percent; roughly 10,500 residents in the Horizon Community Health Board area. Throughout the years, the percentage has risen slightly by one or two percent. The Horizon Community Health Board area has a higher percentage of individuals not exercising than Minnesota as a whole.

***% Horizon Residents Overweight***

***% Horizon Residents Obese***

|  |  |
| --- | --- |
|  | **Minnesota** |
|  | **Horizon** |
|  | **Douglas** |
|  | **Grant** |
|  | **Pope** |
|  | **Stevens** |
|  | **Traverse** |

***% Horizon Residents with No Exercise***

*Source: MN Department of Health, Behavioral Risk Factor Surveillance System*

Obesity and overweight children are becoming a large issue across the country and the Federal Government has recently approved new regulations for healthy school lunches. As seen in the charts below, the Horizon Community Health Board area compares similarly to Minnesota for the percentage of ninth and twelfth graders overweight, obese or feels overweight. However, there are some disparities when breaking down by county. Douglas County consistently has the lowest percentage of ninth and twelfth graders who are overweight, obese, or feel overweight. Pope and Grant counties have some of the highest percentages, while all other counties fall between 10-15% of ninth and twelfth graders overweight, 6-10% of ninth and twelfth graders obese, and 20-25% of ninth and twelfth graders who feel overweight.

|  |  |
| --- | --- |
|  | **2007** |
|  | **2010** |

***Percent 9th Graders Overweight (BMI)\****

***Percent 9th Graders Obese (BMI)\****

***Percent 9th Graders who Feel Overweight***

**\*(BMI) – According to their Body Mass Index**

*Source: MN Department of Health, Center for Health Statistics*

|  |  |
| --- | --- |
|  | **2007** |
|  | **2010** |

***Percent 12th graders Overweight (BMI)\****

***Percent 12th Graders Obese (BMI)\****

***Percent 12th Graders Who Feel Overweight***

**\*(BMI) – According to their Body Mass Index**

*Source: MN Department of Health, Center for Health Statistics*

The following table is a breakdown of the state and counties within the Horizon Community Health Board area of overweight and obesity among WIC participants. Grant County had the highest percentage of overweight children aged two to five years receiving WIC with 20.2%. Grant County also had the highest percentage of overweight or obese women (pre-pregnancy) receiving WIC with 60.6%. Traverse County had the highest percentage of obese children aged two to five years receiving WIC with 17.1%. However, the other counties were below the state percentage of 13.1%.

***Minnesota children aged two to five enrolled in WIC who are overweight or obese: 2010***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **2010 WIC Participants Unduplicated Counts1** | **2008-2010 Pediatric and Pregnancy Nutrition Surveillance2** | | | |
| **Infant and Child Health** | | | **Maternal Health** |
| **Children 2-5 years** | | | **Women (Pre-pregnancy) - Overweight or Obese4** |
| **Overweight3** | **Obese3** | **Ever Breastfed** |
| **State of Minnesota** | **230,110** | **16.7** | **13.1** | **73.7** | **54.2** |
| Douglas | 1,558 | 14.6 | 10.1 | 73.5 | 53.4 |
| Grant | 372 | 20.1 | 9.1 | 73.6 | 60.6 |
| Pope | 594 | 16.5 | 8.4 | 76.2 | 58.8 |
| Stevens | 506 | 14.3 | 11.2 | 81.9 | 57.4 |
| Traverse | 149 | 11.9 | 17.1 | \* | \* |

|  |
| --- |
| 1WIC Participants - Unduplicated Counts: The total number of pregnant, post-partum and nursing women, infants and children less than 5 years of age who received WIC vouchers. County level data are determined by combining unduplicated participants of all clinics within a county's boundaries. State total does not equal the sum of the counties because participants may move counties during the year. |
|
| 2Reporting period is January 1 through December 31. Excludes records with unknown data or errors Data in this report were prepared by the Centers for Disease Control and Prevention’s (CDC’s) Pediatric Nutrition Surveillance System and the Pregnancy Nutrition Surveillance System. The Minnesota-specific data depicted in this table represent the status of children participating in the MN WIC Program in 2008-2010. Trend data do not necessarily include the same children from one year to the next, and so should not be interpreted to reflect changes in individual children’s health status. Rather the changes reflect health status of the population over time.  Infants and children participating in WIC come from families with limited resources. Only families with incomes at or below 185% of federal poverty (or eligible to receive benefits from another program with comparable income guidelines), are eligible for WIC services. All children participating in WIC are considered at nutritional risk. |
| 3Based on 2000 CDC growth chart percentiles for BMI-for-age for children 2 years of age and older. Overweight children are in the 85th to less than 95th percentile category and obese children are in the equal to or greater than 95th percentile category |
|
| 4Prepregnancy overweight - Based on 2009 IOM report "Weight Gain During Pregnancy": underweight (BMI <18.5), normal weight (BMI 18.5 to 24.9), overweight (BMI 25.0 to 29.0) Obese (BMI >30.0) |
| For more data on WIC got to: |
| [www.health.state.mn.us/divs/fh/wic/localagency/infosystem/pednss/index.html](http://www.health.state.mn.us/divs/fh/wic/localagency/infosystem/pednss/index.html) |

Preliminary Conclusion

Minnesota statutes Chapter 145A requires the completion of a comprehensive Community Health Assessment (CHA). This document represents the first, and most lengthy, phase of the assessment process. The data in this document, as well as additional data, has been reviewed at great length with the members of the 5-County Community Partnership Team. Following the application of the 2-step prioritization process, this assessment, and subsequent data, will be used as the basis for the development and implementation of a comprehensive community health improvement plan. This plan will be developed with the collective input and involvement of members of the Horizon Community Partnership Team.

Questions about this Community Health Assessment, or of other related data, can be directed to the Public Health Administrator or to the Community Health Strategist/Accreditation Coordinator at Horizon Public Health.

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