Building Healthy Communities for Clare, Gladwin, Gratiot, Isabella & Midland Counties
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I. Building Healthy Communities

Throughout the region the people who live in our communities rely on MidMichigan Health for excellent care, from the most advanced medical technology to an amazing patient experience. MidMichigan’s care extends outside the walls of our Medical Centers in Alma, Clare, Gladwin and Midland. It reaches beyond our Health Parks in Freeland, Mt. Pleasant and Houghton Lake. And it stretches out from our physician practices in Medical Offices throughout the region. That’s because we are focused on helping people lead healthier lives no matter where their lives may intersect with us.

Improving health in the middle of Michigan is a daunting challenge too large to belong to any single organization or group. That is why MidMichigan has so many partnerships and collaborations and has looked to many sources for quantitative and qualitative information on health status and what can be done to address it.

As you read this assessment you will discover facts and figures which may be new information for you. You will also learn about MidMichigan’s past, present and approach toward improving health status. We appreciate your focus on this topic and welcome your comments and suggestions, and yes, encouragement. Please share them with me at donna.rapp@midmichigan.org.

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Our Mission  
Our mission is to provide excellent health services to improve the quality of life for people in our communities.

Our Vision  
Our vision is to be an integrated health system providing seamless care of each person we serve.

Our Values  
Excellence - We offer nothing less than the best.

We adhere to the highest standards possible in clinical care and customer service. We continuously measure ourselves and constantly strive to improve.

Integrity - We do the right thing, each time, every time.

We treat each individual with compassion and respect, demonstrating the pinnacle of professionalism and dignity. We communicate openly and honestly. We recognize the unique individuality of each person. In all that we do, we exemplify the highest ethical standards.

Teamwork - We provide individual commitment to a group effort.

Collaboration benefits everyone, most importantly our patients. It promotes efficiency, fosters professional and organizational growth, encourages learning and stimulates innovation.

Accountability - We accept responsibility for all we do.

We are accountable for the outcomes of our efforts. We are responsible to the communities we serve, to our patient and to one another. We recognize that as health care providers we occupy a position of trust.
II. Executive Summary

MidMichigan Health’s 2012 Community Health Needs Assessment plan provides prioritized actions to address four community health initiatives. The overarching goal is measurable improvement in community health status, which is believed to be obtainable by adhering to the Goals of Healthy People 2020 as follows:

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

Priority Setting Process and Results

Because of the large number as well as diversity of health issues facing our communities, ten areas were chosen (indicated by an asterisk in the sidebar) to be included in the plan. The starting point was a review of the Healthy People 2020 Focus Areas (see sidebar).

Members of the Community Health Needs Assessment Team reviewed issues based upon the health data that was collected, understanding that choices would need to be made regarding which issues would be able to offer the best impact, given time and resources.

Next, the team analyzed Health Outcomes, or the changes in the health status of our population, using various demographic groups over time. Four target areas were selected: Heart disease and cancer, diabetes mellitus, maternal-infant health and health related behaviors.

The team chose heart disease and cancer for every county in our service area because they were the top two mortality diagnoses in all counties.

There was a clear need to choose Diabetes Mellitus (DM) in order to complement the improved diabetes management strategies demonstrated in our counties. Focus on primary prevention among those at risk for developing DM is needed due to a growing concern about the possibility of substantial increases in diabetes-related complications. In addition, there is a possibility that the increase in people with DM, as well as the complexity of their care, might overwhelm existing health care systems.
II. Executive Summary *Continued*

Next, the team focused on Maternal-Infant Health, recognizing the clear concern of our community partners relative to low birth rates and low breastfeeding rates.

Finally, the team looked at health related behaviors, and determined the top three behavior areas that could best address long-term health: smoking; diet and exercise; and getting preventive screenings.

Four areas stand out to the team where further data is needed to ascertain the seriousness of the issues and the degree with which MidMichigan can have an impact. Those areas are: adolescent health, child health, older adults and respiratory diseases (refer to italicized items in the sidebar on page 4).

**Community Benefit Initiatives**

The following four areas of focus for MidMichigan Health were identified:

<table>
<thead>
<tr>
<th>Area</th>
<th>Focus</th>
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<tr>
<td>Access to Care</td>
<td>Initiation and coordination of care. Continuity of services between acute and chronic health care needs to achieve seamless care. It impacts all other areas. Particular concern for the underinsured and uninsured.</td>
</tr>
<tr>
<td>Health Outcomes: Heart Disease, Cancer &amp; Diabetes</td>
<td>Risk factors as well as populations at risk for heart disease, cancer and diabetes. Referrals and follow-up care resultant from preventive clinical services and health screenings to detect early onset of illness and disease</td>
</tr>
<tr>
<td>Health Care Behaviors</td>
<td>Behaviors important to long term health like a healthy diet, regular physical activity, achieving and maintaining a healthy weight. They can be modified for health improvement.</td>
</tr>
<tr>
<td>Maternal and Infant Health</td>
<td>Improved pregnancy and postpartum health behaviors to improve the health and well being of mothers and infants.</td>
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Prioritization specific to each affiliate was decided based upon the following:
- Size of the problem, including the number or percentage of people personally affected.
- Seriousness of the problem, including mortality and the impact on other health issues.
- Ability to reasonably impact the issue within our resources or collaboratively with others.
- Ability to gauge progress based upon widely used outcome measures.

Input from each member of the Community Health Needs Assessment Team guided the prioritization results. Team member contributed insight based upon their area of expertise, analysis of the data, and input from respective community collaborations. Included in this report is the decision making grid that outlines ranking results for each county.
III. Introduction to the 2012 Community Health Needs Assessment (CHNA)

Introductory Remarks
This report contains the results of a baseline assessment of the health needs of the region served by MidMichigan Health. Contained in the following pages is a report of: (1) the primary and secondary data that has been collected, (2) identification of community benefit initiatives to address prioritized needs based on the data, (3) establishment of priority actions and outcomes and (4) outcome evaluation measures.

Our CHNA supports the Mission of MidMichigan Health to provide excellent health services to improve the quality of life for people in our communities. The Institute for Healthcare Improvement (IHI) believes that new designs can and must be developed to simultaneously accomplish three critical objectives, or what is called the “Triple Aim”: improve the health of the population; enhance the patient experience of care (including quality, access and reliability); and reduce, or at least control, the per capita cost of care. Triple Aim has helped frame our work and focus outcome discussions on measures that matter in the three realms of health, cost and experience. We have analyzed the current status of our population relative to health care access and cost issues, health outcomes and health care behaviors. The community benefit initiatives and corresponding priority actions are intended to provide the best practices for healthy living. We plan to monitor, evaluate and adjust actions on an ongoing basis, refining strategies to improve, as we progress through the ever changing world of health care.

Profiles of the Counties Served by MidMichigan Health
MidMichigan Health’s service area where our hospitals and major facilities are located consists of five counties: Midland, Gratiot, Isabella, Clare and Gladwin. This service area was defined at a zip code level using system-wide inpatient origin data from the Michigan Inpatient Data Base. In FY 2011 over 85 percent of our discharges originated from one of these zip codes. This report will address the major counties MidMichigan Health serves of Clare, Gladwin, Gratiot, Isabella and Midland.

Key Community Partners
Our work has been accomplished through the efforts of many community partners. A description of our primary partners and the important collaborative community health improvement work that has been accomplished follows:

Together We Can Health Improvement Council - In early 2010, the Central Michigan District Health Department (CMDHD) embarked upon the Together We Can initiative, an effort to improve the overall health of the more than 196,000 people within its health district, which includes the central Michigan counties of Arenac, Clare, Gladwin, Isabella, Osceola and Roscommon. The primary strategy of this health improvement effort was to engage the community both as a whole and within each county with a call to action. CMDHD has hosted a summit each spring since 2010 to update stakeholders about the overall health status within the community, based upon the County Health Rankings. The summit sessions have been used to solicit perceptions about key health issues and how to best address them. Resultant from the initial summit, the Together We Can Health Improvement Council (TWC HI-C) was formed to spearhead health improvement initiatives and foster the creation of health improvement planning work groups (HIP-WG) within each of the six counties.

The Michigan Health Information Alliance (MiHIA) - MiHIA is a formal community collaboration created in 2007. The main focus of the alliance is to build a health care system where consumers, providers and payers make decisions based on the value and quality of care. It serves a population of nearly 800,000 in the same 14-county geographic area in central Michigan served by MidMichigan Health, and is one of nine medical trading areas defined by the State of Michigan Department of Community Health. MiHIA’s strategy...
III. Introduction to the 2012 Community Health Needs Assessment

is to serve as the regional hub for sharing health information and for collaboration among multiple stakeholders, including patients and their families. Information sharing is made possible through MiHIA’s Health Dashboard. The Health Dashboard is a web-accessible reporting and monitoring solution that displays key performance indicators used to describe and track a population’s health. It helps to monitor community health status as it relates to economic development and quality of life for the region. MidMichigan Health is active in several of the MiHIA projects as they relate to health outcomes in our region.

**United Way** - United Way is a national system of volunteers, contributors and local charities helping people in their own communities. Each county in our service area is served by their local United Way. Each United Way partners with community agencies to address community issues including environmental health, access to care, substance abuse, poverty, homelessness, and those affecting children and families. The top ten social issues reported by the Midland County Health and Human Services Council, a community partner of The United Way of Midland County in March 2012 are (non-prioritized): Access to care, obesity, depression/suicide, infant mortality, substance abuse, transportation, poverty, basic needs, homelessness and violence/physical abuse.

**MidMichigan Health Network** - MidMichigan Health Network is a joint venture between Physician Associates of MidMichigan and MidMichigan Health. It provides cost-effective managed care services to employers throughout Michigan. MidMichigan Health Network’s ConnectCareSM plans provide health coverage for approximately 55,000 lives and is designed to slow the increasing rate of healthcare costs while maintaining high-quality, accessible care. ConnectCare primarily serves Midland, Clare, Gladwin, Gratiot, Isabella, Montcalm and Roscommon counties. MidMichigan Health Network is helping to lead the way toward Clinical Integration. The four major steps are pay for performance, patient centered medical homes, co-management and accountable care organizations. This initiative focuses our providers on patient access, quality, care coordination and population management.

MidMichigan Health Network administers and manages three county health plans covering 11 counties serving over 5,000 members. The health plans enhance access to basic healthcare services for persons who typically cannot afford to pay for services, and therefore do not seek care. Since 2007 over $1.4 million has been received in free medications to area patients.

**The Healthy Children’s Initiative of Gratiot County** - The Healthy Children’s Initiative of Gratiot County is a community-based coalition, established in 2008 to collaboratively begin addressing the rising incidence of childhood obesity in Gratiot County. Their mission is to promote healthy living, prevention and wellness in children throughout Gratiot County. The Initiative’s vision is to improve the lives of Gratiot County children ages 5-13 by encouraging, promoting and creating opportunities for healthy living through education and policy by October 2, 2015. Targeting access to healthy food and exercise, activities will be accomplished in eight phases to include health fairs, preventive screening days, indoor fitness and nutrition activities as well as a health summit.

**Michigan Health Departments** - Our alliance with the three Michigan Health Departments that service our communities is of utmost importance in preventing disease and treating illness. We are committed to strong working relationships with the Midland County Department of Public Health, serving Midland County; the Central Michigan District Health Department; which serves Arenac, Clare, Gladwin, Isabella, Osceola and Roscommon Counties; and Mid-Michigan District Health Department, serving Clinton, Gratiot and Montcalm County.
IV. Snapshot & Community Description – Clare County

Snapshot of Clare County’s Community Health Needs Assessment

Our preliminary needs assessment utilized health-related data, creating a picture of the disease states and mortality rates for people in Clare county, as well as at-risk behaviors. We additionally determined the impact of health care access as an overarching issue. To follow is a synopsis of this information for Clare County, as well as prioritized community benefit initiatives, goals, actions and outcome measures.

Health Care Access

According to University of Wisconsin Population Health Institute County Health Rankings for 2011 and 2012, Clare ranked 72 out of 82 counties in clinical care in 2011, and declined to 79 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 2,023:1 in 2011 and 2012, against a national benchmark of 631:1. Additionally for Clare, uninsured for ages 18-64 years is 22.6 percent, which exceeds the national and state average of 21.4 percent. There is a higher percentage (24.8%) of Medicare enrollees than the State average of 16.6 percent, and a higher percentage (16.8%) of Medicaid enrollees than State average of 12.4 percent. The preventable hospital stays numbered 109 for 2011 and 104 for 2012, against a national benchmark of 52. (U.S. Census Bureau, American Community Survey, 2008-2010).

According to the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007, Clare County had the highest with 109 per 1,000 population of ambulatory-care sensitive hospitalizations per Medicare enrollee against 52 per 1,000 State of Michigan Medicare enrollees.

According to MidMichigan PRC Research, July 1, 2011 - April 16, 2012, Clare County had the highest percentage of all counties with 90.2 percent of MidMichigan Physicians Group primary care patients questioned who were “always or usually” able to get an appointment as soon as they needed for issues requiring care right away. Clare County was again the highest percentage of our counties with 94.8 percent who stated they were “usually” able to get an appointment as soon as they needed for a routine checkup.

Health Outcomes

Heart Disease - The leading cause of male and female deaths in Clare County is heart disease. The incidence of death associated range of 23-34 percent of all deaths for males, and a range of 25-34 percent of all deaths for females. However, the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. Clare County observed the highest heart disease rate for our counties (279.8 per 100,000 population; these were higher rates than the State of Michigan (216.4 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census.

Cancer Rates - Cancer incidence trends represent age-adjusted rates per 100,000 population.
- Breast Cancer - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007, in all counties except Clare County, which experienced an increase during 1998-2002 of 9.4 incidences per 100,000 population. The incidence of breast cancer in Clare County was 110.5 per 100,000 population, which is a lower incidence of breast cancer than the State of Michigan (122.1 per 100,000 population).
IV. Snapshot & Community Description – Clare County Continued

- **Prostate Cancer** - Prostate cancer trends for all counties and the state of Michigan between 1993 and 2007 showed a mild increase during 1998-2002, followed by a decrease in incidence from 2003-2007. For all counties, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997. Clare County had the highest incidence (173.7 per 100,000) followed closely by Gladwin County (172.9 per 100,000 population). All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).

- **Lung and Bronchus** - Lung and bronchus cancer diagnoses in males between 1993 to 2007 was 107.1 diagnoses per 100,000 population, while the incidence in females was 79.3 per 100,000 population. During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).

- **Colorectal cancer** - Clare had the highest incidence for females (1993-2007) for our counties (51 per 100,000 population), and a higher incidence than the State of Michigan (45 per 100,000 population). However, the incidence of colon and rectum cancer diagnoses in males decreased in number between 1993 to 2007 for all counties and the State of Michigan, with the largest decrease in incidence observed in Clare County, where between 1993 and 2007, the incidence for males declined by 32 diagnoses per 100,000 population. Colorectal cancer rates for men were 51.5 per 100,000 population, which was lower than the State of Michigan, which was 58.2 per 100,000 population.

- **All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum decreased from the baseline (1993-1997) for the time period of 2003-2007 for Clare County, while there was an increase from baseline from the State of Michigan. The largest decrease in incidence from baseline was observed in Clare County, where between 1993 and 2007, the incidence for males declined by 11.9 diagnoses per 100,000 population. An overall increase was observed for the state of 12.5 diagnoses per 100,000 population from 1993-2007. The incidence of cancer in females for all cancer types increased for Clare County to 465.7 per 100,000. The State of Michigan also increased to 436.4 per 100,000 population.

The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compiled from 1993-2007 for both males and females.

**Diabetes** - Diabetes death rates were highest in Clare County (29 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

**Maternal/Infant Health**

- **Low Birth Weights** - (Less than 2,500 grams upon birth.) Clare has highest incidence at 8.4 percent. The U.S. benchmark is defined at the 90th percentile, held an incidence of 6.0 percent. Low-birth weight rates are below the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5.0 percent. (National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007).

- **Breastfeeding** - Breastfeeding per 100,000 population Central Michigan District Health Department (CMDHD)
  - 60.7% Ever
  - 15% 6 months
  - 11.8% 12 months

- **Sexually Transmitted Disease Rate** - The sexually transmitted disease rate is 132 per 100,000 population. Data from the CDC National Center for Hepatitis, HIV, STD and TB prevention 2008. Data from the 2007 Pediatric Nutrition Surveillance, Michigan.
IV. Snapshot & Community Description – Clare County

Continued

Health Care Behaviors

Smoking, Diet and Exercise - Clare County ranked 67 out of 82, and 69 out of 82 counties respectively in Health Behaviors.

- Smoking rankings were 30 percent in 2011 and 29 percent in 2012, compared to a national benchmark of 15 percent for smoking.
- Obesity rankings were 30 percent in both 2011 and 2012.
- Clare ranked 32 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent.
- Recreational facilities ranked 10 per 100,000 population, equal to the State of Michigan (10 per 100,000 population). The U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population.

Data from University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012.

Preventive Screenings

- **Mammography screening** rate of 65 percent indicating less of the female population receiving mammography screening in Clare than in the State of Michigan (69%) and below the U.S. benchmark of 74 percent.

  Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

- **Diabetes Screenings** - HgA1C. Clare County had an 84 percent diabetic screening rate, which was above the rate for the State of Michigan (83%), but below the U.S. benchmark, defined at the 90th percentile, and holds a screening rate of 89 percent.

Clare County Profile

Clare County is widely known as Michigan’s “Gateway to the North.” Established in Michigan’s lumbering era, the area was home to the first successful logging railroad. This line helped revolutionize the logging industry. Timber, the Muskegon and Tobacco Rivers, abundant land, and a railroad were major catalysts for the county. Between 1865 and 1880, the cities of Clare and Harrison and the Village of Farwell were established. Also, with the addition of the railroads, smaller “whistle stops” such as Lake and Lake George grew. Other communities such as Leota and Temple sprang up as a result of the logging boom.

Harrison, the county seat, has hosted the county fair since 1883. Clare grew from a small village in 1865 to a thriving community by 1879, with a main street lined with businesses ranging from a blacksmith to a jewelry store. Many of the original buildings survive today. From its rugged logging past, the county has evolved into a permanent home for many residents, a part-time home for those who journey south for the winter, and a tranquil tourist destination known for its bountiful natural resources. (Reference: Clare County Convention and Visitor’s Bureau, 2011).

The largest employer in Clare County is MidMichigan Health, with many of those employees working for MidMichigan Medical Center–Clare.
IV. Snapshot & Community Description – Clare County

**Facts and Figures on Clare County -** Based on 2010 Census, there were 30,926 people, 12,966 households and 8,584 families residing in the county down from 31,352 in the 2000 Census. The racial makeup was approximately 96.8 percent (29,951) Whites, 0.7 percent (206) American Indian Alaska Native, 0.5 percent (149) Black or African-American, and less than 0.5 percent each for Asian (91) and Pacific Islander (8). Just over 1 percent (446) was classified as two or more races (U.S. Census Bureau, 2010). The median age is 45.3.

The Census Bureau estimates the 2010 median household income was $40,983 and the mean income for a family was $49,808. Slightly over 23 percent of the population was below the poverty line. Those individuals under 100 percent of the federal poverty level were just under 18 percent, under 150 percent of the poverty level just under 28 percent, and under 200 percent federal poverty level were 40 percent (U.S. Census Bureau, 2010).

The Census Bureau estimates in 2010 that Clare County’s unemployment rate was 19 percent. The rate of those county residents with no health insurance coverage was just over 15 percent. Of those individuals with health insurance coverage (84.9%), 56.9 percent had private health insurance and 46.7 percent had public coverage.

Figure 1 illustrates the distribution of Clare County’s uninsured population, by age category. Males age 18 to 24 years of age comprise the highest percentage of uninsured individuals at 34.8 percent, followed closely by females within the same age category at 32.4 percent uninsured. The three age categories containing the highest percentage of uninsured individuals includes both males and females ages 18 to 24 years (34.8% and 32.4%), 25 to 34 years (31.3% and 23.1%), and 35 to 44 years (25.2% and 30.6%).

In 2010 the educational attainment of high school graduate or higher was 83.7 percent; those who have a bachelor’s degree or higher was 10.4 percent according to the 2010 Census Bureau.

According to the University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012, Clare County ranked 67 out of 82, and 69 out of 82 counties respectively in Health Behaviors, which include measures of smoking, diet and exercise, alcohol use, and risky sex behavior. Smoking percentages were 30 percent in 2011 and 29 percent in 2012 compared to a national benchmark of 15 percent for smoking. Obesity percentages were 30 percent in both 2011 and 2012 compared to a benchmark of 25 percent. The percentage of physical inactivity in 2012 was 32 percent compared to a national benchmark of 21 percent. Sexually transmitted disease cases for Clare County were 132 in 2011 and improved to 109 in 2012, with both years above the national benchmark of 84 per 100,000 population.

Clare County ranked 72 out of 82 counties in Clinical Care, which is the defined as the measures of access to care and quality of care, in 2011 and declined to 79 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 2,023:1 in 2011 and 2012, against a national benchmark of 631:1. The
preventable hospital stays were numbered 109 for 2011 and 104 for 2012, against a national benchmark of 52. Preventable hospital stays are measured as the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees. These estimates were calculated for the County Health Rankings by the authors of the Dartmouth Atlas of Health Care using Medicare claims data. The reason for ranking hospitalization for diagnoses amenable to outpatient services suggests that the quality of care provided in the outpatient setting was less than ideal. The measure may also represent the population’s tendency to overuse the hospital as a main source of care. Clare County ranked 78 out of 82 counties in Social and Economic Factors, which is defined as measures of education, employment, income, family and social support and community safety in 2011 and declined to 80 in 2012. Finally, Clare County ranked 6 out of 82 counties in Physical Environment, which is defined as measures of environmental quality and the built environment, in 2011 and declined to 27 out of 80 in 2012 (Robert Wood Johnson Foundation, 2011, 2012).

### MidMichigan Health’s Community Initiative Priority Setting for Clare County

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<thead>
<tr>
<th>Rank</th>
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<th>Seriousness</th>
<th>Resources</th>
<th>Measures</th>
<th>Overall Rank</th>
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<td></td>
<td><strong>Health Care Access: Overarching Issues</strong></td>
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<td>Provider Rates</td>
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**Health Outcomes**

Heart Disease/Stroke; Cancer; Diabetes; Maternal/Infant Health

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**Health Care Behaviors**

Diet and Exercise; Smoking; Preventive Screenings

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<td>3 Preventive Screenings</td>
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IV. Snapshot & Community Description – Gladwin County

Snapshot of Gladwin County’s Community Health Needs Assessment

Our preliminary needs assessment utilized health-related data, creating a picture of the disease states and mortality rates for people in Gladwin county, as well as at-risk behaviors. We additionally determined the impact of health care access as an overarching issue. To follow is a synopsis of this information for Gladwin County, as well as prioritized community benefit initiatives, goals, actions and outcome measures.

Health Care Access

According to University of Wisconsin Population Health Institute County Health Rankings for 2011 and 2012, Gladwin ranked 79 out of 82 counties in clinical care in 2011, and improved to 76 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 3,709:1 in 2011 and 2012, against a national benchmark of 631:1. Additionally for Gladwin, uninsured for ages 18-64 years is 19.6 percent, which is less than the national and state average of 21.4 percent. There is a higher percentage (27.7%) of Medicare enrollees than the State average of 16.6 percent, and a higher percentage (12.8%) of Medicaid enrollees than State average of 12.4 percent. The preventable hospital stays numbered 103 for 2011 and 101 for 2012, against a national benchmark of 52. (U.S. Census Bureau, American Community Survey, 2008-2010).

According to the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007, Gladwin County had 103 per 1,000 population of ambulatory-care sensitive hospitalizations per Medicare enrollee against 52 per 1,000 State of Michigan Medicare enrollees.

According to MidMichigan PRC Research, July 1, 2011 - April 16, 2012, 80.5 percent of MidMichigan Physicians Group primary care patients questioned were “always or usually” able to get an appointment as soon as they needed for issues requiring care right away and 89.7 percent were “usually” able to get an appointment as soon as they needed for a routine checkup.

Health Outcomes

Heart Disease - The leading cause of male and female deaths in Gladwin County is heart disease. However, the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. Gladwin County observed a heart disease rate of (256.7 per 100,000 population; these were higher rates than the State of Michigan (216.4 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census.

Cancer Rates - Cancer incidence trends represent age-adjusted rates per 100,000 population.

- **Breast Cancer** - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007. The incidence of breast cancer in Gladwin County was 96.3 per 100,000 population, which is a lower incidence of breast cancer than the State of Michigan (122.1 per 100,000 population).

- **Prostate Cancer** - Prostate cancer trends for all counties and the state of Michigan between 1993 and 2007 showed a mild increase during 1998-2002, followed by a decrease in incidence from 2003-2007. For all counties, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997. Gladwin County had the highest incidence (173.7 per 100,000) followed closely by Gladwin County (172.9 per 100,000 population). All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).
IV. Snapshot & Community Description – Gladwin County Continued

- **Lung and Bronchus** - Lung and bronchus cancer diagnoses in males between 1993 to 2007 was 103.7 diagnoses per 100,000 population, while the incidence in females was 74.5 per 100,000 population. During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).
- **Colorectal cancer** – Gladwin had an incidence for females in (1993-2007) of 44.1 per 100,000 population, which was a slightly lower incidence than the State of Michigan of 45 per 100,000 population. However, the incidence of colon and rectum cancer diagnoses in males decreased in number between 1993 to 2007 for all counties and the State of Michigan, with the incidence for males being 64 diagnoses per 100,000 population, which was higher than the State of Michigan, which was 58.2 per 100,000 population.
- **All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum was 265.5 per 100,000 population against 265.5 per 100,000 population in the State of Michigan. The incidence of cancer in females for all cancer types increased for Gladwin County to 241.2 per 100,000. The State of Michigan also increased to 206.7 per 100,000 population. The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compiled from 1993-2007 for both males and females.

**Diabetes** - Diabetes death rates in Gladwin County was 28 per 100,000 population. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

**Maternal/Infant Health**
- **Low Birth Weights** - (Less than 2,500 grams upon birth.) Gladwin had an incidence of 7.3 percent. The U.S. benchmark is defined at the 90th percentile, held an incidence of 6.0 percent. Low-birth weight rates in Gladwin County are within the range of the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5.0 percent. (National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007).
- **Breastfeeding** - Breastfeeding per 100,000 population Central Michigan District Health Department (CMDHD)
  - 60.7% Ever
  - 15% 6 months
  - 11.8% 12 months
- **Sexually Transmitted Disease Rate** - The sexually transmitted disease rate is 124 per 100,000 population. Data from the CDC National Center for Hepatitis, HIV, STD and TB prevention 2008. Data from the 2007 Pediatric Nutrition Surveillance, Michigan.

**Health Care Behaviors**

**Smoking, Diet and Exercise** – In 2011 and 2012, Gladwin County ranked 77 out of 82, and 81 out of 82 counties respectively in Health Behaviors. Smoking rankings were 36 percent in 2011 and 33 percent in 2012, compared to a national benchmark of 15 percent for smoking. Obesity rankings were 30 percent in 2011 and 34 percent in 2012 compared with a national benchmark of 25 percent.
IV. Snapshot & Community Description – Gladwin County Continued

- Gladwin ranked 29 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent.
- Recreational facilities ranked 8 per 100,000 population, which is under the State of Michigan’s of 10 per 100,000 population. The U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population.

Data from University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012.

Preventive Screenings

- **Mammography screening** rate of 63 percent indicating less of the female population receiving mammography screening in Gladwin than in the State of Michigan (69%) and below the U.S. benchmark of 74 percent.

  Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

- **Diabetes Screenings - HgA1C.** Gladwin County had the highest screening rate of our counties with an 87 percent diabetic screening rate, which was above the rate for the State of Michigan (83%), but below the U.S. benchmark, defined at the 90th percentile, and holds a screening rate of 89 percent.

Gladwin County Profile

Gladwin County is located in the northeast central section of Michigan’s Lower Peninsula. Gladwin County’s economy includes auto parts manufacturing, thermoform, RV manufacturing, wood products, construction and agriculture. Tourism plays a special role in Gladwin County’s waterways, with several dams on the Tittabawassee, Sugar, Tobacco and Cedar rivers creating opportunities for boating, fishing, canoeing and sightseeing. The Tittabawassee State Forest to the east, almost a fourth of the entire county, offers plenty of opportunity for hiking, hunting and snowmobiling. This area also includes a large 35,000 acre game preserve, the Gladwin Game Refuge, in the northern part of the county.

The largest employer in Gladwin County is MidMichigan Health, with many of those employees working at MidMichigan Medical Center–Gladwin and MidMichigan Gladwin Pines.

Facts and Figures on Gladwin County - Based on 2010 Census, there were 25,692 people, which is down 1.3 percent from 26,023 in 2000. The population density is 51 people per square mile, indicative of a rural location. The mean travel time to work (commute) is 29.5 minutes. The City of Gladwin is most densely populated area with population of 2,933. The next most populated area in Gladwin County is the City of Beaverton with a population of 1,071. Approximately 4,004 of the population reside within rural city limits and 21,688 people live in rural areas outside of the city limits.

The county’s racial makeup is approximately 98 percent white and 1 percent Latino or Asian. There is less than 1 percent between black or African-American, Native American, Asian and Pacific Islander. Less than 1 percent was classified as two or more races. The median age is 47.7.

People 25 years of age or older with a high school degree or higher is 84.9 percent. People 25 years of age or older with a bachelor’s degree or higher is 11.3 percent. The county’s estimated unemployment rate was 15.1 percent.
IV. Snapshot & Community Description – Gladwin County  

The Census Bureau estimates the 2010 median household income was $44,121 and the mean income for a family was $55,055. Unemployment is 7.4 percent. Over 20 percent are below the poverty line. Of those below poverty line, 40 percent are under age 18, 33 percent are between age of 5-17 and 43.4 percent are under 5.

The U.S. Census Bureau estimates in 2010 that 13 percent of the residents in Gladwin County were uninsured.

Figure 2 illustrates the distribution of Gladwin County’s uninsured population, by age category. Males age 18 to 24 years of age comprise the highest percentage of uninsured individuals at 47.4 percent, followed by males age 25 to 34 years of age, at 34.7 percent. Females age 25 to 34 years have the highest percentage of female population uninsured, at 33.6 percent. The three age categories containing the highest percentage of uninsured individuals includes both males and females ages 18 to 24 years (47.4% and 21.7%), 25 to 34 years (34.7% and 33.6%), and 35 to 44 years (30.0% and 16.7%).

According to the University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012, Gladwin County ranked 77 in 2011 and 82 in 2012 out of 82 counties in Health Behaviors, which include measures of smoking, diet and exercise, alcohol use, and risky sex behavior. Smoking percentages were 36 percent in 2011 & 33 percent in 2012 compared to a national benchmark of 15 percent for smoking. Obesity percentages were 30 percent in 2011 and 34 percent in 2012 compared to a benchmark of 25 percent. Gladwin ranked 29 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent.

Sexually transmitted disease cases for Gladwin County were 124 in 2011 and improved to 116 in 2012, with both years above the national benchmark of 84 per 100,000 population. Gladwin County ranked 79 out of 82 counties in Clinical Care, which is defined as the measures of access to care and quality of care, in 2011 and improved to 76 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 3,709:1 in 2011 and 2012, against a national benchmark of 631:1. The preventable hospital stays were numbered 103 for 2011 and 101 for 2012, against a national benchmark of 52. (Robert Wood Johnson Foundation, 2011, 2012).
IV. Snapshot & Community Description – Gladwin County  *Continued*

MidMichigan Health’s Community Initiative Priority Setting for Gladwin County

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**Overarching Issues: Health Care Access**  
Uninsured/underinsured; Primary or other care provider rates; Timeliness/care delay

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**Health Outcomes**  
Heart Disease/Stroke; Cancer; Diabetes; Maternal/Infant Health

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**Health Care Behaviors**  
Diet and Exercise; Smoking; Preventive Screenings

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IV. Snapshot & Community Description – Gratiot County

Snapshot of the Gratiot County Community Health Needs Assessment

Our preliminary needs assessment utilized health-related data, creating a picture of the disease states and mortality rates for people in Gratiot county, as well as at-risk behaviors. We additionally determined the impact of health care access as an overarching issue. To follow is a synopsis of this information for Gratiot County, as well as prioritized community benefit initiatives, goals, actions and outcome measures.

Health Care Access

According to University of Wisconsin Population Health Institute County Health Rankings for 2011 and 2012, Gratiot ranked 40 out of 82 counties in clinical care in 2011, and declined to 59 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 1,323:1 in 2011 and 2012, against a national benchmark of 631:1. Additionally for Gratiot, uninsured for ages 18-64 years is 19.3 percent, which is less than the national and state average of 21.4 percent. There is a consistent percentage (17.4%) of Medicare enrollees than the State average of 16.6 percent, and a lower percentage (11.7%) of Medicaid enrollees than State average of 12.4 percent. The preventable hospital stays numbered 78 for 2011 and 86 for 2012, against a national benchmark of 52. (U.S. Census Bureau, American Community Survey, 2008-2010).

According to the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007, Gratiot County had 78 per 1,000 population of ambulatory-care sensitive hospitalizations per Medicare enrollee against 52 per 1,000 State of Michigan Medicare enrollees.

According to MidMichigan PRC Research, July 1, 2011 - April 16, 2012, 83.6 percent of MidMichigan Physicians Group primary care patients questioned were “always or usually” able to get an appointment as soon as they needed for issues requiring care right away and 93.8 percent were “usually” able to get an appointment as soon as they needed for a routine checkup.

Health Outcomes

Heart Disease - The leading cause of male and female deaths in Gratiot County is heart disease. However, the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. Gratiot County observed a heart disease rate of (247.2 per 100,000 population; these were higher rates than the State of Michigan (216.4 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census.

Cancer Rates - Cancer incidence trends represent age-adjusted rates per 100,000 population.

- **Breast Cancer** - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007. The incidence of breast cancer in Gratiot County was 113.6 per 100,000 population, which is a lower incidence of breast cancer than the State of Michigan (122.1 per 100,000 population).

- **Prostate Cancer** - Prostate cancer trends for all counties and the state of Michigan between 1993 and 2007 showed a mild increase during 1998-2002, followed by a decrease in incidence from 2003-2007. For all counties, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997. Gratiot Counties incidence was 155.1 per 100,000. All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).
IV. Snapshot & Community Description – Gratiot County

- **Lung and Bronchus** - Lung and bronchus cancer diagnoses in males between 1993 to 2007 was 79.4 diagnoses per 100,000 population, while the incidence in females was 54.6 per 100,000 population. During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).

- **Colorectal cancer** – Gratiot had an incidence for females in (1993-2007) of 45.8 per 100,000 population, which was a slightly higher incidence than the State of Michigan of 45 per 100,000 population. The incidence for males was 54.4 diagnoses per 100,000 population, which was lower than the State of Michigan, which was 58.2 per 100,000 population.

- **All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum was 233.5 per 100,000 population against 265.5 per 100,000 population in the State of Michigan. The incidence of cancer in females for all cancer types increased for Gratiot County to 206.4 per 100,000. The State of Michigan also increased to 206.7 per 100,000 population.

  The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compiled from 1993-2007 for both males and females.

**Diabetes** - Diabetes death rates in Gratiot County was 85 per 100,000 population. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

**Maternal/Infant Health**

- **Low Birth Weights** - (Less than 2,500 grams upon birth.) Gratiot had an incidence of 7.1 percent. The U.S. benchmark is defined at the 90th percentile, held an incidence of 6.0 percent. Low-birth weight rates in Gratiot County are below the range of the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5.0 percent. (National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007).

- **Breastfeeding** - Breastfeeding per 100,000 population according to the 2007 Pediatric Surveillance, Mid Michigan District Health Department
  - 63.3% Ever
  - 16.7% 6 months
  - 13.9% 12 months

- **Sexually Transmitted Disease Rate** - The sexually transmitted disease rate is 137 per 100,000 population. Data from the CDC National Center for Hepatitis, HIV, STD and TB prevention 2008. Data from the 2007 Pediatric Nutrition Surveillance, Michigan.

**Health Care Behaviors**

**Smoking, Diet and Exercise** - Gratiot County ranked 72 out of 82, and 76 out of 82 counties respectively in Health Behaviors.

- Smoking rankings were 26 percent in 2011 and 27 percent in 2012, compared to a national benchmark of 15 percent for smoking.
- Obesity rankings were 33 percent in both 2011 and 38 percent in 2012 compared with a national benchmark of 25 percent.
- Gratiot ranked 28 percent in physical inactivity, in 2012, compared to national benchmark of 21 percent.
- Recreational facilities ranked 7 per 100,000 population, which is under the State of Michigan’s of 10 per 100,000 population. The U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population.

Data from University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012.
IV. Snapshot & Community Description – Gratiot County  

Preventive Screenings

- **Mammography screening** rate of 63 percent indicating less of the female population receiving mammography screening in Gratiot than in the State of Michigan (69%) and below the U.S. benchmark of 74 percent.

  Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

**Diabetes Screenings - HgA1C.** Gladwin County had the highest screening rate of our counties with an 85 percent diabetic screening rate, which was above the rate for the State of Michigan (83%), but below the U.S. benchmark, defined at the 90th percentile, and holds a screening rate of 89 percent.

**Gratiot County Profile**

Gratiot County is located at the center of Michigan’s Lower Peninsula between the industrial areas of the south and the recreational area of the north. Much of the county is rural and dependent upon agriculture. The area is a leading producer of dry beans, sugar beets, corn, wheat, corn oats, poultry, pigs, cattle and dairy products. Agriculture accounts for more than 65 percent of all land use. The commercial and industrial development in the county is centered primarily along the U.S. 127 corridor around the cities of Ithaca, Alma and St. Louis.

The Pine and Maple Rivers and the three State Game Areas offer recreational opportunities in the county. Alma College is located in the City of Alma. Highway U.S. 127 passes through the county from north to south. U.S. 127 is intersected to the north by M-46 and to the south by M-57, which provide east-west access. The county seat is Ithaca, a rural community of over 3,000 residents, although its most populated city is Alma with over 9,200 residents.

The largest employer in Gratiot County is MidMichigan Health, with many of those employees working at MidMichigan Medical Center–Gratiot.

**Facts and Figures on Gratiot County** - Based on 2010 Census, there were 42,476 people, 14,852 households and 10,203 families residing in the county. The population density was 74.7 people per square mile, indicative of a rural location. The racial makeup was approximately 90.6 percent Whites, 5.5 percent Black or African-American, and less than 1 percent each for Native American, Asian, and Pacific Islander. Slightly over 1 percent was classified as two or more races. The median age is 38.7.

The Census Bureau estimates the 2010 median household income was $38,943, and the median income for a family was $49,784. Slightly less than 18 percent of the population was below the poverty line, including 25.6 percent of those under age 18 and 22.3 percent of those ages 5-17.

People 25 years of age or older with a high school degree or higher is 87.1 percent. People 25 years of age or older with a bachelor’s degree or higher is 12.6 percent. The county’s estimated unemployment rate was 13.3 percent. The U.S. Census Bureau estimates in 2010 that 13.3 percent of residents in Gratiot County were uninsured.
IV. Snapshot & Community Description – Gratiot County

Figure 3 illustrates the distribution of Gratiot County’s uninsured population, by age category. Males age 18 to 24 years of age comprise the highest percentage of uninsured individuals at 30.2 percent, followed by males age 35 to 44 years of age, at 26.5 percent. Females age 25 to 34 years have the highest percentage of female population uninsured, at 24.3 percent. The three age categories containing the highest percentage of uninsured males includes ages 18 to 24 years (30.2%), 25 to 34 years (25.5%), and 35 to 44 years (26.5%), while the highest percentage of uninsured females includes ages 18 to 24 years (23.5%), 25 to 34 years (24.3%), and 45 to 54 years (15.4%).

According to the University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012, Gratiot County ranked 72 out of 82 counties in Health Behaviors, which include measures of smoking, diet and exercise, alcohol use and risky sex behavior in 2011, and declined to 76 out of 82 in 2012. Smoking percentages were 26 percent in 2011 and 27 percent in 2012 compared to a national benchmark of 15 percent for smoking. Obesity percentages were 33 percent in 2011 and 38 percent in 2012 compared to a national benchmark of 25 percent. Sexually transmitted disease cases for Gratiot County were 137 in 2011 and increased to 161 in 2012, with both years above the national benchmark of 83.

Gratiot County ranked 40 out of 82 counties in Clinical Care, which is defined as the measures of access to care and quality of care, in 2011 and declined to 59 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 1, 323:1 in 2011 and 2012, against a national benchmark of 631:1. The preventable hospital stays were numbered 78 for 2011 and 86 for 2012, against a national benchmark of 52. (Robert Wood Johnson Foundation, 2011, 2012).
IV. Snapshot & Community Description – Gratiot County

MidMichigan Health’s Community Initiative Priority Setting for Gratiot County

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**Health Outcomes**
Heart Disease/Stroke; Cancer; Diabetes; Maternal/Child Health

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**Health Care Behaviors**
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</table>
IV. Snapshot & Community Description – Isabella County

Snapshot of the Isabella County Community Health Needs Assessment

Our preliminary needs assessment utilized health-related data, creating a picture of the disease states and mortality rates for people in Isabella county, as well as at-risk behaviors. We additionally determined the impact of health care access as an overarching issue. To follow is a synopsis of this information for Isabella County, as well as prioritized community benefit initiatives, goals, actions and outcome measures.

Health Care Access

According to University of Wisconsin Population Health Institute County Health Rankings for 2011 and 2012, Isabella ranked 78 out of 82 counties in clinical care in 2011, and improved to 72 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 1,936:1 in 2011 and 2012, against a national benchmark of 631:1. Additionally for Isabella, uninsured for ages 18-64 years is 17.0 percent, which is less than the national and state average of 21.4 percent. There is a lower percentage (12.2%) of Medicare enrollees than the State average of 16.6 percent, affected by the college student population and a lower percentage (8.1%) of Medicaid enrollees than State average of 12.4 percent. The preventable hospital stays numbered 80 for 2011 and 96 for 2012, against a national benchmark of 52. (U.S. Census Bureau, American Community Survey, 2008-2010).

According to the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007, Isabella County had 80 per 1,000 population of ambulatory-care sensitive hospitalizations per Medicare enrollee against 52 per 1,000 State of Michigan Medicare enrollees.

According to MidMichigan PRC Research, July 1, 2011 - April 16, 2012, 83.6 percent of MidMichigan Physicians Group primary care patients questioned were “always or usually” able to get an appointment as soon as they needed for issues requiring care right away and 93.8 percent were “usually” able to get an appointment as soon as they needed for a routine checkup.

Health Outcomes

Heart Disease - The leading cause of male and female deaths in Isabella County is heart disease. However, the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. Isabella County observed a heart disease rate of (166.9 per 100,000 population; these were lower rates than the State of Michigan (216.4 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census.

Cancer Rates - Cancer incidence trends represent age-adjusted rates per 100,000 population.

- Breast Cancer - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007. The incidence of breast cancer in Isabella County was 110.5 per 100,000 population, which is a lower incidence of breast cancer than the State of Michigan (122.1 per 100,000 population).

- Prostate Cancer - Prostate cancer trends for all counties and the state of Michigan between 1993 and 2007 showed a mild increase during 1998-2002, followed by a decrease in incidence from 2003-2007. For all counties, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997. Isabella County had the lowest incidence (142.6 per 100,000) followed closely by Isabella County (172.9 per 100,000 population). All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).
IV. Snapshot & Community Description – Isabella County 

- **Lung and Bronchus** - Lung and bronchus cancer diagnoses in males between 1993 to 2007 was 109.3 diagnoses per 100,000 population, while the incidence in females was 62.7 per 100,000 population. During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).

- **Colorectal cancer** – Isabella had an incidence for females in (1993-2007) of 46.7 per 100,000 population, which was a slightly higher incidence than the State of Michigan of 45 per 100,000 population. However, the incidence of colon and rectum cancer diagnoses in males decreased in number between 1993 to 2007 for all counties and the State of Michigan, with the incidence for males being 67.3 diagnoses per 100,000 population, which was higher than the State of Michigan, which was 58.2 per 100,000 population.

- **All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum was 240 per 100,000 population against 265.5 per 100,000 population in the State of Michigan. The incidence of cancer in females for all cancer types increased for Isabella County to 189.7 per 100,000. The State of Michigan also increased to 206.7 per 100,000 population.

The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compiled from 1993-2007 for both males and females.

**Diabetes** - Diabetes death rates in Isabella County was 19.4 per 100,000 population. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

**Maternal/Infant Health**

- **Low Birth Weights** - (Less than 2,500 grams upon birth.) Isabella had an incidence of 7.9 percent. The U.S. benchmark is defined at the 90th percentile, held an incidence of 6.0 percent. Low-birth weight rates in Isabella County are within the range of the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5.0 percent. (National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007).

- **Breastfeeding** - Breastfeeding per 100,000 population Central Michigan District Health Department (CMDHD)
  - 60.7%  Ever
  - 15%  6 months
  - 11.8%  12 months

- **Sexually Transmitted Disease Rate** - The sexually transmitted disease rate is 288 per 100,000 population. This is the highest rate of our counties affected by the college student population. Data from the CDC National Center for Hepatitis, HIV, STD and TB prevention 2008.

Data from the 2007 Pediatric Nutrition Surveillance, Michigan.

**Health Care Behaviors**

**Smoking, Diet and Exercise**- Isabella County ranked 16 out of 82, and 26 out of 82 counties respectively in Health Behaviors.

- Smoking rankings were 20 percent in 2011 and 21 percent in 2012, compared to a national benchmark of 15 percent for smoking.

- Obesity rankings were 30 percent in both 2011 and 33 percent in 2012 compared with a national benchmark of 25 percent.
IV. Snapshot & Community Description – Isabella County

- Isabella ranked 24 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent.
- Recreational facilities ranked 10 per 100,000 population, which is in line with the State of Michigan’s of 10 per 100,000 population. The U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population.

Data from University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012.

Preventive Screenings

- **Mammography screening** rate of 69 percent indicating they are in line with the female population receiving mammography screening in Isabella as in the State of Michigan (69%) and below the U.S. benchmark of 74 percent.

  Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

**Diabetes Screenings** - HgA1C. Isabella County had the lowest screening rate of our counties with an 82 percent diabetic screening rate, which was lower than the rate for the State of Michigan (83%), but below the U.S. benchmark, defined at the 90th percentile, and holds a screening rate of 89 percent.

Isabella County Profile

Isabella County is located in the heart of Central Lower Michigan. While primarily rural in nature, Isabella County is also noted for its oil and gas production and the manufacturing of machinery for industry, food service and wood products. There are several medical clinics and medical services, many of which are tied to major hospitals in the area including MidMichigan Medical Centers in Alma and Midland as well as McLaren-Central Michigan in Mount Pleasant.

The county seat is Mount Pleasant, which has an urban core mixed with remote rural communities and is home to Central Michigan University, Michigan’s fourth largest University as well as the Saginaw Chippewa Indian Reservation. Mt. Pleasant is both the largest community in Isabella County as well as the mid-Michigan Region with over 26,000 residents. Other communities include Shepherd and Rosebush, which are primarily agricultural, along with some small manufacturing.

**Facts and Figures on Isabella County** - Based on 2010 Census, there were 70,311 people, 25,586 households and 13,762 families residing in the county. The population density was 122.8 people per square mile. The racial makeup was approximately 89.2 percent Whites, 2.4 percent Black or African-American, 3.4 percent Native American and Alaska Native, and 1.6 percent Asian. 2.8 percent was classified as two or more races. The median age is 25.1.

The Census Bureau estimates the 2010 median household income was $34,734, and the median income for a family was $48,040. Slightly less than 32 percent of the population was below the poverty line, including 22.5 percent of those under age 18 and 19.8 percent of those ages 5-17.

People 25 years of age or older with a high school degree or higher is 89.4 percent. People 25 years of age or older with a bachelor’s degree or higher is 25.2 percent. The estimated unemployment rate was 13.3 percent.

The U.S. Census Bureau estimates in 2010 that 13.3 percent of residents in Isabella County were uninsured.
IV. Snapshot & Community Description – Isabella County

Continued

Figure 4 illustrates the distribution of Isabella County’s uninsured population, by age category. Males and females age 25 to 34 years of age comprise the highest percentage of uninsured individuals at 38.9 percent and 31.5 percent, respectively. The three age categories containing the highest percentage of uninsured males includes ages 25 to 34 years (38.9%), 35 to 44 years (22.6%), and 45 to 54 years (21.8%), while the highest percentage of uninsured females includes ages 18 to 24 years (11.4%), 25 to 34 years (31.5%), and 35 to 44 years (14.2%).

According to the University of Wisconsin Population Health Institute County Health Rankings of 2011, Isabella County ranked 16 out of 82 counties in Health Behaviors, which include measures of smoking, diet and exercise, alcohol use and risky sex behavior in 2011, and declined to 26 out of 82 counties in 2012. Smoking percentages were 20 percent in 2011 and 21 percent in 2012 compared to a national benchmark of 15 percent for smoking. Obesity percentages were 30 percent in 2011 and 33 percent in 2012 compared to a national benchmark of 25 percent. Sexually transmitted disease cases for Isabella County were 288 in 2011 and increased to 304 in 2012, with both years above the national benchmark of 83.

The percentage of physical inactivity was 24 percent compared to the National Benchmark of 21 percent. Isabella County ranked 78 out of 82 counties in Clinical Care, which is defined as measures of access to care and quality of care, in 2011 and improved to 72 out of 82 counties in 2012, within the ranking, the ratio of patient to primary care physician was 1,963:1 against a national benchmark of 631:1. Preventable hospital stays were 80 for 2011 and 96 for 2012 out of a national benchmark of 52. Isabella County ranked 13 out of 82 counties in Social and Economic Factors, which is defined as measures of education, employment, income, family and social support, and community safety, in 2011 and declined to 14 out of 82 counties in 2012. Finally, Isabella County ranked 40 out of 82 counties in Physical Environment, which is defined as measures of environmental quality and the built environment, in 2011 and improved to 34 out of 82 counties in 2012 (Robert Wood Johnson Foundation, 2011, 2012).
### IV. Snapshot & Community Description – Isabella County

**MidMichigan Health’s Community Initiative Priority Setting for Isabella County**

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**Health Outcomes**
Heart Disease/Stroke; Cancer; Diabetes; Maternal/Infant Health

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**Health Care Behaviors**
Diet and Exercise; Smoking; Preventive Screenings

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IV. Snapshot & Community Description – Midland County

Snapshot of the Midland County Community Health Needs Assessment

Our preliminary needs assessment utilized health-related data, creating a picture of the disease states and mortality rates for people in Midland county, as well as at-risk behaviors. We additionally determined the impact of health care access as an overarching issue. To follow is a synopsis of this information for Midland County, as well as prioritized community benefit initiatives, goals, actions and outcome measures.

Health Care Access
According to University of Wisconsin Population Health Institute County Health Rankings for 2011 and 2012, Midland ranked 6 out of 82 counties in clinical care in 2011, and improved to 4 out of 82 in 2012. Within that ranking, the ratio of patient to primary care physician was 558:1 in 2011 and 2012, against a national benchmark of 631:1. Additionally for Midland, uninsured for ages 18-64 years is 13.1 percent, which is less than the national and state average of 21.4 percent. There is a consistent percentage (16.4%) of Medicare enrollees than the State average of 16.6 percent, and a lower percentage (8.7%) of Medicaid enrollees than State average of 12.4 percent. The preventable hospital stays numbered 69 for 2011 and 62 for 2012, against a national benchmark of 52. (U.S. Census Bureau, American Community Survey, 2008-2010).

According to the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007, Midland County had 69 per 1,000 population of ambulatory-care sensitive hospitalizations per Medicare enrollee against 52 per 1,000 State of Michigan Medicare enrollees.

According to MidMichigan PRC Research, July 1, 2011 - April 16, 2012, 83.9 percent of MidMichigan Physicians Group primary care patients questioned were “always or usually” able to get an appointment as soon as they needed for issues requiring care right away and 89.6 percent were “usually” able to get an appointment as soon as they needed for a routine checkup.

Health Outcomes

Heart Disease - The leading cause of male and female deaths in Midland County is heart disease. However, the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. Midland County observed a heart disease rate of (173.2 per 100,000 population; these were lower rates than the State of Michigan (216.4 per 100,000 population). The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census.

Cancer Rates - Cancer incidence trends represent age-adjusted rates per 100,000 population.

- Breast Cancer - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007. The incidence of breast cancer in Midland County was 104.5 per 100,000 population, which is less than the State of Michigan (122.1 per 100,000 population).

- Prostate Cancer - Prostate cancer trends for all counties and the state of Michigan between 1993 and 2007 showed a mild increase during 1998-2002, followed by a decrease in incidence from 2003-2007. For all counties, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997. Midland County had an incidence of 148.6 per 100,000. All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).
IV. Snapshot & Community Description – Midland County Continued

- **Lung and Bronchus** - Lung and bronchus cancer diagnoses in males between 1993 to 2007 was 77.2 diagnoses per 100,000 population, while the incidence in females was 38.6 per 100,000 population. During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).

- **Colorectal cancer** – Midland had an incidence for females in (1993-2007) of 37.8 per 100,000 population, which was a lower incidence than the State of Michigan of 45 per 100,000 population. However, the incidence of colon and rectum cancer diagnoses in males decreased in number between 1993 to 2007 for all counties and the State of Michigan, with the incidence for males being 46.5 diagnoses per 100,000 population, which was lower than the State of Michigan, which was 58.2 per 100,000 population.

- **All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum was 232.9 per 100,000 population against 265.5 per 100,000 population in the State of Michigan. The incidence of cancer in females for all cancer types increased for Midland County to 166.5 per 100,000. The State of Michigan also increased to 206.7 per 100,000 population.

The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compiled from 2003-2007 for both males and females.

**Diabetes** - Diabetes death rates in Midland County was 27.9 per 100,000 population. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

**Maternal/Infant Health**

- **Low Birth Weights** - (Less than 2,500 grams upon birth.) Midland had an incidence of 7.6 percent. The U.S. benchmark is defined at the 90th percentile, held an incidence of 6.0 percent. Low-birth weight rates in Midland County are within the range of the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5.0 percent. (National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007).

- **Breastfeeding** - Breastfeeding per 100,000 population per 2007 Pediatric Nutrition Surveillance, Michigan, Breastfeeding: MidMichigan Community Action Agency.
  - 63.4% Ever
  - 12.5% 6 months
  - 8.9% 12 months

- **Sexually Transmitted Disease Rate** - The sexually transmitted disease rate is 120 per 100,000 population. Data from the CDC National Center for Hepatitis, HIV, STD and TB prevention 2008. Data from the 2007 Pediatric Nutrition Surveillance, Michigan.

**Health Care Behaviors**

**Smoking, Diet and Exercise** - Midland County ranked 19 out of 82, and 17 out of 82 counties respectively in Health Behaviors.

- Smoking rankings were 21 percent in 2011 and 22 percent in 2012, compared to a national benchmark of 15 percent for smoking.
- Obesity rankings were 31 percent in both 2011 and 31 percent in 2012 compared with a national benchmark of 25 percent.
- Midland ranked 22 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent.
IV. Snapshot & Community Description – Midland County Continued

- Recreational facilities ranked 19 per 100,000 population, which is well above the State of Michigan’s of 10 per 100,000 population and even higher than the U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population.

Data from University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012.

Preventive Screenings

- **Mammography screening** rate of 80 percent indicating more of the female population receiving mammography screening in Midland than in the State of Michigan (69%) and above the U.S. benchmark of 74 percent.

  Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

Diabetes Screenings - HgA1C. Midland County had an 85 percent diabetic screening rate, which was above the rate for the State of Michigan (83%), but below the U.S. benchmark, defined at the 90th percentile, and holds a screening rate of 89 percent.

Midland County Profile

Midland County was organized in 1850. By 1874, the Flint and Pere Marquette Railroad extended through the heart of Midland to Averill, three miles to the west. The City of Midland was incorporated in 1887. In 1890, a young Herbert Henry Dow arrived in Midland and subsequently founded The Dow Chemical Company. His success enabled Midland to survive the end of the logging era and to grow to its present size. Now the heart of Michigan’s technology basin, Midland is the global headquarters of two Fortune 500 companies, The Dow Chemical Company and Dow Corning Corporation, and home to the Midland Cogeneration Venture, the largest gas-fueled, steam recovery cogeneration facility in North America. Midland has become a center for industrial innovation, and is quickly becoming a hub for the solar energy industry.

Dow Chemical is the largest employer in Midland County followed by MidMichigan Health, Dow Corning and the Midland Public Schools. Many of the MidMichigan Health employees work for MidMichigan Medical Center–Midland, MidMichigan Physicians Group, MidMichigan Home Care and MidMichigan Stratford Village.

In addition to the strong economic base, Midland boasts of quality education programs. Midland Public Schools has been highly rated by Expansion Management magazine. Offering many opportunities for higher education, Midland is the home of Northwood University and is located within a short drive to Davenport University, Mid Michigan Community College (based in Clare County), Saginaw Valley State University, Central Michigan University and Delta College.

Midland has an abundance of cultural and recreational facilities such as the Midland Center for the Arts, the Dow Gardens, plus the Frank Lloyd Wright-inspired architecture of Alden B. Dow are several attractions that reflect Midland’s culture and heritage. The Great Lakes Loons baseball team, a 107,000-square-foot Civic Arena with three skating rinks, Currie Municipal Golf Course, Midland’s 30-mile-long, paved Pere Marquette Rail-Trail, the Midland Community Tennis Center, a volunteer-run soccer complex, a Community Center, 72 different parks, and the Emerson Park and Redcoat softball complexes provide residents with many recreational opportunities.
IV. Snapshot & Community Description – Midland County

**Facts and Figures on Midland County** - Based on 2010 Census, there were 83,629 people, 33,437 households and 22,865 families residing in the county. The population density was 1,162 people per square mile in the city of Midland. The racial makeup was approximately 94.5 percent Whites, 1.2 percent Black or African-American, 0.4 percent Native American; and 1.9 percent Asian. The median age is 40.4.

The Census Bureau estimates the 2010 median household income was $50,157 and the median income for a family was $70,923. 10.4 percent of the population was below the poverty line.

People 25 years of age or older with a high school degree or higher is 91.9 percent. People 25 years of age or older with a bachelor's degree or higher is 31.5 percent. The county’s estimated unemployment rate was 8.3 percent.

The U.S. Census Bureau estimates in 2010 that 9.2 percent of residents in Midland County were uninsured.

Figure 5 illustrates the distribution of Midland County’s uninsured population, by age category. Males age 25 to 34 years of age comprise the highest percentage of uninsured individuals at 29.2 percent, followed by males age 18 to 24 years of age, at 22.9 percent. Females age 25 to 34 years have the highest percentage of female population uninsured, at 21.9 percent. The three age categories containing the highest percentage of uninsured individuals includes both males and females ages 18 to 24 years (22.9% and 16.9%), 25 to 34 years (29.2% and 21.9%), and 35 to 44 years (11.9% and 15.0%).

According to the University of Wisconsin Population Health Institute County Health Rankings of 2011 and 2012, Midland County ranked 19 out of 82 counties in Health Behaviors, which include measures of smoking, diet and exercise, alcohol use and risky sex behavior. Smoking percentages were 21 percent in 2011 and 31 percent in 2012 compared to a national benchmark of 15 percent for smoking. Obesity percentages were 22 percent in 2011 and 31 percent in 2012 compared to a national benchmark of 25 percent.

The percentage of physical inactivity was 22 percent compared to the National Benchmark of 21 percent. Midland County ranked 6 out of 82 counties in Clinical Care, which is defined as measures of access to care and quality of care, in 2011 and improved to 4 out of 82 in 2012. The ratio of primary care physician was 558:1 against the national benchmark of 631:1. Preventable hospitals stays was 69 in 2011 and 62 in 2012 against the national benchmark of 52. Midland County ranked 7 out of 82 counties in Social and Economic Factors, which is defined as measures of education, employment, income, family and social support and community safety, in 2011 and improved to 6 out of 82 counties in 2012. Finally, Midland County ranked 5 out of 82 counties in Physical Environment, which is defined as measures of environmental quality and the built environment, in 2011 and declined to 14 out of 82 counties in 2012 (Robert Wood Johnson Foundation, 2011, 2012).

![Figure 5. Distribution of uninsured population in Midland County (U.S. Census, 2010).](image-url)
IV. Snapshot & Community Description – Midland County *Continued*

MidMichigan Health’s Community Initiative Priority Setting for Midland County

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**Health Outcomes**
Heart Disease/Stroke; Cancer; Diabetes; Maternal/Infant Health

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**Health Care Behaviors**
Diet and Exercise; Smoking; Preventive Screenings

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<td>Preventive Screenings</td>
<td>3 Preventive Screenings</td>
</tr>
</tbody>
</table>
V. Data Sources

The most updated data from sources available to us are included in this report. Description of data sources follow and additional sources are referenced in the data text.

University of Wisconsin Population Health Institute County Health Rankings - The Robert Wood Johnson Foundation and University of Wisconsin’s Population Health Institute has released *County Health Rankings*. Counties in each of the 50 states are ranked according to summaries of a variety of health measures. Counties are ranked relative to the health of other counties in the same state relative to Health Outcomes and Health Factors. Those having high ranks (for example, 1 or 2) are considered to be the healthiest. Those having the lowest ranks (82 for Michigan) are considered to be the least healthy. Multiple databases are used, for example:

- Data on deaths and births are based on certificates from information routinely reported to the National Vital Statistics System (NVSS)
- Morbidity and Health Behaviors are from the Behavioral Risk Factor Surveillance System. Seven years of data, 2002–2008, are used to generate more stable estimates of self-reported health status.
- Preventable hospital stays calculated by the authors of the Dartmouth Atlas of Health Care using Medicare claims data for the years 2006–2007.

Behavioral Risk Factor Surveillance System - The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest, ongoing telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984. Conducted by the 50 state health departments as well as those in the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands, with support from the Center for Disease Control (CDC), BRFSS provides state-specific information about issues such as asthma, diabetes, healthcare access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use and more. Information is self-reported.

The Michigan Behavior Risk Factor Survey (BRFS) - is a statewide, telephone survey of adult residents within each county or region of Michigan. Surveys are administered to collect data regarding region-specific, population-based estimates of health risk behaviors, health practices and chronic conditions of the state's population. The survey reports include data from the following areas:

- Morbidity
  - Poor or fair health
  - Poor physical health days
  - Poor mental health days
- Tobacco Use
- Alcohol Use
- Family and Social Support

Midland County Behavioral 2010 Risk Factor Survey - The Midland County Behavioral 2010 Risk Factor Survey is a community collaboration between non-profits, government and businesses. Midland County Department of Community Health conducted by telephone survey surveillance (cell and land-line). This survey provides prevalence data on risk factors/conditions, morbidity and mortality data, designed and coordinated by the CDC. Midland County specific information on adult health and health behaviors is provided on issues such as asthma, diabetes, healthcare access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use and more.
V. Data Sources Continued

County Health Ranking (MATCH) – website http://www.countyhealthrankings.org/
Multiple databases are used, for example:
- Data on deaths and births are based on certificates from information routinely reported to the National Vital Statistics System (NVSS).
- Morbidity and health behaviors are from BRFSS. Seven years of data between 2002 and 2008 are used to generate more stable estimates of self-reported health status.
- Preventable hospital stays were calculated by the authors of the Dartmouth Atlas of Health Care using Medicare claims data for the years 2006–2007. http://www.dartmouthatlas.org/.

VI. Community Socioeconomic Factors

The data contained within this section was obtained from the United States Census Bureau 2010 Census and the 2010 American Community Surveys.

Population Projections - Based on population through 2020, with the exception of Isabella County which has a projected growth of 4.4 percent, all other counties in the MidMichigan Health service area will experience population declines. Clare County (-9.5%), Gladwin County (-10.7%) and Gratiot County (-6.6%) are all projected to have significantly higher population declines than the State average of -3.8 percent. Midland County will remain relatively flat, experiencing only a slight decline of -0.3 percent.

Race - Compared to the State average of 78.9 percent, all five counties in the MidMichigan Health service area have a significantly higher percentage of White residents; ranging from 89.2 percent in Isabella County to 97.7 percent in Gladwin County. While Gladwin and Clare Counties are almost exclusively White, the other three counties show more variation in race. Gratiot County has the highest percentage of African American population, at 5.5 percent; followed by Isabella County with 2.4 percent and Midland County with 1.2 percent. Gratiot County also has the highest percentage of Hispanic or Latino, at 5.4 percent. Isabella County is 3.1 percent Hispanic or Latino, followed by Midland at 2.0 percent, Clare at 1.5 percent and Gladwin at 1.2 percent. Midland and Isabella Counties are 1.9 percent and 1.6 percent Asian respectively. Isabella County’s population is 3.4 percent American Indian. This does not account for 26,274 American Indians living on the local reservation as they were not included in the U.S. Census Bureau data used as the source for this information.

Median Age - Compared to the State of Michigan as a whole, the MidMichigan Health Service area has a much older population.

The median age for residents of Clare (45.3) and Gladwin (47.7) counties is significantly higher than the median age for Michigan residents of 38.9. The median age of Midland County (40.4) residents is slightly over the State median, while Gratiot County, at 38.7, is right in line with the State median. The median age in Isabella County is only 25.1. It is likely lowered by the concentration of college students in this county. Central Michigan University reports its enrollment at approximately 27,000, or approximately 39 percent of the County population. The concentration of the population falling into the 20 – 24 years old category in Isabella County is 21.9 percent versus the State average of 7.0 percent.

Clare (19.9%) and Gladwin (22.8%) counties also have a significantly higher percentage of population age 65 and older than the State average of 13.8 percent. 14.8 percent of the population of both Midland and
VI. Community Socioeconomic Factors *Continued*

Gratiot counties are age 65 and older. Only 9.7 percent of Isabella County is 65 and older, as is expected with the concentration of college students.

**Uninsured Adults** - Three of the five counties in the MidMichigan Health service area exceeded the National average of 18.1 percent for uninsured persons ages 18-64 years. Clare County exceeds both the National and the State average of 21.4 percent. Uninsured persons ages 18-64 years for each county were as follows: Clare County 22.6 percent, Gladwin County 19.6 percent, Gratiot County 19.3 percent, Isabella County 17.0 percent and Midland County 13.1 percent.

The uninsured statistics for the total population are lower due to the addition of persons 65 and older who are eligible for Medicare. These statistics were as follows: Clare County 15.1 percent, Gratiot County 13.3 percent, Isabella County 13.3 percent, Gladwin County 13.0 percent and Midland County 9.2 percent. The State and National average were 15.5 percent and 12.4 percent respectively.

**Household Income** - With the exception of Midland County, the average household income is below the State and National averages in all counties. Midland County average income was $70,923, followed by Gladwin County at $55,055, Clare County at $49,808, Gratiot County at $49,784 and Isabella County at $48,040. The State and National averages were $59,772 and $68,259. The average income for Isabella County is likely lowered by the concentration of college students in this county as mentioned under the “Median Age” section of this document.

The average income for Gratiot County is likely lowered by the presence of Alma College as well as the presence of three correctional facilities. Alma College reports its enrollment at approximately 1,400. The 2010 census reported the institutionalized population in Gratiot County to be 4,220. These two combined represent 13 percent of the total population in Gratiot County.

**Marital Status** - With the exception of Isabella County (which is likely affected by its concentration of college students), all counties have a higher percentage of married individuals over age 15 than the State average of 48.8 percent. Gladwin County reports this statistic at 60.8 percent, followed by Midland 57.5 percent, Clare 54.8 percent, Gratiot 50.8 percent and Isabella 36.2 percent.

Midland and Isabella Counties show a significantly lower widowed population than the State average; reporting 5.3 percent and 4.0 percent respectively, compared to the State average of 6.3 percent. Gratiot County, Gladwin County and Clare County were all higher than the State average; reporting 7.2 percent, 8.3 percent and 8.0 percent.

While Gratiot County (11.7 percent) and Gladwin County (11.2 percent) reported divorced population numbers similar to the State average of 11.6 percent, Midland County and Isabella County again reported significantly lower numbers at 10.7 percent and 8.6 percent. Clare County reported 13.8 percent which is significantly higher than the State average.

With the exception of Isabella County (again affected by its concentrated college population), all counties reported a significantly higher percentage of “husband-wife” households than the State average of 48.0 percent.
VI. Community Socioeconomic Factors Continued

Vehicles Per Household - Clare County, in which 8.1 percent of the households had no vehicle available, was higher than the State average of 7.8 percent. This is indicative of the County’s transportation needs. The other four counties reported statistics lower than the State average: Gratiot County 3.3 percent, Midland County 5.5 percent, Gladwin County 6.1 percent and Isabella County 7.0 percent.

Social Security Income - Not surprisingly considering their higher percentage of individuals age 65 and greater, Clare County (42.7%) and Gladwin County (44.4%) have a higher percentage of households with one or more members collecting social security than the State average of 31.7 percent. Midland County (31.9%) and Gratiot County (31.3%) numbers are fairly consistent with the State average. Isabella County, again affected by its college population, was significantly lower than the State average at 23.0 percent.

While the State average for Social Security income is $17,108, that number was somewhat lower in all five counties: Clare County $16,008, Gratiot County $16,062, Midland County $16,520, and Isabella County $16,929.

Medicare and Medicaid - Due to the higher percentage of individuals age 65 and greater, Clare County (24.8%) and Gladwin County (27.7%) have a higher percentage of Medicare enrollees than the State average of 16.6 percent. Midland County (16.4%) and Gratiot County (17.4%) numbers are fairly consistent with the State average. Isabella County, again affected by its college student population, was significantly lower than the State average at 12.2 percent.

Clare County (16.8%) has a significantly higher percentage of Medicaid enrollees than the State average of 12.4 percent. Gladwin County is slightly higher with a 12.8 percent Medicaid rate. Gratiot County’s Medicaid rate is slightly lower at 11.7 percent, followed by Midland County at 8.7 percent and Isabella County at 8.1 percent.

Poverty - With the exception of Midland County, all counties have a significantly higher individual and household level poverty rate than the State averages of 13.5 percent for individuals and 9.6 percent for households.

Individual poverty rates: Midland County 10.4 percent, Gratiot County 17.5 percent, Gladwin County 20.7 percent, Clare County 23.1 percent and Isabella County 31.6 percent.

Household poverty rates: Midland County 7.2 percent, Gratiot County 11.1 percent, Gladwin County 15.0 percent, Clare County 17.9 percent and Isabella County 13.0 percent.

Occupation/Employment - Each county is unique in the make-up of its primary employment industries and occupations.

The dominate occupations in Midland County are in the management, business, science and arts category. At 39.8 percent Midland’s percentage of these occupations is higher than the State average of 34.2 percent and significantly higher than the four other counties in the service area. The next highest in this category is Isabella County at 27.1 percent. Midland County’s dominate industries are manufacturing (24.6%) and educational services, health care and social assistance (22.4%). Midland County’s manufacturing industry far outweighs the State average of 16.3 percent. Midland County is the home to two Fortune 500 companies, The Dow Chemical Company and Dow Corning Corporation.
VI. Community Socioeconomic Factors Continued

The main occupations in Isabella County are in the areas of service occupations and sales and office occupations. At 28.2 percent and 28.0 percent respectively, Isabella County outweighs the State averages of 18.8 percent and 25.0 percent and also all four of the other counties in the service area. Although lower than the State average, management, business science and arts occupations are also significant in Isabella County (27.1%). The most prevalent industries in Isabella County are educational services, health care and social assistance (28.2%) and arts, entertainment, recreation, accommodation and food services (22.1%). Isabella County is home to Central Michigan University, a leading educational institution with several programs in health care. Again, Isabella County significantly outweighs the State averages of 24.6 percent and 9.5 percent for these industries, as well as the other four counties.

All occupation categories play a significant role in Gratiot County. While management, business science and arts is the most dominate category at 26.1 percent, service occupations (22.8%), sales and office occupations (23.7%) and production, transportation and material moving (17.3%) are also significant. Natural resources, construction and maintenance occupations also play a significant role in Gratiot County. At 10.1 percent, the County outweighs the State average of 7.9 percent. Gratiot County’s dominate industries are manufacturing (14.6%) and educational services, health care and social assistance (25.2%). Gratiot County is home to Alma College, a leading four-year institution.

Similar to the other counties, Clare County’s primary occupations are a mixture of management, business science and arts (24.8%), service occupations (20.8%) and sales and office occupations (24.6%). Clare County also has a significant amount of natural resources, construction and maintenance occupations. At 15.9 percent, the County far outweighs the State average of 7.9 percent. The primary industries in Clare County are educational services, health care and social assistance (21.6%), retail trade (13.1%), arts, entertainment, recreation, accommodation and food services (11.9%), and manufacturing (11.4%). The county’s arts, entertainment, recreation, accommodation and food services are significantly higher than the State average of 9.5 percent. Clare County is home to Mid Michigan Community College.

The composition of the occupations in Gladwin County is very similar to that of Clare County. Management, business science and arts (25.1%) account for the highest percentage of occupations; followed by sales and office occupations (25.5%) and service occupations (18.8%). Gladwin County also has a significant amount of natural resources, construction and maintenance occupations (14.0%) as well as production, transportation and material moving (16.6%), both of which exceed State averages. The primary industries in Gladwin County are educational services, health care and social assistance (24.1%), followed by manufacturing (16.0%). Construction (10.4%) and retail trade (10.6%) are also important industries in the county.

Unemployment - Gladwin County’s unemployment percentage (15.1%) is consistent with the State average of 15.1 percent. Midland County’s unemployment is significantly lower than the State at 8.3 percent. Isabella County and Gratiot County are also lower than the State average at 13.3 percent. Clare County, on the other hand, has a significantly higher unemployment rate at 19.0 percent.

Disabilities - The percentage of population with various disabilities in both Clare (23.4%) and Gladwin (20.3%) counties is significantly higher than the State average of 14.4 percent. Gratiot County is also slightly higher than the State average at 15.6 percent. Both Midland County and Isabella County are slightly lower than the State at 13.1 percent and 13.3 percent respectively.
VI. Community Socioeconomic Factors Continued

Clare and Gladwin Counties report percentages higher than the State averages in all categories of disabilities. Gratiot County reports higher percentages in all categories except self care and independent living difficulties. Isabella County has higher percentages in hearing difficulty and cognitive difficulty, but is below the State averages in all other categories. Midland County is below the State averages in all categories except hearing difficulty.

Education - Midland County is the most educated of the five counties in the service area. 41.6 percent of the population in Midland County has received some sort of college degree compared to 32.7 percent in Isabella County, 19.8 percent in Gratiot County, 18.3 percent in Gladwin County and 18.0 percent in Clare County. The State average is 33.6 percent.

Clare County (16.3%), Gladwin County (15.1%) and Gratiot County (12.9%) all have a higher percentage of the population not receiving a high school diploma or a GED compared to the State average of 11.3 percent.

Language Spoken at Home - The percentage of people speaking only English is higher in all five counties than the State average of 91.4 percent. Gladwin County had the highest percentage (97.1%), followed by Gratiot County 96.3 percent, Clare County 96.2 percent, Midland County 95.8 percent, and Isabella County 95.3 percent.

Of the people not speaking English as their only language 1 percent or less do not also speak English very well, with the exception of Isabella County where 2.6 percent speak English less than very well.

VII. Community Health Factors – General Health Status

General Health Status

Personal Health - Personal health is a self-reported measure of the health status of individuals in the community, utilized as a general measure for health-related quality of life. The data were gathered by the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), and the incidence was calculated by the National Center for Health Statistics. Data is based on the question: “In general, would you say that your health is excellent, very good, good, fair or poor?”

Figure 6 illustrates across all counties, 75-88 percent of respondents claimed to be in good, very good or excellent health. Midland and Isabella Counties reported the lowest response rate of poor or fair health at 12 percent. Gladwin reported the highest rate (25%), followed by Clare County (20%). The State of Michigan reported that 15 percent of respondents claim poor or fair health. Midland (12%), Gratiot (15%), and Isabella (12%) Counties reported equal or lower rates of poor or fair health than the state. The U.S. benchmark defined at the 90th percentile, reported a rate of 10 percent poor or fair health, which was lower than all counties and the State of Michigan.

Figure 6. Percent of Adults Reporting Poor or Fair Health (age-adjusted), 2003-2009

<table>
<thead>
<tr>
<th>County</th>
<th>Poor or fair health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midland County</td>
<td>12%</td>
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<tr>
<td>Clare County</td>
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<tr>
<td>Gladwin County</td>
<td>25%</td>
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<tr>
<td>Gratiot County</td>
<td>15%</td>
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<tr>
<td>Isabella County</td>
<td>12%</td>
</tr>
<tr>
<td>Michigan</td>
<td>15%</td>
</tr>
<tr>
<td>US Benchmark</td>
<td>10%</td>
</tr>
</tbody>
</table>
VII. Community Health Factors – General Health Status

Continued

**Leading Health Problems** - Leading health problems in the community were evaluated through two metrics including the distribution of deaths by cause for males and females, as well as years of potential life years lost for males and females. Data estimates were gathered in two forms. The first estimate gathered by the National Vital Statistics System (NVSS) at the National Center for Health Statistics, is based on death certificates reported to the NVSS. This data is a report of the number of years of life lost, before the age of 75, for individuals in the community.

The second estimate was gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the 2009 Michigan Death File. This data is reported in two ways. It is an estimate of the total number of deaths associated with an illness. This serves as an indicator for what illnesses are associated with the highest rate of deaths in the community. The data is also utilized to estimate the number of years of life lost below age 75, due to a particular illness. The years of life lost to a particular illness serves as an indicator for what illnesses are having the largest impact on the longevity and quality of life of individuals in the community.

**Access to Healthy Foods** - The Access to healthy foods is estimated by the percent of zip codes within each county with a healthy food outlet, where healthy food outlets are defined as a grocery store or produce stands and farmer’s markets. It is a measure of the fraction of the population with access to identified healthy food outlets. The data were gathered by the U.S. Census Bureau’s Zip Code Business Patterns in 2008.

Figure 7 illustrates that Clare County was estimated to have the greatest access to healthy food outlets (100%), while Gratiot County was estimated to have the lowest access (50%), followed by Isabella County (67%). Both Clare (100%) and Midland (80%) Counties had greater access to health foods than the estimated access for the State of Michigan (73%), while Gladwin (67%), Gratiot (50%), and Isabella (60%) Counties had less access to healthy foods. The U.S. benchmark defined at the 90th percentile, held an estimate of 92 percent access to healthy foods. Clare County met the U.S. benchmark, while the remaining counties as well as the State of Michigan were estimated to have less access than the U.S. benchmark.
VII. Community Health Factors – General Health Status *Continued*

**Male Deaths** - It was estimated that the leading cause of male deaths in the community was heart disease. The incidence of death associated with heart disease varied by county, with a range of 23-34 percent of all deaths for males. Cancer was associated with the second highest incidence of death in the community with a range of 20-28 percent of all deaths for males. Chronic lower respiratory diseases were associated with the third highest incidence of death in the community with a range of 5-8 percent of all deaths for males. Trends associated with the top three contributing illnesses were consistent among all counties with the exception of Isabella County where more deaths from cancer were observed than deaths from heart disease. The top three contributing illnesses to male death in the community followed the same trends with the State of Michigan. There was an exception however, for the number of deaths for the state which are associated with unintentional injuries which was slightly above chronic lower respiratory diseases for the state.

![Distribution of Male Deaths by Cause, 2009](image-url)

*Figure 8: Distribution of Male Deaths by Cause*
VII. Community Health Factors – General Health Status

**Female Deaths** - It was estimated that the leading cause of female deaths in the community was heart disease. The incidence of death associated with heart disease varied by county, with a range of 25-34 percent of all deaths for females. Cancer was associated with the second highest incidence of death in the community with a range of 17-23 percent of all deaths for females. Chronic lower respiratory diseases and stroke share significant overlap in the number of deaths associated with each, and therefore were both associated with the third highest incidence of death in the community with ranges of 6-10 percent and 4-8 percent, respectively, of all deaths for females. Trends associated with the top three contributing illnesses were consistent among all counties with the exception of Gratiot and Isabella Counties where more deaths from stroke were observed than deaths from chronic lower respiratory diseases. The top three contributing illnesses to female death in the community followed the same trends with the state of Michigan.

![Distribution of Female Deaths by Cause, 2009](chart.png)

**Figure 9: Distribution of Female Deaths by Cause**

Although rates fluctuated by county, it was evident that the major contributors to death were heart disease and cancer, for both men and women, across the community.

**Years of Potential Life Lost** - Years of life lost are reported in two methods. The first method examines the years of potential life lost below age 75 per 100,000 population. The second method examines the fraction of total life years lost in a particular county or state, due to a particular illness.
VII. Community Health Factors – General Health Status

Figure 10 illustrates the lowest rate of potential years of life lost was observed in Midland County (6,161 per 100,000 population), while the highest rate was observed in Clare County (10,723 per 100,000 population), followed by Gladwin County (8,854 per 100,000 population). Midland, Gratiot (6,783 per 100,000 population), and Isabella (7,135 per 100,000 population) Counties observed a lower rate of years of life lost than the State of Michigan (7,387 per 100,000 population). The U.S. benchmark defined at the 90th percentile, reports a rate of 5,564 per 100,000 population, which is lower than all counties and the State of Michigan.

Figure 11 illustrates the examination of the years of life lost below the age of 75, by cause of death, for males, revealed that the top three contributing factors were malignant neoplasms (cancer), heart disease and accidents. Malignant neoplasms contributed to 19-28 percent of potential years of male life lost in the community. Heart disease contributed to 15-29 percent of potential years of male life lost in the community. Accidents contributed to 13-26 percent of potential years of male life lost in the community. These three contributors varied in incidence by county, but followed the State of Michigan in sharing the top three contributors to potential years of male life lost.
Figure 11: Distribution of Years of Life Lost Below the Age of 75

VII. Community Health Factors – General Health Status Continued

Figure 12 illustrates, like males, the highest rate for years of life lost below the age of 75, by cause of death, for females, was contributed to malignant neoplasms (cancer), heart disease and accidents. Malignant neoplasms contributed to 30-47 percent of potential years of female life lost in the community. Heart disease contributed to 11-27 percent of potential years of female life lost in the community. Accidents contributed to 6-25 percent of potential years of female life lost in the community. These three contributors also varied in incidence by county, but follow the State of Michigan in sharing the top three contributors to potential years of female life lost.

![Distribution of Years of Life Lost Below the Age of 75, by Cause of Death, for Females, 2009](image)

**Figure 12: Distribution of Years of Life Lost Below the Age of 75**

**Mental and Physical Health** - Mental and physical health are self-reported measures of the health status of individuals in the community, based on the responses to two questions: 1) “Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” 2) “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” The data were gathered by the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), and the incidence was calculated by the National Center for Health Statistics.
VII. Community Health Factors – General Health Status

Figure 13 illustrates the range of physically unhealthy days reported in the community was 3-5 days. Midland County reported the fewest number of days (3 days), while Gladwin County reported the greatest (5 days), followed by Clare County (4.8 days). Midland and Gratiot Counties (3.1 days) report fewer physically unhealthy days than the State of Michigan (3.5 days). The U.S. benchmark defined at the 90th percentile, reports 2.6 days of physically unhealthy days. All counties and the State of Michigan were above the U.S. benchmark.

The range of mentally unhealthy days reported in the community was 2.6-5.2 days. Isabella County reported the fewest number of days (2.6 days), while Clare County reported the greatest (5.2 days), followed by Gladwin County (4 days). Midland (3.1 days), Gratiot (3.7 days), and Isabella (2.6 days) Counties reported equal to or fewer mentally unhealthy days than the State of Michigan (3.7 days). The U.S. benchmark defined at the 90th percentile, reported 2.3 mentally unhealthy days. All counties and the State of Michigan were above the U.S. Benchmark.

VII. Community Health Factors – Chronic Disease & Conditions

Chronic Disease & Conditions

Diabetes – The HbA1c screening is utilized to monitor blood sugar control of individuals diagnosed with diabetes. It is an indicator for how well an individual’s diabetes is being managed. Estimates for HbA1c screenings are based on the percent of Medicare enrollees who have undergone a HbA1c screening at least once each year. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007. In addition, the diabetes mellitus age-adjusted death rates were reviewed and represent the age-adjusted rate of death per 100,000 population; where the underlying condition giving rise to the chain of events leading to death is diabetes mellitus. The data were gathered by Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics.

Figure 14 illustrates that Gladwin County was estimated to have the highest rate of HbA1c screening (87%), while Isabella had the lowest rate (82%), followed by Clare County (84%). All counties with the exception of Isabella County observed HbA1c screening rates above the rate for the State of Michigan (83%). The US benchmark, defined at the 90th percentile, holds a screening rate of 89 percent. All counties and the state of Michigan observed rates below the U.S. Benchmark.

Figure 14: Percent of Diabetic Medical Enrollees who Receive HbA1c Screening, 2006-2007.
Figure 15 illustrates the rate of deaths associated with diabetes mellitus varied by county, from 1999-2009. County rates range from 19.4 to 29 per 100,000 population, from 2007-2009. Isabella County observed the lowest death rate (19.4 per 100,000 population) from 2007-2009, while Clare County observed the highest (29 per 100,000 population), followed by Gladwin County (28 per 100,000 population). During that time period, Gratiot (22.7 per 100,000 population) and Isabella (19.4 per 100,000 population) Counties observed lower rates than the State of Michigan (25.3 per 100,000 population).

Cardiovascular Disease - The age-adjusted death rate associated with heart disease was reviewed and represents the age-adjusted rate of death per 100,000 population where the underlying condition giving rise to the chain of events leading to death is heart disease. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by the National Center for Health Statistics, U.S. Census Populations with Bridged Race Categories, 2007-2009.

Figure 16 illustrates the rate of deaths associated with heart disease has decreased overall from 1999 to 2009. All counties have experienced an overall decline in rate, ranging from 23.8 to 85.3 per 100,000 population. Isabella County observed the lowest death rate (166.9 per 100,000 population) from 2007-2009, while Clare County observed the highest (279.8 per 100,000 population), followed by Gladwin County (256.7 per 100,000 population). During that time period, Midland (173.2 per 100,000 population) and Isabella (166.9 per 100,000 population) Counties observed lower rates than the State of Michigan (216.4 per 100,000 population).
VII. Community Health Factors – Chronic Disease & Conditions Continued

Chronic Lower Respiratory Disease - The age-adjusted death rate associated with chronic lower respiratory disease represents the age-adjusted rate of death per 100,000 population where the underlying condition giving rise to the chain of events leading to death is chronic lower respiratory disease. The data were gathered by the Division for Vital Records & Health Statistics, Michigan Department of Community Health, Population Estimate. Estimates were calculated by National Center for Health Statistics, U.S. Census Populations with Race Categories, 2007-2009.

Figure 17 illustrates the rate of deaths associated with chronic lower respiratory disease has risen slightly for nearly all counties from 1999 to 2009. Counties have experienced an increase, ranging from 2.3 to 17.5 per 100,000 population. Midland County observed the lowest death rate (37.2 per 100,000 population) from 2007-2009, while Clare County observed the highest (69.7 per 100,000 population), followed by Gratiot County (61.3 per 100,000 population). During that time period, all counties with the exception of Midland County, experienced higher rates than the State of Michigan (45.5 per 100,000 population).

Sexually Transmitted Infections - The rate of sexually transmitted infections is measured as the rate of chlamydia incidence per 100,000 population. The data were measured by the Center for Disease Control’s National Center for hepatitis, HIV, STD and TB Prevention, 2008.

Figure 18 illustrates that Midland County was estimated to have the lowest incidence of sexually transmitted infections at 120 per 100,000 population, while Isabella County had the highest incidence at 288 per 100,000 population. All counties were observed as having a lower incidence of sexually transmitted infections than the State of Michigan (446 per 100,000 population). The U.S. benchmark, defined at the 90th percentile, holds a rate of 83 per 100,000 population. All counties, including the State of Michigan, are above the U.S. benchmark.
Incidence of Cancer - Cancer incidence trends represent age-adjusted rates per 100,000 population. The data were gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Cancer File. Data were compile from 1993-2007 for both males and females. Cancer diagnoses captured in the study include prostate, breast, lung and bronchus, colon and rectum, all other sites and total incidence of cancer. Mammography screening values represent the fraction of the female population (age 67-69) that had at least one mammogram over a two-year period. The data were gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007.

Prostate Cancer - The incidence of prostate cancer in males maintained a similar trend for all counties as well as the state of Michigan between 1993 and 2007. All populations observed a mild increase in the number of prostate cancer diagnoses during 1998-2002, followed by a decrease in incidence from 2003-2007. In all cases, prostate cancer incidence has decreased at present, from its initial baseline incidence observed from 1993-1997.

Figure 19 illustrates Isabella County had the lowest incidence of prostate cancer from 2003-2007 (142.6 per 100,000 population), while Clare County had the highest incidence of prostate cancer (173.7 per 100,000), followed closely by Gladwin County (172.9 per 100,000 population). All counties maintained a lower incidence of prostate cancer than the State of Michigan (173.8 per 100,000 population).

Breast Cancer - The incidence of breast cancer in females experienced a gradual decrease in the number of diagnoses between 1993 to 2007, with all counties but Clare County, which experienced an increase during 1998-2002 of 9.4 incidences per 100,000 population.

Figure 20 illustrates Gladwin County had the lowest incidence of breast cancer (96.3 per 100,000 population) from 2003-2007, while Gratiot County had the highest incidence (113.6 per 100,000 population), followed by Clare County (110.5 per 100,000 population). All counties maintained a lower incidence of breast cancer, than the State of Michigan (122.1 per 100,000 population).
Mammography screening as a preventative measure for discovering breast cancer in women, is an available procedure in the community.

Figure 21 illustrates Midland County had the highest percentage of the female population receiving mammography screening (80%) from 2003-2007, while Gladwin (63%) and Gratiot (63%) Counties had the lowest, followed by Clare County (65%). Midland (80%) and Isabella (69%) Counties observe equal to or greater percentages of the female populations receiving mammography screening than the State of Michigan (69%). The U.S. benchmark defined at the 90th percentile, held a screening rate of 74 percent of the female population. All counties and the State of Michigan, with the exception of Midland County held rates below the U.S. benchmark.

**Lung and Bronchus** - The incidence of lung and bronchus cancer diagnoses in males decreased in number between 1993 to 2007, with all counties but Isabella County, which experienced an increase during 2003-2007 of 16.5 incidences per 100,000 population from the previous period (1998-2002). The largest decrease in incidence was observed in Clare County, where between 1993 and 2007, the incidence for males declined by 56.8 diagnoses per 100,000 population.

Figure 22 illustrates Midland County had the lowest incidence of lung and bronchus cancer for males (77.2 per 100,000 population) from 2003-2007, while Isabella had the highest incidence (109.3 per 100,000 population), followed by Clare County (107.1 per 100,000 population).

Midland and Gratiot Counties experience a lower incidence than the State of Michigan (92.2 per 100,000 population), while a higher incidence was observed in Clare, Gladwin and Isabella Counties.
VII. Community Health Factors – Chronic Disease & Conditions  

Continued

The incidence of lung and bronchus cancer diagnoses in females increased in number between 1993 to 2007, within all counties but Midland County, which experienced a decline during 2003-2007 of 17.3 incidences per 100,000 population from the previous period (1998-2002). The largest increase in incidence was observed in Isabella County, where between 1993 and 2007, the incidence for females rose by 25.8 diagnoses per 100,000 population.

Figure 23 illustrates Midland County had the lowest incidence of lung and bronchus cancer diagnoses for females (38.6 per 100,000 population) from 2003-2007, while Clare County had the highest incidence (79.3 per 100,000 population), followed by Gladwin County (74.5 per 100,000 population). Midland and Gratiot Counties experience a lower incidence than the State of Michigan (62.5 per 100,000 population), while a higher incidence was observed in Clare, Gladwin and Isabella Counties.

In general there appeared to be an overall higher incidence of lung and bronchus cancer diagnosis for males, than females, in each county as well as the State of Michigan.

Colon and Rectum - The incidence of colon and rectum cancer diagnoses in males decreased in number between 1993 to 2007 for all counties and the State of Michigan. The largest decrease in incidence was observed in Clare County, where between 1993 and 2007, the incidence for males declined by 32 diagnoses per 100,000 population.

Figure 24 illustrates Midland County had the lowest incidence of colon and rectal cancer diagnoses in males (46.5 per 100,000 population) from 2003-2007, while Isabella County had the highest incidence (67.3 per 100,000 population), followed by Gladwin County (64 per 100,000 population). Midland, Clare and Gratiot Counties experienced a lower incidence than the State of Michigan (58.2 per 100,000 population), while a higher incidence was observed in Gladwin and Isabella Counties.
The incidence of colon and rectal cancer diagnoses in females decreased in number from 1993 to 2007, for Midland and Gratiot Counties. An increase in incidence was observed for Clare, Gladwin and Isabella Counties. The largest decrease in incidence was observed in Midland County, where between 1993 and 2007, the incidence for females declined by 18.8 diagnoses per 100,000 population. The largest increase in incidence was observed in Clare County, between 1993 and 2007, the number of diagnoses rose by 7.2 per 100,000 population.

Figure 25 illustrates Midland County had the lowest incidence of colon and rectal cancer diagnoses in females (37.8 per 100,000 population) from 2003-2007, while Clare County had the highest incidence (51 per 100,000 population), followed by Isabella County (46.7 per 100,000 population). Midland and Gladwin Counties experienced a lower incidence than the State of Michigan (45 per 100,000 population), while a higher incidence was observed in Gratiot, Isabella, and Clare Counties.

In general there was a higher incidence of colon and rectal cancer diagnosis for males, than females, in each county as well as the State of Michigan. The largest disparity in male and female diagnoses existed in Isabella County, where there was an incidence of 20.6 diagnoses per 100,000 population greater for men than women. The smallest disparity in male and female diagnoses existed in Clare County where there was an incidence of 0.5 diagnoses per 100,000 population greater for men than women. The State of Michigan disparity was 13.2 diagnoses per 100,000 population greater for men than women.

**All Other Sites** - The incidence of cancer in males for all other sites, excluding prostate, lung and bronchus, and colon and rectum decreased from the baseline (1993-1997) for the time period of 2003-2007, for Midland, Clare and Gratiot Counties. An increase from baseline was observed for Gladwin and Isabella Counties, as well as the State of Michigan. An increase in incidence was observed for all counties excluding Midland and Isabella Counties between 1998 and 2007. The largest decrease in incidence from baseline was observed in Clare County, where between 1993 and 2007, the incidence for males declined by 11.9 diagnoses per 100,000 population. An overall increase was observed for the state of 12.5 diagnoses per 100,000 population from 1993-2007.
Figure 26 illustrates Midland County had the lowest incidence of cancer diagnoses in males for all other sites (232.9 per 100,000 population), while Clare County had the highest incidence (276.4 per 100,000 population), followed by Gladwin County (267.1 per 100,000 population). Midland, Gratiot and Isabella Counties experienced a lower incidence than the State of Michigan (265.5 per 100,000 population), while a higher incidence was observed in Clare and Gladwin Counties.

The incidence of cancer in females for all other sites, excluding breast, lung and bronchus, and colon and rectum increased from the baseline (1993-1997) for the time period of 2003-2007 for all counties and the State of Michigan, with the exception of Midland County. The largest decrease in incidence from baseline was observed in Midland County, where between 1993 and 2007, the incidence for females declined by 15.3 diagnoses per 100,000 population between 1998 and 2007. An overall increase was observed for the state of 11.4 diagnoses per 100,000 population from 1993-2007.

Figure 27 illustrates Midland County had the lowest incidence of cancer diagnoses in females for all other sites (166.5 per 100,000 population), while Gladwin County had the highest incidence (241.2 per 100,000 population), followed by Clare County (224.9 per 100,000 population). Midland, Gratiot and Isabella Counties experienced a lower incidence than the State of Michigan (206.7 per 100,000 population), while a higher incidence was observed in Clare and Gladwin Counties.

In general there was a higher incidence of cancer diagnoses for all other sites for males, than females, in each county as well as the State of Michigan. The largest disparity in male and female diagnoses existed in Midland County, where there was an incidence of 66.4 diagnoses per 100,000 population greater for men than women. The smallest disparity in male and female diagnoses existed in Gratiot County where there was an incidence of 21.1 diagnoses per 100,000 population greater for men than women. The State of Michigan disparity was 58.8 diagnoses per 100,000 population greater for men than women.
VII. Community Health Factors – Chronic Disease & Conditions Continued

All Cancer Types - The incidence of cancer in males for all cancer types decreased from the baseline (1993-1997) to present, for all counties as well as the State of Michigan. The largest decrease in incidence from baseline was observed in Clare County, where between 1993 and 2007, the incidence for males declined by 114.1 diagnoses per 100,000 population. An overall decrease was observed for the state of 43.6 diagnoses per 100,000 population from 1993-2007.

Figure 28 illustrates Midland County currently had the lowest incidence of cancer diagnoses in males for all cancer types (505.2 per 100,000 population), while Clare County has the highest incidence (609.3 per 100,000 population), followed by Gladwin County (607.7 per 100,000 population). Midland, Gratiot and Isabella Counties experienced a lower incidence than the State of Michigan (591.2 per 100,000 population), while a higher incidence was observed in Clare and Gladwin Counties.

The incidence of cancer in females for all cancer types decreased from the baseline (1993-1997) to the time period of 2003-2007, for Midland, Gladwin, and Gratiot Counties, while an increase was experienced for Clare and Isabella counties as well as the State of Michigan. The largest decrease in incidence from baseline was observed in Midland County, where between 1993 and 2007, the incidence for females declined by 59.6 diagnoses per 100,000 population. An overall increase was observed for the state of 3 diagnoses per 100,000 population from 1993-2007.

Figure 29 illustrates Midland County had the lowest incidence of cancer diagnoses in females for all cancer types (347.5 per 100,000 population), while Clare County had the highest incidence (465.7 per 100,000 population), followed by Gladwin County (456.1 per 100,000 population). Midland, Gratiot and Isabella Counties experienced a lower incidence than the State of Michigan (436.4 per 100,000 population), while a higher incidence is observed in Clare and Gladwin Counties.
VII. Community Health Factors – Chronic Disease & Conditions  

In general there was a higher incidence of cancer diagnoses for all cancer sites for males, than females, in each county as well as the State of Michigan. The largest disparity in male and female diagnoses existed in Midland County, where there was an incidence of 157.7 diagnoses per 100,000 population greater for men than women. The smallest disparity in male and female diagnoses existed in Gratiot County where there is an incidence of 101.9 diagnoses per 100,000 population greater for men than women. The State of Michigan disparity was 154.8 diagnoses per 100,000 population greater for men than women.

VII. Community Health Factors – Maternal and Child Health Indicators

**Low Birth Weights** - The incidence of low birth weight represents the percent of live births for which the infant weighed less than 2,500 grams upon birth. The data were gathered through the National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) from 2001-2007.

Figure 30 illustrates Gratiot County was estimated to have the lowest incidence of low birth weight (7.1%), while the highest incidence was observed in Clare County (8.4%), followed by Isabella County (7.9%). All counties experienced a lower incidence than the State of Michigan (8.2%) with the exception of Clare County. The U.S. benchmark defined at the 90th percentile, held an incidence of 6.0 percent. All counties as well as the State of Michigan were above the U.S. benchmark.

Low-birth weight rates for all counties are below the national average (6.9% compared to 8.3%) but still above the Healthy People 2020 objective of 5 percent (Healthy People 2020).

**Prenatal Care** - The target is 77.9 percent for prenatal care beginning in first trimester. (The baseline is 70.8 percent of females delivering a live birth received prenatal care beginning in the first trimester in 2007). All counties in our service area except Midland fell below this target in 2010. The target for early and adequate prenatal care is 77.6 percent. (The baseline is 70.5 percent of pregnant females receiving early and adequate prenatal care in 2007).

**Breastfeeding** - The Pediatric Nutrition Surveillance System (PedNSS) is a public health surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs. Data on birth weight, anemia, breastfeeding, short stature, underweight, overweight and obesity are collected for children who attend public health clinics for routine care, nutrition education and supplemental food.

Data are collected at the clinic level, aggregated at the state level and then submitted to the Centers for Disease Control and Prevention (CDC) for analysis. A national nutrition surveillance report is produced, and an additional surveillance report is produced for each contributor. The 2007 Pediatric Nutrition
VII. Community Health Factors – Maternal and Child Health Indicators Conti...d

Surveillance for breastfeeding in Michigan shows the following breastfeeding results by county. Central Michigan District Health Department (CMDHD) for Gladwin, Clare and Isabella counties shows that 60.7 percent of respondents have ever breastfed, while 15 percent breastfed for 6 months and 11.8 percent breastfed for 12 months. Mid Michigan District Health Department for Gratiot County shows that 63.3 percent of respondents have ever breastfed, while 16.7 percent breastfed at least six months and 13.9 percent breastfed for at least 12 months. Mid Michigan Community Action Agency for Midland County shows that 63.4 percent ever breastfed while 12.5 percent breastfed for six months and 8.9 percent breastfed for 12 months.

Teen Pregnancy - The teen birth rate represents an estimated rate of the number of births per 1,000 female population, ages 15-19. The data were gathered by the National Vital Statistics System (NVSS) at the National Center of Health Statistics.

Figure 31 illustrates teen birth rates range from 14 to 50 per 1,000 female population, ages 15-19, across the counties. The lowest rate was observed in Isabella County (14 per 1,000 population) from 2001-2007, while Clare County observed the highest (50 per 1,000 population), followed by Gladwin County (42 per 1,000 population). All counties with the exception of Isabella and Midland (25 per 1,000 population) Counties, experienced higher teen birth rates than the state of Michigan (35 per 1,000 population). The U.S. benchmark, defined at the 90th percentile, holds a rate of 22 per 1,000 population. All counties, as well as the State of Michigan, were above the U.S. benchmark.

VII. Community Health Factors – Health Behaviors

Smoking - The incidence of adult smoking represents an estimated percent of the adult population that smokes every day, most days or has at least smoked 100 cigarettes in their lifetime. The data were gathered through the Behavioral Risk Factor Surveillance System (BRFSS) by the Centers for Disease Control and Prevention. The Prevalence was calculated by the National Center for Health Statistics.

Figure 32 illustrates Gladwin County was estimated to have the highest incidence of smoking from 2003-2009 (36%), followed by Clare County (30%) and Gratiot County (26%). Isabella County has the lowest incidence of smoking at 20 percent. Clare, Gladwin and Gratiot Counties exceed the incidence of smoking in the State of Michigan, while Midland (21%) and Isabella (20%) Counties maintain incidence rates below the state rate. The U.S. benchmark, defined at the 90th percentile, holds a rate of 15 percent. All counties, as well as the State of Michigan, are currently above the U.S. benchmark.
Alcohol Use - The incidence of excessive drinking is a measure of the fraction of the adult population that reports either binge drinking (defined as consuming more than four and five alcoholic beverages on a single occasion for women and men, respectively) or heavy drinking (defined as drinking more than one and two drinks per day for men and women, respectively). The data were gathered by the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), and the incidence was calculated by the National Center for Health Statistics.

Figure 33 illustrates Clare County was estimated to have the lowest incidence of excessive drinking (15%), while Isabella County had the highest incidence (23%), followed by Gladwin County (19%). Midland (17%), Clare (15%) and Gratiot (17%) Counties were observed as having lower incidences of excessive drinking than the State of Michigan (19%). The U.S. benchmark defined at the 90th percentile, held an incidence of 8 percent. All counties as well as the state of Michigan were above the U.S. benchmark.

Obesity - The incidence of adult obesity is a measure of the fraction of the adult population (age 20 and older) that has a body mass index (BMI) of greater than or equal to 30 kg/m². The data were gathered and prevalence was determined by the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS) from 2003-2009.

Figure 34 illustrates the incidence of adult obesity comparable for all counties. Clare, Gladwin and Isabella Counties had the lowest incidence of adult obesity (30%, 30%, and 30%, respectively), while Gratiot County had the highest incidence (33%), followed by Midland County (31%). Clare, Gladwin and Isabella Counties observed a lower incidence than the State of Michigan (31%), while an equal or higher incidence was observed in Midland and Gratiot Counties. The U.S. benchmark defined at the 90th percentile, held an incidence of 25 percent. All counties as well as the State of Michigan were above the U.S. Benchmark.

Physical Activity - Numerous studies have shown the health benefits of even moderate physical activity, particularly in reducing the risk of cardiovascular health problems. Some studies have indicated that the risks of such problems are appreciably greater for those who engage in no physical activity even compared to those with sedentary lifestyles.

Clare ranked 32 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent. Gladwin ranked 29 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent. Gratiot ranked 28 percent in physical inactivity, added in 2012, compared to a national benchmark of 21 percent. The category of physical inactivity was added in 2012, with Midland County ranking 22 percent to the U.S. Benchmark of 21 percent.
VII. Community Health Factors – Health Behaviors *Continued*

**MidMichigan Health Line Calls** - Our community calls our physician referral line for provider referrals and inquiries as well as for program information, program registration and literature fulfillment requests, in addition to many other inquiries. Summary data for MidMichigan Health Line activities follows.

**Summary of Health Line Data for FY 2011**
- Provider Referral & Inquiries: 7,019
- Community Education Registration & Inquiries: 9,375
- Programs & Services Information Requests: 1,699
- Literature Fulfillment: 658

**Summary of Data for FY 2012 YTD (through 3/31/12)**
- Provider Referrals: 4,193
- Provider Inquiries: 6,017
- Community Education Registration & Inquiries: 5,071
- Programs & Services Information Requests: 1,248
- Support Group Inquiries: 55

VII. Community Health Factors – Environmental Health

**Environmental Health**

**Air Quality** - The incidence of unhealthy air quality was evaluated by unhealthy air quality days due to fine particulate matter as well as unhealthy air quality days due to ozone. Unhealthy air quality days to fine particulate matter pollution are defined as the annual number of days that was reported as unhealthy for sensitive populations, where fine particulate matter are defined as < 2.5 micrometers in diameter. Unhealthy air quality days due to ozone pollution are defined as the annual number of days that air quality was unhealthy for sensitive populations due to ozone levels. The data were estimated by a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the Environment Protection Agency (EPA) in 2006.

**Fine Particulate Matter** – Figure 35 illustrates Clare and Gladwin counties were estimated to have the lowest number of air quality days due to fine particulate matter (two days, each), while Midland, Gratiot and Isabella were estimated as having higher levels of fine particulate matter pollution at three days each. All counties were estimated to have lower numbers of unhealthy air quality days than the State of Michigan (five days). The U.S. benchmark defined at the 90th percentile, held an estimate of zero days of unhealthy air quality days due to fine particulate matter. All counties as well as the State of Michigan were above U.S. benchmark.

**Figure 35: Annual Number of Unhealthy Air Quality Days Due to Fine Particulate Matter, 2006.**
VII. Community Health Factors – Environmental Health

**Ozone** – Figure 36 illustrates all counties were estimated to have zero days of unhealthy air quality due to ozone pollution. In addition, all counties were estimated to have fewer unhealthy air quality days than the State of Michigan (five days). The U.S. benchmark defined at the 90th percentile, held an estimate of zero days of unhealthy air quality days due to ozone levels. All counties met the U.S. benchmark for unhealthy air quality days due to ozone pollution.

**Access to Healthy Foods** - The Access to healthy foods is estimated by the percent of zip codes within each county with a healthy food outlet, where healthy food outlets are defined as a grocery store or produce stands and farmer’s markets. It is a measure of the fraction of the population with access to identified healthy food outlets. The data were gathered by the U.S. Census Bureau’s Zip Code Business Patterns in 2008.

Clare County was estimated to have the greatest access to healthy food outlets (100%), while Gratiot County was estimated to have the lowest access (50%), followed by Isabella County (67%). Both Clare (100%) and Midland (80%) Counties had greater access to health foods than the estimated access for the State of Michigan (73%), while Gladwin (67%), Gratiot (50%) and Isabella (60%) Counties had less access to healthy foods. The U.S. benchmark defined at the 90th percentile, held an estimate of 92 percent access to healthy foods. Clare County met the U.S. benchmark, while the remaining counties as well as the State of Michigan were estimated to have less access than the U.S. benchmark.
VIII. Access to Care – Professional Research Consultants

Professional Research Consultants Patient Research

**Overall Health** – Figure 38 illustrates, 3,023 Midland County MidMichigan Physicians Group patients were surveyed by Professional Research Consultants, Inc. Of the respondents, 453 or 15 percent rated their own overall health as excellent, 41.1 percent gave a rating of very good, 34.0 percent good, 8.6 percent fair and 1.4 percent rated their overall health as poor.

Of the 666 patients surveyed in Gratiot and Isabella Counties combined, 11.7 percent felt their overall health was excellent. 39.3 percent rated their overall health very good, 35.1 percent good, 10.7 percent fair and 3.2 percent poor.

10.6 percent of the 809 patients surveyed in Clare County rated their overall health as excellent, 31.3 percent gave a rating of very good, 36.8 percent good, 16.4 percent fair and 4.8 percent, or almost 3.5 times the rate in Midland County, rated their overall health as poor.

Only 4.9 percent of the 430 patients surveyed in Gladwin County felt their overall health was excellent. 34.4 percent responded very good, 43.3 percent good, 14.7 percent fair and 2.8 percent poor.

Access to Care - MidMichigan Physician Group patients were also asked how often they were able to get an appointment for care as soon as they needed for issues requiring care right away. Of those answering always or usually, the highest percentage, 90.2 percent, was in Clare County. Midland County and Gratiot/Isabella Counties combined reported similar percentages of 83.9 percent and 83.6 percent respectively. Gladwin County reported the lowest percentage (80.5%) of patients feeling they always or usually were able to get an appointment as soon they needed.

Another question asked of these same patients was how often they were able to get an appointment for care as soon as they needed for a routine check-up. Clare County again had the highest percentage (94.8%) of respondents answering always or usually. Gratiot/Isabella Counties combined had 93.8 percent of respondents answer always or usually, and Midland and Gladwin Counties reported similar percentages of 89.6 percent and 89.7 percent respectively.
VIII. Access to Care – Information from the American Community Survey

Information from the American Community Survey

Uninsured Households - The distribution of uninsured population is an estimate, by age category and gender, by the U.S. Census Bureau. The data were gathered during the American Community Survey, and is based on three-year estimates from 2008-2010.

Uninsured Males by Age
Under 6 Years: Less than 5.0 percent of males under the age of six are without health insurance. The highest incidence is estimated in Gratiot County at 4.9 percent, while the lowest incidence is estimated in Midland County at 2.4 percent. Midland (2.4%) and Clare (3.5%) Counties have a lower incidence than the State of Michigan (3.8%). All counties as well as the State of Michigan are estimated to have a higher incidence of individuals without insurance than the United States (0.5%).

6 to 17 Years: Midland County has the lowest incidence of individuals without health insurance, at 1.0% of the male population, 6 to 17 years of age. Gladwin has the highest incidence (13.8%), followed by Clare County (10.4%). Midland (1.0%) Gratiot (3.8%) and Isabella (3.8%) Counties are estimated to have a lower incidence of uninsured individuals than the State of Michigan (4.6%). Midland, Gratiot and Isabella Counties (3.8%), as well as the State of Michigan, are estimated to have lower incidences of individuals without insurance than the United States (8.8%).

18 to 24 Years: Isabella County has the lowest incidence of individuals without health insurance, at 13.4 percent of the male population, 18 to 24 years of age. Gladwin has the highest incidence (47.4%), followed by Clare County (34.8%). Midland (22.9%) and Isabella (13.4%) Counties are estimated to have a lower incidence than the State of Michigan (29.4%). Midland, Gratiot (30.2%) and Isabella Counties, as well as the State of Michigan, are estimated to have a lower incidence than the United States (33.3%).

25 to 34 Years: Midland County has the lowest incidence of individuals without health insurance, at 11.9 percent of the male population, 25 to 34 years of age. Isabella County has the highest incidence (38.9%), followed by Gladwin County (34.7%). Midland (11.9%) and Gratiot (25.5%) Counties are estimated to have a lower incidence than the State of Michigan (28.6%). Midland, Clare (31.3%) Gratiot, as well as the State of Michigan, are estimated to have a lower incidence than the United States (33.1%).

35 to 44 Years: Isabella County has the lowest incidence of individuals without health insurance, at 22.6 percent of the male population, 35 to 44 years of age. Gladwin County (30.0%) has the highest incidence, followed by Midland County (29.2%). All counties exceed the incidence in the State of Michigan (18.9%). Isabella County and the State of Michigan have a lower incidence of uninsured individuals than the United States (23.7%), while all remaining counties exceed the incidence for the United States.

45 to 54 Years: Midland County has the lowest incidence of individuals without insurance at 9.3 percent of the male population, 45 to 54 years of age. Clare County (23.9%) has the highest incidence, followed by Isabella County (21.8%). Midland County is estimated to have a lower incidence (9.3%) than the State of Michigan (15.2%), while all remaining counties have a higher incidence. Midland (9.3%), Gladwin (17.6%) and Gratiot (16.8%) Counties, as well as the State of Michigan, have a lower incidence of uninsured individuals than the United States (18.5%).
VIII. Access to Care – Uninsured Males by Age 

55 to 64 Years: Isabella County has the lowest incidence of individuals without insurance at 7.3 percent of the male population, 55 to 64 years of age. Midland and Clare County have the highest incidence (9.3%, each), followed by Gladwin County (7.9%). Gladwin (7.9%), Gratiot (7.8%) and Isabella (7.3%) Counties are estimated to have a lower incidence than the State of Michigan (8.5%). All counties and the State of Michigan are estimated to have a lower incidence of uninsured individuals than the United States (12.4%).

65 to 74 Years: Less than 1.0 percent of males 65 to 74 years of age are without health insurance. All counties have a lower incidence than the State of Michigan (0.5%). All counties and the State of Michigan have a lower incidence than the United States (1.2%).

75 Years and Over: Less than 1.0 percent of males 75 years of age and over are without health insurance. All counties with the exception of Gratiot County (0.4%) have a lower incidence than the State of Michigan (0.1%). All counties and the State of Michigan have a lower incidence than the United States (0.6%).

Figure 38: Distribution of Uninsured Male Population by Age Category, 2008-2010.
VIII. Access to Care – Uninsured Females by Age

Uninsured Females by Age

Under 6 Years: Midland County has the lowest incidence of individuals without health insurance at 3.9 percent of the female population, under 6 years of age. Gladwin County (13.8%) has the highest incidence, followed by Clare County (7.5%). Midland (3.9%) and Gratiot (3.7%) Counties are estimated to have a lower incidence of uninsured individuals than the State of Michigan (4.8%). Midland, Gratiot, and Isabella Counties (5.1%), as well as the State of Michigan are estimated to have a lower incidence than the United States (6.3%).

6 to 17 Years: Isabella County has the lowest incidence of individuals without health insurance, at 3.1 percent of the female population, 6 to 17 years of age. Gratiot County (8.1%) has the highest incidence, followed by Clare County (8.0%). Gladwin (4.7%) and Isabella (3.1%) Counties have a lower incidence of uninsured individuals than the State of Michigan (4.8%). All counties and the State of Michigan are estimated to have a lower incidence than the United States (8.8%).

18 to 24 Years: Isabella County has the lowest incidence of individuals without health insurance, at 13.4 percent of the female population, 18 to 24 years of age. Clare County (32.4%) has the highest incidence, followed by Gratiot County (23.5%). Midland (16.9%) and Isabella (11.4%) Counties are estimated to have a lower incidence of individuals without health insurance than the State of Michigan (21.2%). All counties and the State of Michigan, with the exception of Clare County have a lower incidence than the United States (25.8%).

25 to 34 Years: Midland County has the lowest incidence of individuals without health insurance, at 21.9 percent of the female population, 25 to 34 years of age. Gladwin County (33.6%) has the highest incidence, followed by Isabella County (31.5%). All counties are estimated to have a higher incidence of uninsured individuals than the State of Michigan (17.8%). Midland (21.9%) and Clare (23.1%) Counties, as well as the State of Michigan are estimated to have a lower incidence than the United States (23.4%).

35 to 44 Years: Isabella County has the lowest incidence of individuals without health insurance, at 14.2 percent of the female population, 35 to 44 years of age. Clare County (30.6%) has the highest incidence, followed by Gladwin County (16.7%). All counties are estimated to have a higher incidence of uninsured individuals than the State of Michigan (13.7%). All counties and the State of Michigan, with the exception of Clare County, have a lower incidence than the United States (18.7%).

45 to 54 Years: Midland County has the lowest incidence of individuals without health insurance at 9.0 percent of the female population, 45 to 54 years of age. Clare County (21.5%) has the highest incidence, followed by Gratiot County (15.4%). Midland (9.0%), Gladwin (9.5%), and Isabella (9.3%) Counties have a lower incidence of individuals than the State of Michigan (12.3%). All counties and the State of Michigan, with the exception of Clare County, have a lower incidence than the United States (16.1%).

55 to 64 Years: Midland County has the lowest incidence of individuals without insurance at 7.5 percent of the female population, 55 to 64 years of age. Gratiot County (11.7%) has the highest incidence, followed by Clare County (10.4%). Midland (7.5%), Gladwin (8.0%), and Isabella Counties (8.5%) have a lower incidence of uninsured individuals than the State of Michigan (9.2%). All counties and the state of Michigan have a lower incidence than the United States (12.9%).
VIII. Access to Care – Uninsured Females by Age

**65 to 74 Years**: Less than 1.0 percent of females 65 to 74 years of age are without health insurance. All counties have a lower incidence than the state of Michigan (0.5%). All counties and the state of Michigan have a lower incidence than the United States (1.3%)

**75 Years and Over**: Less than 1.0 percent of females 75 years of age and over are without health insurance. All counties have a lower incidence than the state of Michigan (0.2%). All counties and the state of Michigan have a lower incidence than the United States (0.7%).

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**Figure 39: Distribution of Uninsured Female Population by Age Category, 2008-2010.**

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VIII. Access to Care – Uninsured Population

Difficulty in Obtaining Health Care Services - Difficulty in obtaining health care services is a complex issue that is examined through several metrics including the evaluation of the uninsured population, population per primary care provider and ambulatory-care sensitive hospitalizations.

Uninsured Population - The subject of the uninsured population specific to each county is addressed in the previous section, where it is evident that there is a disparity in health insurance coverage of up to 47.4 percent, based on age and gender in the community.

Figures 40 and 41 illustrate the largest population densities without health insurance are both male and female genders, between the ages 18-44. In comparison to the State of Michigan and the United States, this age group follows a similar trend for individuals without health insurance.

Population Per Primary Care Provider - The population per primary care provider is an estimate of the number of primary care physicians including physicians practicing general practice medicine, family medicine, internal medicine, pediatrics and obstetrics or gynecology. The ratio of the population to one provider is an indicator for the level of access that a community has to a primary care provider. The data were gathered by the Health Resources and Services Administration’s Area Resource File (ARF), in 2009.
**VIII. Access to Care – Population by Primary Care Provider Continued**

Figure 42 illustrates the ratio of population to primary care provider varied greatly across the counties by up to 3,151 individuals per provider. Midland County had the lowest ratio at 558 individuals per primary care provider, while Gladwin has the highest ratio (3709:1), followed by Clare County (2023:1). The State of Michigan held a ratio of 874 individuals per primary care provider, which was lower than all counties, with the exception of Midland County. The U.S. benchmark defined at the 90\(^{th}\) percentile, held a ratio of 631 individuals per primary care provider. The U.S. benchmark ratio was lower than all counties and the State of Michigan, again with the exception of Midland County. When compared to the U.S. benchmark, counties excluding Midland County experienced population volumes per primary care provider that were between 2 and 5.9 times the national benchmark.

**VIII. Access to Care – Ambulatory-Care Sensitive Hospitalizations**

**Ambulatory-Care Sensitive Hospitalizations** - Ambulatory-care sensitive hospitalizations are those hospitalizations which are deemed potentially preventable hospitalizations had the illness been addressed in an outpatient, ambulatory care environment. Data estimates were gathered in two forms. The first estimate gathered by the Dartmouth Atlas of Health Care, utilizing Medicare Claims Data, from 2006-2007. This data is designated as a rate of ambulatory-care sensitive hospitalizations per 1,000 Medicare enrollees. The second estimate was gathered by the Division for Vital Records and Health Statistics, Michigan Department of Community Health, utilizing the Michigan Resident Inpatient Files, from 2009. This data is designated as a rate of ambulatory-care sensitive hospitalizations per 10,000 population, by age and gender.

Figure 43 illustrates that the examination of the Medicare enrollee data revealed a range of ambulatory care sensitive hospitalization of 69 to 109 hospitalizations per 1,000 enrollees. Midland County had the lowest number of ambulatory-care sensitive hospitalizations at 69 per 1,000 enrollees, while Clare County had the highest (109 per 1,000 enrollees), followed by Gladwin County (103 per 1,000 population). Midland County was the only county that had fewer ambulatory-care sensitive hospitalizations (69 per 1,000 enrollees) than the State of Michigan (74 per 1,000 enrollees). The U.S. benchmark defined at the 90\(^{th}\) percentile, held a rate of 52 ambulatory-care sensitive hospitalizations per enrollee, which was lower than all counties and the state of Michigan.
Ambulatory-care sensitive hospitalizations for males, based on age, revealed a similar trend observed in ambulatory-care sensitive hospitalizations of Medicare enrollees. Midland County experienced fewer ambulatory-care sensitive hospitalizations than all other counties with the exception of the “18-24 years” age category. Like the hospitalization of Medicare enrollees, there was a large range between counties and age categories. The highest rates of ambulatory-care sensitive hospitalizations were associated with males greater than 45 years of age. Men ages 45 to 64 experienced the highest rate of ambulatory-care sensitive hospitalizations in Clare County, followed by Gladwin and Gratiot Counties. Men 65 to 74 experienced the highest rate in Gratiot County, followed by Clare and Gladwin Counties. Men 75-84 experienced the highest rate in Gratiot County, followed by Clare and Gladwin Counties. Men 84 and older experienced the highest rate in Isabella County, followed by Gladwin and Gratiot County. Additionally, all counties experienced higher rates of ambulatory care hospitalizations than the State of Michigan, for males greater than 45 years of age.

Figure 44: Ambulatory-Care Sensitive Hospitalizations of Males, By Selected Age Group, 2009.

Ambulatory-Care Sensitive Hospitalizations of Males, By Selected Age Group, 2009

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Michigan</th>
<th>Isabella County</th>
<th>Gratiot County</th>
<th>Gladwin County</th>
<th>Clare County</th>
<th>Midland County</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 84 years</td>
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<td></td>
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<tr>
<td>75-84 years</td>
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<tr>
<td>65-74 years</td>
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<tr>
<td>45-64 years</td>
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<td>25-44 years</td>
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<tr>
<td>18-24 years</td>
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<tr>
<td>&lt; 18 years</td>
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<td></td>
<td></td>
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<tr>
<td>All Ages</td>
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<td></td>
</tr>
</tbody>
</table>
VIII. Access to Care – Ambulatory-Care Sensitive Hospitalizations  *Continued*

Ambulatory-care sensitive hospitalizations for females, based on age, again revealed similar trends. Midland County experienced fewer ambulatory-care sensitive hospitalizations than all other counties with the exception of the “18-24 years” age category. There was a large range between counties and age categories. The highest rates of ambulatory-care sensitive hospitalizations were associated with females greater than 45 years of age. For all ages greater than 45, Clare County had the highest rate of ambulatory-care sensitive hospitalizations, followed by Gladwin and Gratiot Counties. Additionally, all counties experienced higher rates of ambulatory care hospitalization than the State of Michigan, for females greater than 45 years of age, with the exception of females greater than 84 years of age in Isabella County.

Examination of the rates for all ages revealed the same rank of the highest number of ambulatory-care sensitive hospitalizations in both men and women. The highest rate of occurrence was experienced in Clare County, followed by Gratiot and Isabella Counties.

![Ambulatory-Care Sensitive Hospitalizations of Females, By Selected Age Group, 2009](image)

*Figure 45: Ambulatory-Care Sensitive Hospitalizations of Females, By Selected Age Group, 2009.*
VIII. Access to Care – Exercise / Recreational Facilities

**Exercise** - The rate of recreational facilities in the community is an indicator of access to recreational exercise. The rate is an estimate of the number of recreational facilities per 100,000 population. The data were gathered by the United States Department of Agriculture (USDA) Food Environment Atlas, and the rates are estimated by the County Business Patterns, for 2008.

The range of recreational facilities in the community was 7-19 facilities per 100,000 population. Midland County had the highest rate of recreational facilities (19 per 100,000 population), while Gratiot County had the lowest rate (7 per 100,000 population), followed by Gladwin County (8 per 100,000 population). Midland, Clare (10 per 100,000 population) and Isabella (10 per 100,000 population) Counties observed rates that were equal to or greater than the State of Michigan (10 per 100,000 population). The U.S. benchmark defined at the 90th percentile, reported a rate of 17 per 100,000 population. All counties and the State of Michigan observed rates below the U.S. benchmark, with the exception of Midland County.

![Rate of Recreational Facilities per 100,000 Population, 2008](image)

Figure 46: Rate of Recreational Facilities per 100,000 Population, 2008.
### IX. MidMichigan Health’s Community Benefit Implementation Strategies

#### Community Benefit Implementation Strategy

**Health Care Access**

**Goal:** Improve access to seamless, comprehensive, quality health care services to include health care providers, diagnostic services and area referral resources.

**Critical Measures:** Percentage of uninsured, care provider rates and timeliness.

<table>
<thead>
<tr>
<th>Priority Actions</th>
<th>FY 2013-2016 Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inform community members regarding available insurance and payment options.</td>
<td>1. County Specific Provider Referral and Inquiry reports from Health Line.</td>
</tr>
</tbody>
</table>
| 2. Connect people to services.  
  - Health Care Staff at community venues  
  - Nurse Navigators  
  - Discharge Planners  
  - Wellness Coaches | 2. Percentage of the population under 65 with and without health insurance. |
| 3. Arrange transportation to services for those who would not otherwise receive these services. | 3. Percentage of the population that could (or could not) get medical care when needed when surveyed and why. |
| 4. Help people find a health care provider through physician referral services. | 4. Number of patients served by a federally qualified health center (FQHC). |
| 5. Recruit physicians, mid-levels and other health care providers to areas of need. | 5. Percentage of the population using emergency rooms as the usual source of care. |
| 6. Continue projects targeted at preventable readmissions for selected diagnoses. | 6. Primary care provider rate in each county. |
| 7. Implement projects targeted at preventable hospital stays. | 7. Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees. |
| 8. Admission review process to determine appropriateness of each admission. | 8. Readmission rates for selected diagnoses. |
## Community Benefit Implementation Strategy
### Clinical Preventive and Supportive Services

**Goal:** Reduce disease and economic burden of chronic diseases and improve quality of life for people who have or are at risk for chronic diseases through chronic disease prevention and detection (Heart Disease/Stroke, Cancer and Diabetes).

**Critical Measures:** reduced overall heart disease/stroke, cancer, diabetes incidence and death rates.

### Priority Actions

**To Initiate, Continue or Improve**

1. Implement disease prevention topic specific media campaigns with a call to action to contact Health Line for specific educational literature.
   - Know Your Numbers Education
   - Men’s Guide to Living Well
   - Women’s Guide to Living Well
   - Twelve Weeks to a Better You

2. Provide reduced cost or no cost screening activities for targeted populations based upon United States Services Task Force (USPSTF) recommendations and other empirical clinical standards.
   - Blood Pressure
   - Know Your Numbers (cholesterol, glucose, BMI & MetS
   - Stroke inclusive of PVD
   - Fecal Occult
   - Lung CT scan
   - Mammography
   - Others

3. Provide screenings at a variety of venues that people frequent (like college campuses, at health fairs and other community events).

4. Provide Client Reminders for PCP office screenings:
   - Colorectal Cancer
   - Prostate Cancer
   - Mammography Screening

5. Implement purposeful education
   - Breast Health Nurse one-on-one counseling
   - Pre-Diabetes & Diabetes Classes
   - Hip, shoulder, knee and pain programs
   - Lunch, Live Learn Series for Seniors
   - Support Groups with focused topics
   - Diabetes Expos
   - Call to Action Health Fairs
   - Wellness Counseling
   - Customized pt. education re: preventive actions needed

6. Institute payment and reimbursement systems that incentivize preventive care.

7. Record health screening and other health care preventive actions in the EMR.

8. Expand use of EMR to include preventive measure tracking.

### FY 2013-2016 Measures

1. Number of Intake calls to Health Line for health literature fulfillment..

2. Participation counts for education classes and health care screenings.

3. Screening results and data comparison reports.
   - Participant results: initial, 6 months, 1 year.
   - Track downstream services utilized for each screening encounter.

4. Documentation of preventive screening activities per survey.
   - Blood pressure check in 2 years
   - Cholesterol check in 5 years
   - Fecal occult blood stool test in 2 years
   - Colonoscopy or sigmoidoscopy
   - Flu shot in past year
   - Pap smear in 3 years
   - Mammogram in 2 years

5. Diabetes health status by 10 percent improvement:
   - Diabetic Medicare enrollees that receive HbA1c screening.
   - Other insurance data as available from other providers.

6. Mortality: life expectancy; years of potential life lost; standardized mortality rates.

7. MHN performance reports on diabetes, coronary artery disease and hypertension.
### Community Benefit Implementation Strategy
#### Health Care Behaviors

**Goal:** Improve health behaviors to promote health and reduce the risk of chronic disease.

**Critical measures:** Improved physical activity and eating; reduced prevalence of overweight and obesity.

#### Priority Actions
**To Initiate, Continue or Improve**

1. Increase the level of fitness through incentivized physical activity programs in the communities and schools.
   - Community fitness walks.
   - Sponsorship Support of Walk or bike to school programs.
   - Watch/Fitness Trail Project with schools.

2. Smoking Cessation Programs, to include incentives, wellness counseling and tobacco facilitators (telephone support and no to low out of pocket cost).

3. Tobacco Use Cessation: Media Campaigns using brief, recurring messages to inform and motivate tobacco users to quit.

4. Reducing Exposure to Environmental Tobacco Smoke.
   - Continued support of Smoke-free Campuses

5. Implement and support Outpatient Smoking Cessation Clinical Path, inclusive of nicotine replacement &/or smoking cessation and other supportive Rx. Measures.

6. Implement purposeful education targeted at behavior change & illness prevention.
   - Fitness/Nutrition/Tobacco Cessation in schools.
   - Family Nights following youth health fairs.
   - Individually Adapted Health Behavior Change Programs.

7. Multi-component, technology-supported interventions that use counseling or coaching to effect weight loss.
   - Am I Hungry Weight Loss (behavior focused) program.

#### FY 2013-2016 Measures

1. Percent of the adult population that has a body mass index greater or equal to 30.

2. Proportion of adults who report a healthy weight each year.

3. Proportion of children who have a healthy weight reported by a parent.

4. Proportion of educational offerings that provide counseling or education related to nutrition.

5. Proportion of educational offerings that provide counseling or education related to healthy weight.

6. Improvement in Tobacco Cessation Rates.

7. County-level estimates of leisure time physical inactivity
   - Increase physical activity to 75 minutes of vigorous activity/wk. for adults.

8. Number of school health programs to promote personal health and wellness.
   - Increase in fitness levels and number of minutes of physical activity to 60 minutes per day for children.

# Community Benefit Implementation Strategy

## Maternal and Infant Health

**Goal:** Improved pregnancy and postpartum health behaviors to improve the health and well being of mothers and infants.

**Critical measure:** Improvement in maternal and infant child health; decrease in teen birth rates

### Maternal and Infant Health Priority Actions

<table>
<thead>
<tr>
<th>Priority Actions</th>
<th>FY 2013-2016 Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase the proportion of pregnant women who attend a series of prepared childbirth classes.</td>
<td>1. Prenatal data</td>
</tr>
<tr>
<td>2. Target underserved populations to include teen moms and those in financial need.</td>
<td>First trimester care rates.</td>
</tr>
<tr>
<td>3. Collaborate with other agencies to provide needed care, education and services across county lines.</td>
<td>First time mom follow-up rates.</td>
</tr>
<tr>
<td>4. Increase breastfeeding initiation, duration and exclusivity.</td>
<td>2. Infant data</td>
</tr>
<tr>
<td>• ideal breastfeeding exclusivity for the first 6 mths.; target 50 percent breastfeeding for 6 mths.; goal 50 percent breastfeeding for 1 year.</td>
<td>Birth weight</td>
</tr>
<tr>
<td>• track breastfeeding moms for duration and exclusivity.</td>
<td>Number of well visits for babies and children.</td>
</tr>
<tr>
<td>5. Increase the proportion of new mothers who receive breastfeeding support.</td>
<td>3. Participation counts and biographic data of participants in childbirth education and support group classes.</td>
</tr>
<tr>
<td>6. Provide childbirth preparation classes for areas with low birth weight baby and increase obesity rates</td>
<td>4. OB specialty clinic visit volumes; prenatal care rates.</td>
</tr>
<tr>
<td>• Include maternal/infant health, breastfeeding &amp; nutrition content.</td>
<td></td>
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<tr>
<td>• Coordinate classes with area agencies, so that all expectant moms have the opportunity for education</td>
<td></td>
</tr>
<tr>
<td>7. Implement support for new moms.</td>
<td>5. Breastfeeding data: follow-up survey.</td>
</tr>
<tr>
<td>• Breastfeeding support in partnership with public health &amp; other agencies.</td>
<td>First initiation</td>
</tr>
<tr>
<td>• Newborn support group for 1st year of life.</td>
<td>1-2 days post discharge</td>
</tr>
<tr>
<td>• Include purposeful education for healthy mom and growing baby.</td>
<td>3 months</td>
</tr>
<tr>
<td>8. Implement purposeful education targeted at behavior change and prevention.</td>
<td>6 months</td>
</tr>
<tr>
<td>• Maturation classes for adolescents and parents.</td>
<td>12 months</td>
</tr>
<tr>
<td>• Safe Sex Talk – aimed at High School and College aged students.</td>
<td></td>
</tr>
<tr>
<td>9. Implement wellness promotion literature, with a call to action to call Health Line.</td>
<td>6. Track number of intake calls specific to each call to action.</td>
</tr>
<tr>
<td>• Benefits of Breastfeeding</td>
<td>a. Requests for BF facilitation</td>
</tr>
<tr>
<td>• Twelve Weeks to a Better you</td>
<td>b. Requests for education or call to action literature.</td>
</tr>
</tbody>
</table>

### FY 2013-2016 Measures

<table>
<thead>
<tr>
<th>Measures</th>
</tr>
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<tbody>
<tr>
<td>1. Prenatal data</td>
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<td>2. Infant data</td>
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<td>• Number of well visits for babies and children.</td>
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<td>4. OB specialty clinic visit volumes; prenatal care rates.</td>
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<tr>
<td>• First initiation</td>
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<td>• 1-2 days post discharge</td>
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<td>• 6 months</td>
</tr>
<tr>
<td>• 12 months</td>
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<tr>
<td>6. Track number of intake calls specific to each call to action.</td>
</tr>
<tr>
<td>a. Requests for BF facilitation</td>
</tr>
<tr>
<td>b. Requests for education or call to action literature.</td>
</tr>
<tr>
<td>7. Teen pregnancy and STD rates.</td>
</tr>
</tbody>
</table>
X. Summary Statement – The Future is Now

Having identified the priority community initiatives for each of the affiliates of MidMichigan Health, we look forward to implementing the actions needed to help us attain our goals. We understand that educating people about how to avoid a disease, or offering one program or preventive screening may not improve outcome measures to the degree that we would like. Thus, we plan to evaluate our outcomes while considering the impact of other contributing factors, like economic factors, social inclusion, education, racial or ethnic bias, cultural factors, community acceptance, mass media impact, politics, living conditions and geography; described as determinants of health. To create a more comprehensive picture of the needs of our population we will complete a Community Health Needs Assessment Survey to assess current needs for services and community outreach programs from the perspective of the population we serve. This will give us further input regarding the successes of our current community outreach efforts, as well as whether or not they feel their clinical needs are being met. We are particularly interested in knowing what impacts the decision of people who are uninsured or underinsured to come to programs and services that are provided at a reduced or no cost. We also want to know what suggestions they have, and what needs to be provided from their perspective.

Also, since our communities proclaim a strong interest in health of children, we will develop and implement our own Behavioral Risk Factor Survey to be completed by middle school students, based upon the National Youth Risk Behavior Surveillance System (YRBSS). Since the National Youth Risk Behavior Surveillance System (YRBSS) is based upon national data; we are interested in local data for our goals and implementation strategies.

With the advent of the electronic medical record, we will be able to collect further data on readmission diagnoses, to target areas where further prevention activities are needed. Additionally, the patient portal will allow patients to request medication refills, request appointments, and manage their healthcare information. Communication between the inpatient and outpatient electronic medical record systems will provide further benefits, improving coordination of care among different providers and shortening the time it takes to accurately make a diagnosis and provide appropriate treatment.

Also with advancement in call tracking, we can track the number of health provider referrals and health provider inquiries to obtain further information about access to care. Additionally, the expansion of the Patient Centered Medical Home will change the way physician offices currently operate. Patient Centered Medical Homes promote efficient use of resources and technology, and foster highly involved relationships between individual patients and their personal physicians, as well as their families. MidMichigan Health has nominated 11 physician practices within MidMichigan Health Network to be designated as a Patient Centered Medical Home. Our hope is that this method of care coordination will promote better health care for patients while cutting costs. Additional screening data like A1C rates for diabetes diagnoses and monitoring of diabetes patients will be available in all practices that use Patient Centered Medical Home. One of the Triple Aim Health Improvement Delivery Projects through MiHIA, the Cost of Care project, is focusing on diabetic care. The purpose is to examine best practices for community diabetic care delivery. The long-term goal is to define payment models that reward the “right behavior” for chronic disease management.

We recognize the ongoing, cyclical nature of our Community Health Needs Assessment plan, and look forward to the challenge of moving toward improved health. The Changes of Today define our Tomorrow.

June 11, 2012
Appendix A: Organizations and People Consulted

Gladwin
Organizations Participating Together We Can and Health Improvement
Must identify any individual providing input who has special knowledge or expertise in public health by name, title, and affiliation and provide a brief description of the individual's special knowledge or expertise
- Mary Kushion MSA Health Officer for the Central Michigan District Health Department.
- Helen Lee Director of Public Health Promotion and Preparedness at Central Michigan District Health Department
- Melissa DeRoche Health Promotion and Preparedness Supervisor at Central Michigan District Health Department
- Kelly Conley Director of Personal Health Services at Central Michigan District Health Department
- Dennis Cantrell RS Environmental Health at Central Michigan District Health Department

Must include a prioritized description of all community health needs identified through the assessment, as well as a description of the process and criteria used in prioritizing such health needs

A. 1016 Recovery Network: Sarah Kile
B. Alzheimers Association: Laura Rule
C. Clare County Cleaver: Jeanie Hopkins
D. Clare County Transit: Tom Prinstill
E. Gladwin/Clare Regional Education School District: Heather DuBois
F. Region 7 Area on Aging:
G. Community Mental health Central Michigan
H. Commissioner Gladwin County: Billie Babcock
I. Gladwin County Board of Commissioners: Bill Rhode
J. SPARKS: Carol West John
K. Community Mental Health for Central Michigan
L. Gladwin County Chamber of Commerce:
M. MidMichigan Big Brothers Big Sisters: Jared Seibt
N. Harrison Farmers Market: Marilyn Worpell
O. Listening Ear: Amanda Hart
P. Council on Aging: Tammy Roehrs
Q. Northeast Michigan Community Service Agency (NEMSCA) Headstart: Amy Pratt
R. Council on Aging: Jane Iutzi
S. Clare Ministerial Association: Dennis Bromly
T. Department of Human Services: Gretchen Wilbur
U. Beaverton Rural Schools: Darryl Philips
V. Women’s Aid: Tara Buening
W. Hope Pregnancy Services: Vicky Stickler
X. United Rescue Service: Eric Phelps
Y. A&D Home care: Jack Gleason
Z. Saginaw Indian Chippewa Tribe: Janes Anderson
AA. MidMichigan Blue cross Blue shield: Jared Seibt
BB. Central Michigan University: College of Health Professions: Jessica Garden Rose
CC. Naturopathic Doctor: Anne M Hobart ND
DD. Pediatric Nurse: Carol Mass
EE. Women’s Aid Service: Tara Buening
FF. Gladwin Sherrif Department: Mike Shea
GG. Gladwin Chamber of Commerce:
HH. Pere Marquette District Library
II. Michigan State University Extension
JJ. MidMichigan Community College: Carol Santini, Christie Beck, Kelly Ross
KK. Local Press: Kristen Schultz and
LL. MidMichigan Homecare: Stacy Reaume
MM. MidMichigan Clare: Glen King, Allison Murphy, Cindy Fillmore
NN. MidMichigan Physicians Group: Cheryl Yensey
OO. MidMichigan Gladwin: Janet Foor, Dana Garafalo, Deana Pitts
PP. Alzheimers Association: Greater Michigan:
QQ. Clare Gladwin Literacy Council Executive Director: Joann Richards
RR. MidMichigan Gladwin Pines
SS. MidMichigan Midland
TT. MidMichigan Gratiot
UU. MidMichigan Physician Group
VV. Gladwin Elementary
WW. Gladwin Junior High
XX. Gladwin Skeels School
YY. Beaverton Creative Learning Academy
ZZ. Human Service Committee
AAA. City of Gladwin
BBB. Gladwin Business Professionals
CCC. Beaverton Business Professionals
DDD. Emergency Management Services
EEE. Rotary
FFF. Central Michigan Infection Prevention
GGG. Great Start Collaborative: Gladwin County Child Abuse and Neglect Council
HHH. Domestic Abuse and Sexual Violence Coordinating Council Meeting

Clare

Allison Murphy  MMMC – Clare Health Educator
Dennis Bromley  Clare Ministerial Association
Amanda Cote  GSPC
Eric Phelps  United Rescue Service
Amanda Hart  Listening Ear
Genre Hopkins  Clare County Cleaver
Andrea Eiseler  Community Mental Health of Central Michigan
Glenn King  MidMichigan Medical Center Clare
Anne Hobart  Naturopathic Doctor
Gretchen Wilbur  Clare County DHS
Annette Jeske  Region VII Area Agency on Aging
Heather DuBois  Clare Gladwin RESD – Great Start Collaborative
Beth Bellamy  MidMichigan Health Service – Houghton Lake
Jack Gleason  A&D Home Health Care
Bev Przystas  MSU Extension
Jake Trombley  MSU Student
Bille Babcock  Commissioner Gladwin County
James Anderson  Saginaw Chippewa Indian Tribe
Bill Rhode  Gladwin County Board of Commissioner
Jane Iutzi  Clare County Senior Services – Council on Aging
Brian Block  Attentive Care Companions
Janelle Cuddie  Northeast Michigan Community Service Agency
Carol Maas  Pediatrics  MidMichigan Medical Center Gladwin
Janet Foor  MidMichigan Medical Center Gladwin
Carol Santini  Mid Michigan Community College
Jared Seibt  Mid Michigan BBBS
Carol Westjohn  RESD Sparks
Jerry Becker  MidMichigan Physicians Group Clare
Carolyn Hilley  MidMichigan Physicians Group Clare
Jessica Gardner  Central Michigan University – College of Health Professions
Cathy Rayburn  Gratiot Isabella RESD
Cheryl Yesney  MidMichigan Medical Center Clare
Joann Richards  Clare Gladwin Literacy Council Executive Director
Christi Beck  Mid Michigan Community College
Joe Phillips  Clare County Family Court
Cindy Fillmore  MidMichigan Medical Center Clare
Joe Trommater  RESD Sparks
Coral Beth Rowley  MSU – Gladwin County J
Stacey Reaume  MidMichigan Home Care
Lorraine Koehn  Love, Inc
Tammy Roehrs  Council On Aging – Serving Gladwin County
Lynn Grim  Clare County Commissioner
Tara Buening  Women’s Aid
Marilyn Woprell  Harrison Farmers Market, Inc.
Tom House  Harrison Community Schools
Marty Johnson  Clare County Resident
Tom Pirnstill  Clare County Transit Corporation
Mary Battaglia  Mid Michigan Community College
Tom Tucholski  Gladwin County Chamber of Commerce
Mary Griffore  MidMichigan Medical Center Gladwin
Veronica Romanov  Together We Can Council Member
Mary Jane Ogg  Harrison District Library
Vicki Bohr  MidMichigan Community Action Agency
Amy Pratt  NEMCSA Head Start
Vicky Stickler  Hope Pregnancy Services
Michael Hetzman  Community Mental Health For Central Michigan
Michael Shea  Gladwin County Sheriff’s Department
Patty Meyer  Alzheimer’s Association – Greater Michigan
Paul Cronstrom  Community Mental Health for Central Michigan
Rachel Haltiner  Clare Gladwin RESD – Great Start Collaborative Parent Coalition
Renee Haley  Clare County Veteran’s Services
Richard Cronk  MidMichigan Community College
Sandy Dodson  Clare County Emergency Management
Sandy Merrifield  Central Michigan District Health Department
Appendix B: Approvals

Clare County was approved by the MidMichigan Medical Center-Clare Board of Directors on April 24, 2012

Gladwin County was approved by the MidMichigan Medical Center-Gladwin Board of Directors on April 25, 2012

Gratiot County was approved by the MidMichigan Medical Center-Gratiot Board of Directors on April 25, 2012

Isabella County was approved by the MidMichigan Medical Center-Gratiot Board of Directors on April 25, 2012

Midland County was approved by the MidMichigan Medical Center-Midland Board of Directors on April 27, 2012