# District Health Department #10

Healthy People, Healthy Communities

# 2016 Community Health Needs Assessment

FEBRUARY 2017

# District Health Department #10
# Community Health Needs Assessment

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January 11, 2017

Message from the Health Officer:

In an effort to keep the communities within our Health Jurisdiction informed and aware of their health status and risks, District Health Department #10 has completed this Community Health Needs Assessment. The purpose of such a document is to aid in our, and our partners, efforts to provide programming and services which will assist in building and maintaining healthy communities.

The information contained within this assessment consists of our most current primary and secondary data and includes sources collected and provided by both our agency and our partners. In the future we believe that a regional approach to creating and maintaining health will be required to be successful. The collaborative foundation utilized in the creation of this assessment will position this agency well as we move closer to this idea. As you review the information contained within the document, we welcome any comments or input you have on it.

District Health Department #10 appreciates funding for this Community Health Needs Assessment from the TENCON Health Plan.  Should you have any questions on our efforts in completing this assessment, please feel free to contact me at (231) 876-3839 or by email at khughes@dhd10.org

Again, I hope you find this a beneficial tool.

Sincerely,

Kevin Hughes, MA
Health Officer
District Health Department #10

The mission of District Health Department #10 is to promote and enhance the health of our communities and environment through protection, prevention, and intervention. Serving Crawford, Lake, Mason, Missaukee, Oceana, Kalkaska, Manistee, Mecosta, Newaygo, and Wexford Counties

# Introduction

The Community Health Needs Assessment (CHNA) is a collaborative process of collecting, reviewing, and analyzing health related data to understand the health status of the health jurisdiction. Development of a CHNA requires the collection of data, both primary and secondary, and the analysis of the data and other pertinent community information. This will enable District Health Department #10 (DHD #10) and its partners to make informed decisions and plan for action. Data included in the CHNA consist of both local and statewide demographics, health indicators, health behaviors, and local resources.

DHD #10 will utilize data obtained through the CHNA process to educate and mobilize the community, identify areas of focus at the community level, identify available local resources for target issues, and create a community plan spelling out priorities to be addressed. The data contained within the CHNA identify current, emerging, or future issues that may have a negative impact on the community. The CHNA can also be used as an evaluation tool to measure change from previous interventions and/or actions. Data gathered in the CHNA will form the foundation for the development of a DHD #10 Community Health Improvement Plan and will provide direction for the health department's strategic plan.

## Agency Description

The health jurisdiction covered by the District Health Department #10 includes the counties of Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana and Wexford. An office is located in each county to facilitate easy access to services for clients.

With a service area of 5,796 miles, the jurisdiction is the largest geographical area of any health department in the state of Michigan and serves the 10th largest population in the state (and has a larger area than the states of Connecticut, Rhode Island and Delaware).

DHD #10 is governed by a Board of Health, responsible for reviewing agency efforts and setting agency policy. The Board of Health is comprised of two county commissioners from each of the 10 counties within the health jurisdiction. As an organization, DHD #10 has developed a Vision, Mission, Core Values, and Agency Goals.
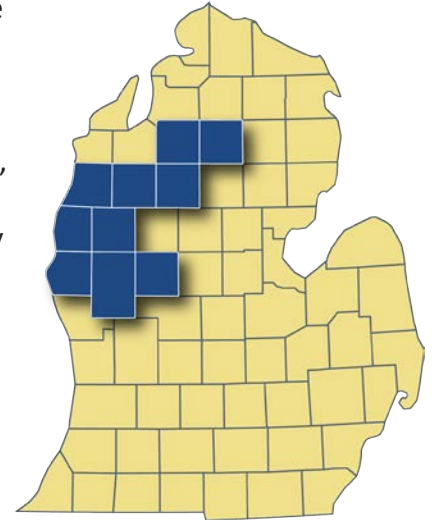


## OUR MISSION

To promote and enhance the health of our communities and environment through protection, prevention and intervention.

## OUR VISION

Healthy People, Healthy Communities

## OUR CORE VALUES

- Communication
- Customer Service
- Integrity
- Positive Attitude
- Responsibility and Accountability

## OUR AGENCY GOALS

- Maintain excellence as a public health agency
- Improve the health status of residents
- Engage Communities to Identify and Solve Health Problems

## HEALTH JURISDICTION DEMOGRAPHICS

DHD #10's health jurisdiction is situated in a rural area of the lower peninsula of Michigan on the northwest side of the state. Within the health jurisdiction, there are 260,755 individuals. Numerous social and economic factors impact the health of the residents and their communities. High numbers of individuals living in poverty and elevated jobless rates are just two examples of some of the factors that negatively impact the communities.

**POPULATION AND AGE:** Total population in 2015 for each county ranges from 11,424 in Lake County to 47,948 in Newaygo County. When broken down by age group, Lake County has the lowest percent of people under age 5 (3.3%) and Wexford has the highest at 6.3%. Compared to Michigan, eight counties have a lower percent of residents under age 5. Results are similar in the under age 18 group, with Lake County having the lowest at 17%, and six counties falling under the Michigan rate. All ten counties have higher percentages of individuals age 65 and over compared to Michigan's rate of 15.8%.

**RACE:** All ten counties in the DHD #10 jurisdiction are predominately White, with the highest percent in Crawford County (96.7%). The highest percent of Blacks are reported in Lake County (8.8%). The highest percent of Hispanic population is found in Oceana County (14.6%). Within the DHD #10 health jurisdiction, Manistee County is the base for the governing council and offices of the federally recognized tribe of the Little River Band of Ottawa Indians (US Census Bureau, 2010).

**INCOME:** All ten counties have a lower per capita income than the State ($26,607), with the lowest in Lake County ($16,679) and highest in Mason County ($24,244).

| | Crawford | Kalkaska | Lake | Manistee | Mason | Mecosta | Missaukee | Newaygo | Oceana | Wexford | MI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Population | 13,801 | 17,260 | 11,424 | 24,461 | 28,783 | 43,067 | 14,903 | 47,948 | 26,105 | 33,003 | 9,922,576 |
| Under age 5 | 4.2% | 5.3% | 3.6% | 3.7% | 5.2% | 4.8% | 6.0% | 5.7% | 5.9% | 6.3% | 5.8% |
| Under age 18 | 18.3% | 21.2% | 17.0% | 17.8% | 20.7% | 18.6% | 22.8% | 22.9% | 23.5% | 23.4% | 22.2% |
| Age 65+ | 20.8% | 16.5% | 23.7% | 20.7% | 19.2% | 17.4% | 19.6% | 18.3% | 19.5% | 17.9% | 15.8% |
| Race: White | 96.7% | 96.1% | 87.3% | 91.8% | 95.4% | 93.1% | 96.6% | 95.9% | 95.6% | 96.2% | 79.7% |
| Race: Black | 0.9% | 0.7% | 8.8% | 3.4% | 0.9% | 3.0% | 0.5% | 1.3% | 0.9% | 0.6% | 14.2% |
| Hispanic | 1.9% | 1.9% | 2.6% | 2.9% | 4.6% | 2.2% | 2.7% | 5.9% | 14.6% | 1.8% | 4.9% |
| Per capita income 2011-2015 | $22,595 | $21,320 | $16,679 | $22,647 | $24,244 | $20,405 | $20,530 | $21,230 | $20,234 | $20,988 | $26,607 |

Source: US Census Bureau, 2015

## DHD #10 PROGRAMS AND SERVICES

Funding comes from local, state, and federal dollars for programs and services provided by DHD #10. This mix of funding is used to provide the following essential local public health services as outlined in the Public Health Code:

- Immunizations
- Infectious/Communicable Disease Control
- Sexually Transmitted Disease Control
- Hearing Screening
- Vision Screening
- Public/Private Wastewater
- Food Protection
- Public/Private Water Supply

Other screening and prevention-related services, designed to maintain and promote the health of residents and the community, are also provided by DHD #10.  Examples include:

- Women-Infants-Children Program (WIC)
- Maternal and Infant Health Services
- Emergency Preparedness
- Health Education/Promotion
- Breast and Cervical Cancer Control Program
- WISEWOMAN
- Colo-rectal Cancer Early Detection Program
- Family Planning

# Community Health Needs Assessment Process

## DHD #10 CHNA EFFORTS

Since the last Community Health Needs Assessment was completed in 2012, District Health Department #10 has expanded the CHNA process to increase input and buy-in from residents in each county. Improvements have been made in the areas of secondary data collection, use of community wide resident and health care provider surveys, and Community Conversations using the Technology of Participation method.

In 2015, VIP Research and Evaluation was contracted by District Health Department #10 to conduct a Behavioral Risk Factor Survey (BRFS) for the five northern counties within its district: Crawford, Kalkaska, Manistee, Missaukee, and Wexford.  The BRFS data from the five northern counties was combined with BRFS data collected from the five southern counties in 2014 as part of a Spectrum Health Community Health Needs Assessment (CHNA): Lake, Mason, Mecosta, Oceana, and Newaygo.  The resulting BRFS data provides DHD #10 with feedback from residents representing all ten counties, something never previously done.

This survey was conducted by telephone using randomly selected landlines and cell phones; the household member to interview was also randomly selected.  Completed surveys included 4,699 adults,

representing 4.6% of the 101,546 households in the ten counties. Questions on this survey cover five general areas: health status, health care access, health risk behaviors, clinical preventive practices, and chronic conditions.  This local information provides a much better assessment of the health of the residents in the DHD #10 jurisdiction than was available in the past.

On an annual basis, DHD #10 continues to compile secondary health data by county.  The Chartbooks include an array of demographic, health behavior, and chronic disease information to present part of the picture of the health status in each community. Sources of data include the Michigan Department of Health and Human Services (MDHHS), US Census Bureau, the Michigan League for Public Policy, and County Health Rankings.  These Chartbooks and Profiles are also intended to serve as the foundation for the agency's CHNA.  A copy of the DHD #10 CHNA Plan is included in *Appendix A.* Chartbooks were updated with the DHD #10 2014-15 BRFSS data and used in the 2016 CHNA and are available on the DHD #10 website. (Links are included in *Appendix B*). The one-page County Profiles were also updated with the DHD #10 2014-15 BRFSS data. *(Appendix B).*

In 2015-16, community members in all ten counties were surveyed to collect primary data to complement the secondary data.  The survey, "What Matters to You?", was distributed to residents through our community partners, coalitions, senior centers, libraries, food pantries, and health clinics.  Key questions on the survey asked residents to choose three of the most important factors for a healthy community, choose the three most important health problems in your county, identify problems getting health care, and identify diseases and conditions within the family.  A summary of the survey results is included in *Appendix C.*

In addition to the health survey, community conversations were held in all ten counties.  This process, using the Technology of Participation method, gave key stakeholders an opportunity to provide input on the health status in the community from a different perspective.  The question posed to each group was "What can we do in our county to move closer to our vision of a healthy

community?" Each of the conversation groups identified goals and strategies. Both the survey and community conversations included a much broader representation of community residents, expanding the CHNA to reach additional areas. County specific results of the community conversations are included in *Appendix D*.

All of the above data was summarized and compared to Michigan and the total health jurisdiction, when appropriate. A Community Health Needs Assessment At-a-Glance was developed for each county. Issue briefs were developed for the top priorities, including such areas as access to health care, tobacco use, substance abuse, healthy lifestyles, health disparities, maternal, infant, and child health, mental health, and chronic disease. This information was provided to local community coalitions in each of the ten counties in the jurisdiction. Using a method of prioritization, each county selected their top three issues that will be included in the Community Health Improvement Plan.

## COLLABORATIVE PARTNERSHIPS

The process of completing a CHNA is generally not undertaken by a single entity but rather by a group. In February 2016, DHD #10 facilitated a meeting of its hospital partners and other key stakeholder agencies to discuss how the organizations could collaborate to complete this process. As part of the Patient Protection and Affordable Care Act, non-profit hospitals are required to complete a CHNA and Community Health Improvement Plan (CHIP) every three years. Serving the DHD #10 health jurisdiction are nine hospitals, eight within and one outside of the jurisdiction. The hospitals within the jurisdiction are: Munson Healthcare Grayling Hospital, Kalkaska Memorial Health Center, Munson Healthcare Cadillac Hospital, West Shore Medical Center, Spectrum Health Big Rapids, Spectrum Health Ludington, Mercy Health Partners Lakeshore Campus Shelby, and Spectrum Health Gerber Memorial. The hospital outside the health jurisdiction is Spectrum Health Reed City, which provides services to Lake and Mecosta Counties.

In an attempt to avoid duplication of efforts, DHD #10 and its hospital partners agreed to assist each other

in the completion of each organization's CHNA and CHIP. As outlined in the hospital requirements, DHD #10 would serve as a member of each organization's steering committee, provide county level chart book data and community health related input, and participate in the prioritization and strategy identification process. In return, the hospital partners agreed to serve as the steering committee for the DHD #10 CHNA and CHIP development process, as well as participate in the DHD #10 public health focused prioritization and strategy identification process. Copies of the groups' meeting agendas and meeting minutes are included as *Appendix H*. The steering committee did agree that while collaboration in this process was required and essential to its success, it was recognized that each individual organization needed to determine its own specific process for completing its CHNA and CHIP. Links to hospital partners' CHNA are included in *Appendix K*. *Appendix L* includes a table of DHD #10 and Hospital Partners Focus Areas.

## COMMUNITY RESOURCES

Within the DHD #10 health jurisdiction, collaboration among the community members and organizations is essential for success. Limited resources, both personnel and financial, have created huge issues in trying to adequately address all community health needs. While it is true that some counties and communities have fewer resources than others, all have equal commitment to working together to address issues. Existing community health coalitions and collaboratives have come together to explore and secure resources needed to create and maintain healthier communities. These resources have come from a variety of sources including healthcare organizations, local community foundations, state agencies, local service organizations, national funding organizations and foundations, local governmental agencies, and community members.

In the DHD #10 health jurisdiction there are presently nine community health coalitions serving the 10 counties and one eleven county Chronic Disease Prevention Coalition working to improve the health of communities. In addition, most counties are served by a community collaborative of which two of the health coalitions are considered subgroups. Many of

the coalitions have formed sub-committees to focus on specific health issues identified by community members. All of the health coalitions focus on a philosophy of utilizing policy, environmental, and systems changes in addressing health issues in the community. Coalitions differ in regards to whether they address single or multiple issues. Membership in these groups is comprised of diverse sectors within each community: health department staff, healthcare organization staff, school and college personnel, city and county governmental representatives, county extension staff, chambers of commerce, worksite and business members, community-based organization members, and other community members.

The following are examples of some of the resources available within each county, including existing community health coalitions:

**Hospitals and Clinics:**
AuSable Free Clinic, Baldwin Child and Adolescent Health Center, Family Health Care (Baldwin, Cadillac, Grant and White Cloud), Hope House Free Medical Clinic, Kalkaska Memorial Health Center, Kalkaska Teen Health Corner, Little River Band of Ottawa Indians Health Services, Mercy Health Lakeshore, Mercy Health Urgent Care, Munson Healthcare Grayling Hospital, Munson Healthcare Cadillac Hospital, My Community Dental Clinics, Northwest Michigan Health Services, School- based Adolescent Wellness Clinics (Crawford, Newaygo, Oceana, Wexford), Spectrum Health Big Rapids, Spectrum Health Family Medicine, Spectrum Health Gerber Memorial, Spectrum Health Ludington, Spectrum Health Ludington Hospital, Spectrum Health Reed City, Stehouwer Free Clinic in Cadillac, Susan P Wheatlake Cancer Center, and West Shore Medical Center.

**Mental Health:**
Centra Wellness, Central Michigan Community Mental Health, Choices West Counseling Services, Mecosta Osceola Coalition to Reduce Underage Substance Abuse, Newaygo County Community Mental Health, North Country Community Mental Health, Northern Lakes Community Mental Health, Pine Rest Christian Mental Health Services, and West Michigan Community Mental Health.

**Coalitions/Councils/Collaboratives:**
Regional: 21 County Perinatal Initiative, Aging and Disability Resource Collaboration of Northwest Michigan, Breast Feeding Coalition, Northern Michigan Community Health Innovation Region, Great Start Collaboratives, Northern Michigan Health Coalition, Northern Michigan Regional Entity, Northwest Michigan Chronic Disease Prevention Coalition, Northwest Michigan Food and Farming Network, Maternal Smoking Coalition, Northern Michigan Diabetes Initiative, and Northern Michigan Public Health Alliance.

**Local**: Cadillac Area Health Coalition, Crawford County Health Improvement Committee, Crawford County Collaborative, Kalkaska County Community Collaborative, Live Well Kalkaska County, Live Well Kalkaska Substance Free, Lake County Food Policy Council, Lake County Roundtable, Lake County Communities That Care, Live Well Manistee County, Substance Education and Awareness (SEA) Manistee, Manistee County Human Services Collaborative Body, Mason County Substance Abuse Prevention Coalition, Big Rapids Health Coalition, Mecosta/Osceola County Collaborative, Mecosta/Osceola Substance Abuse Reduction Coalition, Live Well Newaygo County, NC3 Coalition, Breathe Well Newaygo County, Headway Coalition of Newaygo County, Healthy Families of Oceana County, Oceana County Health Disparities Reduction Coalition, and Wexford/Missaukee Human Services Leadership Collaborative.

**Governmental and Social Service Agencies/ Organizations:**
Aging and Disability Resource Center, Baldwin Housing Commission, Benzie Area Christian Neighbors, Catholic Human Services, City of Big Rapids Non-Motorized Transportation Infrastructure, City of Manistee, Councils on Aging and Senior Centers, County Housing Authorities, Crawford County Recreation Authority, Department of Health and Social Services, Five Cap, Inc., Fountain Hill Center, Goodwill, Government Subsidized Food Programs, Love, Inc., Manistee Community Kitchen, Manistee County Child Advocacy Center, Manistee County Human Services Collaborative Body, Manistee Recreation Association, Mecosta County Youth and Family Center, Michigan State University Extension, Michigan Works, Mid-Michigan Community Action

Agency, NEMSCA Housing, Northern Michigan Substance Abuse Services, Inc., Northwest Michigan Community Action Agency, Parks and Recreation Departments, Salvation Army, Tamarac Center, True North Community Services, United Way, Veteran Affairs Office, and Services of Hope.

**Programs and Initiatives:**
Catholic Charities West Michigan, DHD #10 MCIR Region 5 Community-based Immunization Project, DHD #10 Live Well Campaign, DHD #10 Tobacco Prevention and Control Project, Disability Network West Michigan, Early Childhood Education Program, Enroll Northern Michigan, Food Assistance Outreach Program, Habitat for Humanity, Homeless Prevention Workgroup, Lakeside Comprehensive Wellness, Launch Manistee, Lions Club Vision and Hearing Services, Meals on Wheels, Michigan Tobacco Quitline, MiPCT Michigan Primary Care Transformation Project, National Diabetes Prevention Program, Northern Michigan Diabetes Initiative, Oceana College Access Network, Project Fresh, SNAP-Ed, Teen Pregnancy Prevention Initiative, Walkerville Thrives, and WIC/MIHP Quality Improvement Project.

**Community Resources:**
Food pantries, employment services, faith community, farmers' markets, hospice care, intermediate school districts, schools and universities, local TV and radio stations, public transportation services, Cadillac Area YMCA, walking paths and bike trails, Weight Watchers and TOPS.

**Funding Sources:**
Building Healthy Communities, Fremont Area Community Foundation, Manistee Community Foundation, Michigan Cancer Consortium, Michigan Department of Health and Human Services, Michigan Health Endowment Fund, SNAP-Ed, TENCON Health Plan, and UnitedHealthcare.

## COMMUNITY LEVEL COALITIONS

Recognizing that no single organization or group can adequately or effectively address all community issues, collaboration is a priority. Within the DHD #10 health jurisdiction, community level health coalitions do exist in all of the ten counties. Some of the coalitions may be stronger than others. Efforts to energize and engage all coalitions must be combined with maintaining the stronger coalitions; these efforts are essential to achieving success. Only through these collaborative groups can healthier communities be built and maintained. Data on issues related to the coalitions are not identified in the Chartbooks or the one page summaries, but they are recognized as being paramount to the successful creation and maintenance of healthy communities.

# Findings from Community Health Needs Assessment

## BEHAVIORAL RISK FACTOR SURVEY RESULTS

In 2014-15, a Behavioral Risk Factor Survey was conducted for all ten counties in the District Health Department #10 jurisdiction. The overall objective of the BRFS is to obtain information from DHD #10 residents about a wide range of behaviors that affect their health. More specific objectives include measuring each of the following:

- Health status indicators, such as perception of general health, satisfaction with life, weight (BMI), and levels of high blood pressure
- Health risk behaviors, such as smoking, drinking, diet, and physical activity
- Clinical preventative measures, such as routine physical checkups, cancer screenings, oral health, and immunizations
- Chronic conditions, such as diabetes, asthma, and cancer, and their management

The information collected will be used to:

- Prioritize health issues and develop strategic plans
- Monitor the effectiveness of intervention measures
- Examine the achievement of prevention program goals
- Support appropriate public health policy
- Educate the public about disease prevention through dissemination of information

The resulting BRFS data provides DHD #10 with feedback from residents representing all ten counties, something never previously done. Questions on this survey cover the five general areas: health status, health care access, health risk behaviors, clinical preventive practices, and chronic conditions.

## Health Status Indicators

The following areas illustrate the perception of general health, satisfaction with life, emotional support, and activity limitation. Poor physical health, poor mental health, and activity limitation are those who reported this occurring in the past 14 out of 30 days. The best measures for these areas are found in Mason County; Oceana also had a low percent (8.0%) of reported poor mental health. Crawford County had the highest percent of those dissatisfied or very dissatisfied with life and activity limitation. The highest percent of fair/poor health status and poor physical health was found in Lake County.

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| Fair/poor general health status | 20.4% | 22.2% | **28.3%** | 18.2% | **16.2%** |
| Very dissatisfied/ dissatisfied with life | **9.7%** | 4.1% | 6.7% | 8.5% | **3.6%** |
| Rarely/never receive emotional support | 10.8% | 5.8% | 10.2% | 5.0% | **4.4%** |
| Poor physical health | 18.4% | 16.3% | **24.6%** | 13.5% | **10.9%** |
| Poor mental health | 18.2% | **19.5%** | 12.8% | 15.5% | **8.0%** |
| Activity limitation | **17.5%** | 14.3% | 13.9% | 11.1% | **8.7%** |
| Have high blood pressure | 31.4% | 39.6% | **41.6%** | 38.1% | 34.7% |
| Take medication for high blood pressure | 74.5% | **53.8%** | 81.7% | 63.2% | **85.4%** |
| Have high cholesterol | 34.7% | 28.0% | **42.9%** | **25.9%** | 28.7% |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| Fair/poor general health status | 18.7% | 17.4% | 22.0% | 20.2% | 18.4% |
| Very dissatisfied/ dissatisfied with life | 4.7% | 6.7% | 5.6% | 4.2% | 5.5% |
| Rarely/never receive emotional support | **13.2%** | 4.9% | 6.3% | 6.5% | 4.7% |
| Poor physical health | 13.8% | 15.0% | 14.1% | 16.6% | 14.8% |
| Poor mental health | 8.3% | 13.4% | 8.7% | **8.0%** | 11.9% |
| Activity limitation | 9.3% | 10.0% | 9.0% | 10.7% | 9.1% |
| Have high blood pressure | **25.4%** | 31.9% | 33.5% | 36.3% | 30.0% |
| Take medication for high blood pressure | 76.9% | 72.5% | 74.4% | 80.8% | 74.7% |
| Have high cholesterol | 30.9% | 39.4% | 31.5% | 35.8% | 31.9% |

The highest percent of those having high blood pressure (41.6%) and high cholesterol (42.9%) were found in Lake County, while the lowest scores were in Mecosta and Manistee counties. Of those with high blood pressure, the highest percent taking medication was in Mason County (85.4%) and the lowest was in Kalkaska County (53.8%).

## Health Care Access

Missaukee County had the highest percent of those without a primary care provider (25.8%) or no health care coverage (19.7%); the lowest percentages were found in Newaygo County (10.7%) and Manistee County (5.1%), respectively. Those who had to forgo care in the past year due to costs ranged from 8.3% in Newaygo County to 15.5% in Kalkaska County. In Missaukee County, 9.3% reported visiting the ER/ED two or more times in the past year compared to 20.3% in Lake County. In Kalkaska County, 72.3% were confident about navigating the health care system compared to 86.7% in Mecosta County.

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| No primary care provider | 18.9% | 21.3% | 12.7% | 17.6% | 12.2% |
| No health care coverage (ages 18-64) | 10.4% | 8.3% | 10.1% | **5.1%** | 8.7% |
| Had to forgo care in past year due to costs | 14.7% | **15.5%** | 9.2% | 13.7% | 8.6% |
| Visited ER/ED two or more times in past year | 12.1% | 13.2% | **20.3%** | 15.7% | 17.8% |
| Confident can navigate health care system | 74.6% | **72.3%** | 83.5% | 73.3% | 83.7% |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| No primary care provider | 15.8% | **25.8%** | **10.7%** | 12.1% | 23.5% |
| No health care coverage (ages 18-64) | 16.7% | **19.7%** | 8.7% | 8.3% | 12.6% |
| Had to forgo care in past year due to costs | 12.6% | 13.7% | **8.3%** | 10.7% | 15.3% |
| Visited ER/ED two or more times in past year | 14.9% | **9.3%** | 11.9% | 10.1% | 13.0% |
| Confident can navigate health care system | **86.7%** | 75.8% | 81.6% | 75.8% | 79.4% |

## Health Risk Behaviors

Crawford County has the highest percent of responses to overweight (40.4%), cigarette smoker (40.7%), heavy drinker (14.9%), and binge drinker (23.4%). Obesity is highest in Wexford County (38.4%), no leisure time physical activity is highest in Lake

County (55.4%), and inadequate fruit and vegetable consumption in Mecosta County (89.4%).  Lowest rates for obesity is in Mecosta County (23.1%), overweight in Kalkaska County (27.8%), no leisure time physical activity in Wexford County (21.0%), cigarette smoking in Mason County (20.8%), heavy drinking in Mason County (3.3%), binge drinking in Lake County (9.3%), and inadequate fruit and vegetable consumption in Missaukee County (76.9%).

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| Obese | 27.8% | 29.6% | 35.4% | 36.0% | 33.5% |
| Overweight | 40.4% | 27.8% | 35.1% | 31.8% | 30.9% |
| No leisure time physical activity | 27.1% | 21.3% | 55.4% | 24.0% | 35.5% |
| Cigarette smoker | 40.7% | 39.0% | 39.1% | 34.5% | 20.8% |
| Heavy drinker | 14.9% | 9.2% | 3.5% | 5.5% | 3.3% |
| Binge drinker | 23.4% | 17.4% | 9.3% | 13.8% | 12.6% |
| Inadequate fruit and vegetable consumption (<5 times/day) | 85.7% | 82.4% | 83.0% | 80.8% | 84.8% |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| Obese | 23.1% | 35.0% | 28.6% | 32.5% | 38.4% |
| Overweight | 32.3% | 36.5% | 34.8% | 35.0% | 34.1% |
| No leisure time physical activity | 42.5% | 27.9% | 42.5% | 43.9% | 21.0% |
| Cigarette smoker | 31.6% | 25.2% | 26.0% | 21.5% | 23.2% |
| Heavy drinker | 7.0% | 9.8% | 7.3% | 3.6% | 10.7% |
| Binge drinker | 18.9% | 21.9% | 13.8% | 9.5% | 16.2% |
| Inadequate fruit and vegetable consumption (<5 times/day) | 89.4% | 76.9% | 85.8% | 85.5% | 79.7% |

**Clinical Preventive Practices**
No routine check-up in the past year ranged from 14.7% in Lake County to 25.4% in Missaukee County. In Mecosta County, 68.1% have had their cholesterol checked, compared to 81.3% in Oceana County.  In Crawford County, 90.5% have had a mammogram in the past two years and 74.8% have had an appropriately timed pap test (74.8%); 76.1% in Manistee County have had a mammogram and 64.6% have had a pap test.  Males over age 50 having a PSA test ranged from 84.4% in Kalkaska County to 45.9% in Wexford County.  In Mason County, rates for having a sigmoidoscopy or colonoscopy (66.2%), no dental visit (21.8%), and no teeth cleaning (26.0%) were more favorable than in Lake County (sigmoidoscopy or

colonoscopy at 53.0%, no dental visit at 45.5%, and no teeth cleaning at 49.0%).  Flu vaccine in the past year for those over age 65 ranged from 56.0% in Oceana County to 78.5% in Crawford County.  Pneumonia vaccine for those over age 65 ranged from 55.7% in Oceana County to 78.9% in Crawford County.

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| No routine check-up in past year | 18.3% | 22.5% | 14.7% | 14.4% | 15.8% |
| Have had cholesterol checked | 70.8% | 78.3% | 78.9% | 73.2% | 80.0% |
| Had mammogram in past two years (females, 40+) | 90.5% | 81.2% | 82.7% | 76.1% | 79.4% |
| Had appropriately timed pap test | 74.8% | 74.2% | 69.3% | 68.4% | 68.8% |
| Ever had PSA test (males, 50+) | 75.9% | 84.4% | 62.3% | 79.3% | 76.7% |
| Had sigmoidoscopy or colonoscopy in past 5 years (age 50+) | 64.9% | 63.4% | 53.0% | 57.5% | 66.2% |
| No dental visit in past year | 27.6% | 35.0% | 45.5% | 28.4% | 21.8% |
| No teeth cleaning in past year | 36.1% | 37.8% | 49.0% | 33.2% | 26.0% |
| Had flu vaccine in past year (age 65+) | 78.5% | 71.7% | 62.3% | 68.5% | 73.4% |
| Had pneumonia vaccine (age 65+) | 78.9% | 75.3% | 64.8% | 66.3% | 63.3% |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| No routine check-up in past year | 21.4% | 25.4% | 18.4% | 17.4% | 22.7% |
| Have had cholesterol checked | 68.1% | 71.8% | 74.7% | 81.3% | 72.7% |
| Had mammogram in past two years (females, 40+) | 83.4% | 86.6% | 81.1% | 88.0% | 87.1% |
| Had appropriately timed pap test | 66.8% | 64.6% | 69.5% | 71.5% | 69.6% |
| Ever had PSA test (males, 50+) | 74.1% | 68.2% | 67.2% | 69.9% | 45.9% |
| Had sigmoidoscopy or colonoscopy in past 5 years (age 50+) | 61.0% | 56.9% | 63.8% | 53.3% | 60.1% |
| No dental visit in past year | 27.9% | 27.0% | 32.1% | 29.3% | 34.0% |
| No teeth cleaning in past year | 34.7% | 30.9% | 36.4% | 33.9% | 40.4% |
| Had flu vaccine in past year (age 65+) | 72.4% | 73.7% | 69.2% | 56.0% | 66.0% |
| Had pneumonia vaccine (age 65+) | 69.1% | 69.7% | 69.1% | 55.7% | 71.3% |

## Chronic Conditions

The lowest percentages for arthritis (25.6%), diabetes (7.3%), any cardiovascular disease (6.7%), angina (3.1%), and heart attack (2.8%) are found in Mecosta County. Wexford County has the lowest percentages for lifetime asthma (10.6%) and current asthma (5.5%). Lowest rates for cancer, non-skin, (4.9%) and stroke (1.2%) are in Missaukee County. Mason County has the lowest rate for COPD (6.0%). Kalkaska County has the lowest rate for skin cancer (3.5%). Highest rates are in Lake County for arthritis (39.3%), any cardiovascular disease (13.7%), COPD (16.3%), and heart attack (9.2%). Arthritis is highest in Lake County (39.3%); lifetime asthma (24.6%) and cancer, non-skin (8.6%) are highest in Crawford County; current asthma is highest in Kalkaska County (16.3%); skin cancer in Mason County (7.0%); angina in Missaukee County (8.1%); stroke in Newaygo County (5.5%); and diabetes in Oceana County (14.8%).

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| Arthritis | 33.7% | 38.4% | **39.3%** | 32.7% | 28.2% |
| Lifetime asthma | **24.6%** | 22.1% | 17.5% | 17.6% | 12.2% |
| Current asthma | 14.3% | **16.3%** | 13.1% | 12.8% | 8.3% |
| Diabetes | 7.8% | 9.6% | 14.0% | 10.9% | 10.7% |
| Any cardiovascular disease | 11.4% | 12.2% | **13.7%** | 10.7% | 8.5% |
| COPD | 11.9% | 6.7% | **16.3%** | 9.7% | **6.0%** |
| Cancer, non-skin | **8.6%** | 5.0% | 6.9% | 7.8% | 6.9% |
| Angina | 4.9% | 6.8% | 6.4% | 5.5% | 4.5% |
| Heart Attack | 6.2% | 7.5% | **9.2%** | 7.0% | 3.7% |
| Skin cancer | 3.7% | **3.5%** | 3.6% | 6.9% | **7.0%** |
| Stroke | 4.0% | 3.5% | 3.9% | 1.9% | 2.6% |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| Arthritis | **25.6%** | 30.7% | 28.9% | 28.8% | 33.5% |
| Lifetime asthma | 18.1% | 16.5% | 15.0% | 11.4% | **10.6%** |
| Current asthma | 14.7% | 9.8% | 12.0% | 7.6% | **5.5%** |
| Diabetes | **7.3%** | 9.6% | 10.8% | **14.8%** | 8.9% |
| Any cardiovascular disease | **6.7%** | 11.4% | 9.3% | 9.9% | 10.7% |
| COPD | 7.7% | 10.4% | 8.2% | 8.6% | 8.7% |
| Cancer, non-skin | 5.2% | **4.9%** | 7.5% | 7.9% | 7.7% |
| Angina | **3.1%** | **8.1%** | 3.6% | 6.8% | 4.7% |
| Heart Attack | **2.8%** | 4.7% | 3.6% | 5.5% | 5.0% |
| Skin cancer | 4.0% | 4.5% | 4.5% | 5.5% | 4.6% |
| Stroke | 2.8% | **1.2%** | **5.5%** | 1.8% | 3.0% |

## RISK/ISSUE AREAS FROM COUNTY SUMMARIES

On an annual basis, DHD #10 compiles secondary health data by county. These Chartbooks include an array of demographic, health behavior, and chronic disease information to present part of the picture of the health status in each community. Sources of data include the Michigan Department of Health and Human Services (MDHHS), US Census Bureau; and the Michigan League for Public Policy. The complete Chartbooks are included in *Appendix B* and a summary and comparison follows:

**High School Graduate:** In Michigan, the percent of those with a high school education is 89.3%. The percent of those age 25 and over graduating from high school in the DHD #10 health jurisdiction ranges from 83.2% in Lake County to 90.7% in Mason County. All of the counties except Mason and Manistee are below the state percentage rate. (US Census Bureau, 2010-2014)

**Bachelor's Degree:** The percentage of Michigan residents over age 25 who attained a Bachelor's degree is 26.4%. Within the health jurisdiction, all counties are below the state percent. Mecosta has the highest percentage at 22.2% and Lake has the lowest at 9.2%. (US Census Bureau, 2010-2014)

**Unemployment Rate:** The current unemployment rate in Michigan is 7.3%, with Mason and Newaygo counties at or below that rate. The highest unemployment rate is 11% in Lake County. (Michigan League for Public Policy, 2014)

**Poverty:** The lowest rates of poverty among all ages are in Missaukee (15.6%) and Mason (15.7%) counties, under the state rate of 17.0%. All ten counties have higher rates of poverty among those ages 0-17 than the state rate of 23.7%. The highest percent in that age group is found in Lake County, with 52.2%. (Michigan League for Public Policy, 2013)

**Free and Reduced Lunch:** All ten counties have a higher percentage of students eligible for free and reduced price lunch than the state of Michigan (46.7%). The highest rate is 92.3% in Lake County. (Michigan League for Human Services, 2014)

**Medicaid Paid Births:** The highest percentage of Medicaid paid births is in Lake County at 70.1%. All ten counties are above the Michigan rate of 42.8%. (Michigan League for Human Services, 2014).

**Number of People per Primary Care Physician:** In Michigan, the number of individuals per primary care physician is 1,246:1. All counties have a higher ratio than the state except Wexford County (1,019:1). The highest ratio is 5,749:1 in Lake County. (County Health Rankings, 2015)

**Cancer Mortality Rate:** The age adjusted cancer mortality rate per 100,000 for Michigan is 170.4. Manistee (166.9) and Newaygo (168.9) counties have rates lower than the state rate. All other counties have a higher rate than the state rate, with the highest rate of 224.7 in Missaukee County. (Michigan Department of Health and Human Services, 2013)

**Cancer Incidence:** Michigan's age adjusted cancer incidence rate is 445.8 per 100,000. All counties

except Wexford (491.7) and Manistee (495.6) have rates lower than the state rate. (Michigan Department of Health and Human Services, 2012)

**Infant Mortality:** Michigan's Infant Mortality rate is 6.9 per 1000. Five of the ten DHD #10 counties have Infant mortality rates higher than Michigan. (Michigan Department of Health and Human Services, 2013)

**Smoking During Pregnancy:** In Michigan, the percent of mothers who report smoking during pregnancy is 21.6%. Within the DHD #10 jurisdiction, all counties exceed this percent and range from a high of 47.7% in Crawford County to a low of 25.4% in Missaukee County. (Michigan Department of Health and Human Services, 2013)

**Teen Pregnancy:** The teen pregnancy rate in Michigan is 38.2 pregnancies per 1,000 females ages 15-19. Half of the counties in the jurisdiction have lower teen pregnancy rates than the Michigan rate. (Michigan Department of Health and Human Services, 2013)

| | Crawford | Kalkaska | Lake | Manistee | Mason | Mecosta | Missaukee | Newaygo | Oceana | Wexford | MI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| High school graduate | 85.8% | 86.2% | 82.3% | **89.5%** | **90.7%** | **89.6%** | 86.9% | 86.0% | 84.8% | 88.8% | 89.3% |
| Bachelor's degree or higher | 15.8% | 13.0% | 9.2% | 19.4% | 20.1% | 22.2% | 13.3% | 13.0% | 16.1% | 16.7% | 26.4% |
| Unemployment rate | 9.4% | 9.4% | 11.0% | 8.3% | **7.3%** | 7.8% | 7.7% | **7.1%** | 9.8% | 8.4% | 7.3% |
| Poverty – all ages | 17.6% | 17.9% | 31.0% | 17.9% | **15.7%** | 23.6% | **15.6%** | 17.2% | 18.3% | 19.8% | 17.0% |
| Poverty – ages 0-17 | 32.3% | 29.1% | 52.2% | 28.8% | 26.8% | 31.6% | 25.8% | 26.1% | 30.9% | 29.1% | 23.7% |
| Students eligible for free lunch | 57.5% | 57.3% | 92.3% | 52.8% | 54.7% | 48.7% | 57.5% | 59.3% | 72.2% | 56.6% | 46.7% |
| Medicaid paid births | 67.5% | 60.1% | 70.1% | 49.7% | 47.1% | 45.4% | 53.6% | 49.1% | 66.6% | 58.5% | 42.8% |
| Primary care physician ratio | 1,274:1 | 2,850:1 | 5,749:1 | 1,898:1 | 1,434:1 | 2,063:1 | 3,758:1 | 2,821:1 | 2,024:1 | **1,019:1** | 1,246:1 |
| Cancer mortality rate | 179.7 | 183.6 | 214.5 | **166.9** | 189.4 | 191.5 | 224.7 | **168.9** | 175.8 | 213.6 | 170.4 |
| Cancer incidence rate | **317.2** | **384.9** | **323.1** | 495.6 | **255.3** | **399.8** | **298.7** | **328.9** | **251.4** | 491.7 | 445.8 |
| Infant mortality rate, per 1000 | * | 12.7 | * | * | **4.8** | 10.4 | * | 7.6 | 9.6 | 9.2 | 6.9 |
| Smoking during pregnancy | 47.7% | 41.6% | 39.7% | 37.4% | 25.6% | 31.2% | 25.4% | 30.5% | 28.5% | 33.8% | 21.6% |
| Teen pregnancy | **31.1** | 42.9 | 54.1 | 38.8 | **32.2** | **21.3** | **28.5** | **36.5** | 46.9 | 58.2 | 38.2 |

## COUNTY HEALTH RANKINGS, 2016

The County Health Rankings have been available since 2010 and provide another source of data to assess the health status of our jurisdiction.  In Michigan, 83 counties are ranked, with "1" being the best score.  County Health Rankings are broken down into two main categories:  Health Outcomes which represents how healthy a county is, using factors of how long people live and how healthy they feel while they are alive (quality of life).  Health Factors represents what influences the health of a county.  Within each of these categories are subgroups.  Health Outcomes contains mortality and morbidity data and the Health Factors contains health behaviors, clinical care, social and economic factors, and physical environment.

| | Crawford | Kalkaska | Lake | Manistee | Mason |
|---|---|---|---|---|---|
| **HEALTH OUTCOMES** | 75 | 77 | 79 | 46 | 62 |
| Length of Life | 76 | 78 | 65 | 49 | 66 |
| Quality of Life | 67 | 60 | 83 | 47 | 50 |
| | | | | | |
| **HEALTH FACTORS** | 41 | 73 | 82 | 40 | 22 |
| Health Behaviors | 34 | 45 | 71 | 30 | 20 |
| Clinical Care | 19 | 65 | 77 | 35 | 17 |
| Social and Economic Factors | 70 | 76 | 82 | 64 | 40 |
| Physical Environment | 31 | 40 | 41 | 19 | 26 |

| | Mecosta | Missaukee | Newaygo | Oceana | Wexford |
|---|---|---|---|---|---|
| **HEALTH OUTCOMES** | 61 | 17 | 64 | 70 | 68 |
| Length of Life | 52 | 23 | 67 | 55 | 73 |
| Quality of Life | 65 | 14 | 57 | 76 | 53 |
| | | | | | |
| **HEALTH FACTORS** | 54 | 36 | 61 | 71 | 44 |
| Health Behaviors | 63 | 52 | 68 | 62 | 56 |
| Clinical Care | 36 | 61 | 42 | 48 | 44 |
| Social and Economic Factors | 54 | 25 | 47 | 73 | 58 |
| Physical Environment | 42 | 43 | 69 | 18 | 34 |

## MICHIGAN PROFILE FOR HEALTHY YOUTH (MIPHY) DATA

The final piece of data contained within the DHD #10 CHNA is from the 2015-2016 Michigan Profile for Healthy Youth (MiPHY) survey.  This survey is made available to students in the 7th, 9th and 11th grades statewide every other year.  Participation in the online survey is voluntary and prior registration with the MDCH is required.  MiPHY provides student results on health risk behaviors, including alcohol and other drugs, violence, physical activity, weight and nutrition, sexual behavior, and tobacco.  The survey also measures risk and protective factors most predictive of alcohol, tobacco, other drug use, and violence.  Individual school results are made available to each respective school.  County-wide results, providing at least two schools in each county complete the survey, are available online for community partners and stakeholders to view.

For the 2015-2016 school year, counties with schools completing the MiPHY survey included:  Crawford, Manistee, Newaygo, Oceana and Wexford. Crawford county data is combined with Ogemaw, Oscoda, and Roscommon counties so this data will not be included in the DHD #10 CHNA.  Wexford County surveyed only 9th and 11th grade students. Efforts were undertaken by DHD #10 during the FY 2014 and 2015 school year to encourage all schools in the health jurisdiction to complete the MiPHY survey.  Included in *Appendix I* is a summary of MiPHY data from the 2015 -2016 survey.  Below are some highlights from the 2015 2016 survey data.

**Alcohol and Other Drugs:**

- Alcohol use by high school students is fairly uniform among the counties that have MiPHY data except for Manistee County.  The percentage of students who ever drank alcohol ranges from a low of 37.3% in Oceana County to a high of 51.5% in Manistee County.  The percentage of high school students who had at least one drink of alcohol in the past 30 days ranges from 15.8% in Newaygo county to 18.3% in Wexford County.

- Marijuana use is the 2nd most frequently used drug reported among high school students in the DHD #10 counties.  The percentage of students who used marijuana in the past 30 days ranges from 10.3% in Oceana County to 13.4% in Wexford County.

- Synthetic marijuana use among high school students reporting using synthetic marijuana one

or more times during their life ranges from 7.0% in Wexford to 7.9% in Newaygo County.

- What is alarming is the percentage of 7th grade students reporting they had ever used cocaine, steroids, methamphetamines, synthetic marijuana, or used an needle to inject any illegal drug into their body.  These percentages among 7th graders were higher than among high school students.  7.8% of 7th graders in Manistee County had ever used steroids, 10.3 % of students in Oceana County had ever used methamphetamines, and 7.4 % of students in Newaygo County had ever used synthetic marijuana.

- Seventh graders who report having smoked cigarettes in the past 30 days is 1.4% in Newaygo County, 3.0% in Manistee County and 3.1% in Oceana County.  E-cigarette use is increasing rapidly among youth, and approximately double the percentage of 7th graders use e-cigarettes versus smoke cigarettes.  Seventh graders who report using an electronic vapor product in the past 30 days is 2.8% in Newaygo County, 6.9% in Manistee County and 7.3% in Oceana County.

- Among high school students, the percentage of students who report smoking cigarettes in the past 30 days ranges from 5.3% in Oceana County to 8.2% in Newaygo County.  E-cigarette use ranges from 8.7% in Oceana County to 16.2% in Manistee County.

- 32.2% of high school students and 6.3% of 7th graders in Newaygo County reported ever having sexual intercourse.

- The percentage of high school students who are overweight or obese ranges from 32.6% in Manistee County to 41.6% in Oceana County.  The percentage of 7th graders who are overweight or obese ranges from 29.0% in Manistee County to 38.0% in Oceana County.

- The percentage of high school students who ate 5 or more servings per day of fruits and vegetables in the last 7 days ranges from 17.8% in Manistee County to 27.1% in Wexford County.  The percentage of 7th graders who ate 5 or more servings per day of fruits and vegetables in the last 7 days ranges from 29.3% in Manistee County

to 41.5% in Oceana County.

- The percentage of high school students who report playing video or computer games or use a computer for other than school work three or more hours per day on an average school day ranges from 33.6% in Oceana County to 29.8% in Wexford County.  The percentage of 7th graders who report playing video or computer games or use a computer for other than school work three or more hours per day on an average school day ranges from 43.0% in Oceana County to 29.8% in Newaygo County.



## COMMUNITY SURVEY FINDINGS

In 2015-16, community members in all ten counties were surveyed to collect primary data to complement the secondary data.  The survey, "What Matters to You?", was distributed to residents through our community partners, coalitions, senior centers, libraries, food pantries and distribution sites, and health clinics.  Key questions on the survey asked residents to choose three of the most important factors for a healthy community, choose the three most important health problems in your county, identify problems getting health care, and identify diseases and conditions within the family.

| Community Survey | What are the most important factors for a healthy community? | What are the top three health problems in your county? |
|---|---|---|
| Crawford (n=362) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Good jobs and healthy economy<br>3. Access to affordable, healthy foods | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Chronic diseases |
| Kalkaska (n=178) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Access to affordable, healthy foods<br>3. Adequate income | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Lack of physical activity |
| Lake (n=128) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Access to affordable, healthy foods<br>3. Good jobs and healthy economy | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Aging problems (arthritis, hearing/vision loss) |
| Manistee (n=165) | 1. Access to health care, including primary care, specialty care, behavioral health services, or dental care<br>2. Good jobs and healthy economy<br>3. Access to affordable healthy food | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Chronic diseases (heart disease, cancer, diabetes, COPD, stroke) |
| Mason (n=117) | 1. Access to health care, including primary care, specialty care, behavioral health or dental care<br>2. Good jobs and healthy economy<br>3. Affordable housing | 1. Substance (alcohol, illegal drugs, prescription drugs)<br>2. Lack of affordable housing<br>3. Lack of access to primary, specialty care, behavioral health, or dental care |
| Mecosta (n=131) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Good jobs and healthy economy<br>3. Access to affordable healthy food | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Lack of access to primary, specialty care, behavioral health, or dental care |
| Newaygo (n=104) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Access to affordable, healthy foods<br>3. Good jobs and healthy economy | 1. Overweight and obesity<br>2. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>3. Lack of access to primary, specialty care, behavioral health, or dental care/ Mental health issues |
| Oceana (n=75) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Access to affordable, healthy foods<br>3. Good jobs and healthy economy | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Mental health issues |
| Wexford/ Missaukee (n=322) | 1. Access to health care, including primary care, specialty care, behavioral health services, and dental care<br>2. Good jobs and healthy economy<br>3. Access to affordable healthy food | 1. Substance abuse (alcohol, illegal drugs, prescription drugs)<br>2. Overweight and obesity<br>3. Chronic diseases (heart disease, cancer, diabetes, COPD, stroke) |

| What are the problems adults, older adults, and children in your family have in getting health care services? | | | |
|---|---|---|---|
| Community | Adults | Older adults | Children |
| Crawford | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Insurance coverage is limited<br>2. Health insurance has high deductibles and/or co-pays<br>3. Insurance does not cover dental | 1. Insurance has high deductibles and/or co-pays<br>2. ER waiting time<br>3. Health insurance coverage is limited |
| Kalkaska | 1. High deductibles and/or co-pays<br>2. Cannot afford medications<br>3. Getting specialist care | 1. High deductibles and/or co-pays<br>2. Cannot afford medications<br>3. Getting specialist care | 1. High deductibles and/or co-pays<br>2. Cannot afford medications<br>3. Getting specialist care |
| Lake | 1. Health insurance does not cover dental services<br>2. Health insurance coverage is limited<br>3. Transportation issues | 1. Transportation issues<br>2. Health insurance has high deductibles/co-pays<br>3. ER waiting time | 1. Finding a behavioral health provider<br>2. Health insurance does not cover dental services<br>3. ER waiting time |
| Manistee | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance does not cover dental services | 1. Health insurance has high deductibles and/or co-pays<br>2. Finding a behavioral health provider<br>3. Cannot afford visits to doctor, dentist, clinic, and/or hospital |
| Mason | 1. Health insurance does not cover dental services<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance has high deductibles and/or co-pays | 1. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>2. Health insurance does not cover dental services<br>3. Transportation issues | 1. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>2. Health insurance does not cover dental services<br>3. Finding a dentist |
| Mecosta | 1. Health insurance has high deductibles and/or co-pays<br>2. Health insurance coverage is limited<br>3. Health insurance does not cover dental services | 1. Transportation issues<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Insurance has high deductibles and/or co-pays | 1. Health insurance has high deductibles and/or co-pays<br>2. Finding a behavioral health provider<br>3. Health insurance does not cover dental services |
| Newaygo | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>2. Health insurance coverage is limited<br>3. Insurance has high deductibles and/or co-pays | 1. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>2. Difficult to set appointments<br>3. Finding a behavioral health provider |
| Oceana | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Health insurance has high deductibles and/or co-pays<br>2. Health insurance coverage is limited<br>3. Health insurance does not cover dental services | 1. Health insurance has high deductibles and/or co-pays<br>2. Health insurance coverage is limited<br>3. ER waiting time |
| Wexford/Missaukee | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Health insurance has high deductibles and/or co-pays<br>2. Cannot afford visits to doctor, dentist, clinic, and/or hospital<br>3. Health insurance coverage is limited | 1. Health insurance has high deductibles and/or co-pays<br>2. Finding a behavioral health provider<br>3. Cannot afford visits to doctor, dentist, clinic, and/or hospital |

| Have you or any member of your immediate family ever been told by a doctor or other health professional that you have any of the following? | | |
|---|---|---|
| Community | Self | Immediate Family |
| Crawford | 1. Overweight/obese<br>2. Arthritis<br>3. High blood pressure | 1. High blood pressure<br>2. Overweight/obese<br>3. High cholesterol |
| Kalkaska | 1. Overweight/obese<br>2. High cholesterol<br>3. High blood pressure | 1. High blood pressure<br>2. Overweight/obese<br>3. High cholesterol |
| Lake | 1. Vision problems<br>2. Arthritis<br>3. High blood pressure | 1. High cholesterol<br>2. Arthritis<br>3. Vision problems |
| Manistee | 1. Vision problems<br>2. Arthritis<br>3. Overweight/obese | 1. High blood pressure<br>2. Vision problems<br>3. Arthritis |
| Mason | 1. Arthritis<br>2. Vision problems<br>3. Overweight/obese | 1. High blood pressure<br>2. Vision problems<br>3. Arthritis |
| Mecosta | 1. Vision problems<br>2. Arthritis<br>3. Overweight/obese | 1. High blood pressure<br>2. High cholesterol<br>3. Asthma |
| Newaygo | 1. Overweight/obese<br>2. Vision problems<br>3. High blood pressure | 1. High blood pressure<br>2. Overweight/obese<br>3. High cholesterol |
| Oceana | 1. Vision problems<br>2. Overweight/ obese<br>3. High cholesterol | 1. High blood pressure<br>2. Vision problems<br>3. Overweight/obese |
| Wexford/ Missaukee | 1. Overweight/ obese<br>2. High cholesterol<br>3. High blood pressure | 1. High blood pressure<br>2. Overweight/obese<br>3. High cholesterol |

## COMMUNITY CONVERSATION RESULTS

In addition to the health survey, community conversations were held in all ten counties. This process, using the Technology of Participation method, gave community members an opportunity to provide input on the health status in the community from a different perspective. The question posed to each group was "What can we do in our county to move closer to our vision of a healthy community?" Each of the conversation groups identified goals and strategies; the goals are presented below. The complete results are included in *Appendix C*, along with a list of participants and their agency/ organization.

| What can we do in our county to move closer to our vision of a healthy community? | | |
|---|---|---|
| Community | Venue | Results |
| Crawford | Crawford County Collaborative Body | 1. Create community hub for recreation and resources<br>2. Increase access to economic self-sufficiency<br>3. Create a wellness culture in the community<br>4. Increase behavioral health awareness and services<br>5. Link systems for lifespan care and support<br>6. Increase year round access and consumption of healthy foods<br>7. Increase accessibility for year round physical activity |
| Kalkaska | Kalkaska County Community Collaborative | 1. Continuously focus on health and wellness<br>2. Strategically implement education building blocks<br>3. Mindfully engage community<br>4. Purposefully incorporate nutritional health<br>5. Thoughtfully and deliberately improve behavioral<br>6. Strategically recruit economic opportunity<br>7. Thoughtfully and open-mindedly consider infrastructure<br>8. Continuously create incentives for active participation |
| Lake | Lake County Roundtable | 1. Increase community health education<br>2. Working together in unity to create a healthy and active community<br>3. Increase access for existing and mobile preventive health services<br>4. Create opportunities for physical activity<br>5. Provide access to affordable, fresh, healthy food<br>6. Improve culture and climate to increase job growth<br>7. Create opportunities for expanded transportation<br>8. Build safe, affordable 24-hour childcare network |
| Manistee | Manistee County Human Services Collaborative Body and Live Well Manistee County | 1. Provide access to care for all<br>2. Create a proactive culture of healthy lifestyles<br>3. Reduce and prevent substance abuse<br>4. Educate on values and create opportunities for physical activities all seasons for all ages<br>5. Improve education and affordability of good nutrition<br>6. Improve community clinical linkages/ connections<br>7. Develop and nurture a skilled workforce<br>8. Improve access to mental health options<br>9. Improve policy and advocacy |
| Mason | Key Community Stakeholders | 1. Create an environment that supports healthy lifestyles<br>2. Improve behavioral health and substance abuse treatment through early intervention and trauma informed community approach<br>3. Foster a culture of collaboration<br>4. Increase access to affordable housing<br>5. Improve community education for adults and children<br>6. Provide consistent employment, education, and training access<br>7. Increase affordable/accessible health care options<br>8. Improve access to public transportation |
| Mecosta | Mecosta Osceola Human Services Collaborative Body | 1. Increased access to healthy sustainable nutrition and recreation<br>2. Expand affordable health care for all<br>3. Expand services for substance abuse and mental health clients and families<br>4. Make youth #1 priority<br>5. Expand collective impact community wide<br>6. Expand safe, affordable transportation to all<br>7. Attract corporations for sustainable job growth<br>8. Develop safe affordable housing for all |
| Newaygo | Live Well Newaygo County | 1. Catalyzing improvements in community policy, systems, and environmental change<br>2. Integrate behavioral, physical, social health and addiction systems<br>3. Create opportunities for healthy eating<br>4. Create opportunities for physical activity<br>5. Decrease teen pregnancy<br>6. Address primary care access and shortages |
| Oceana | Oceana County System of Care for Youth | 1. Collaborate to unite resources for community<br>2. Develop and promote mind and body wellness<br>3. Enhance the wellbeing of families<br>4. Build opportunities to connect community to resources<br>5. Increase transportation options to community resources<br>6. Connect community to housing resources and advocate growth<br>7. Create employment opportunities for all abilities and increase workforce readiness<br>8. Create activity for healthy lifestyles |
| Wexford/ Missaukee | Cadillac Community Health Coalition | 1. Increase health resources and support<br>2. Create opportunities for physical activity<br>3. Support varied socio-economic growth<br>4. Promote and create opportunities for health education<br>5. Strengthen families and support disadvantaged youth<br>6. Increase availability of local foods<br>7. Expand transportation availability |
| | Human Services Leadership Collaborative | 1. Increase awareness and access to educational opportunities<br>2. Promote healthy lifestyles<br>3. Improve access to primary and specialty care<br>4. Increase awareness of and access to addiction treatment<br>5. Achieve multi-level collaboration to serve community/ individuals<br>6. Improve all forms of transportation<br>7. Improve access to safe and affordable housing |

## DHD #10 FOOD SYSTEM ANALYSIS

The DHD #10 Food System Analysis (FSA) was modeled after a combination of multiple reports from different areas. The inspirational report indicated the importance of integrating a food systems review as part of the Community Health Needs Assessment (CHNA) as a method of tackling hunger and associated health effects and outcomes[1]. The DHD #10 Food Systems Analysis complete report is included in *Appendix J*.

Research was conducted to find similar reports and numerous examples were found on the Community Commons data site. The Community Commons site included an FSA done by the state of Colorado[2]. The Colorado FSA was used as a template and customized to better fit the DHD #10 jurisdiction, eliminating some of the data indicators which would be repetitive and adding some that would highlight the rural nature of many of our ten counties.

Numerous data sources were utilized, including:
- Feeding America
- National Center for Education
- US Census Bureau
- US Department of Agriculture
- Live Well 4 Health
- Centers for Disease Control and Prevention
- Risk Behavior Factor Survey
- Michigan Profile for Health Youth

Important findings from the FSA include:
- There is a high percentage of food insecure children who are ineligible for assistance. The highest percentage is in Manistee (22.04%) and all the DHD #10 counties are higher than 10%.
- The percentage of food insecure population is another indicator where all the DHD #10 counties had higher than 10% of the population being food insecure, the highest percentage of population who are food insecure is in Lake County (18.98%
- The most noteworthy indicator for agricultural

data is the change in the number of farms from 2007-2012 as an indicator of the agricultural framework and shift in each county. In the DHD #10 counties, Manistee County had the biggest decline in farming at -2.46 and Crawford County had the most growth at 4.78.

## ENVIRONMENTAL HEALTH

Environmental health is the branch of public health that: focuses on the relationships between people and their environment; promotes human health and well-being; and fosters healthy and safe communities. Environmental health is a key part of any comprehensive public health system. The field works to advance policies and programs to reduce chemical and other environmental exposures in air, water, soil and food to protect people and provide communities with healthier environment[3].

### Food Protection Program

The food protection program for District Health Department #10 enforces the provisions of the 2009 Food and Drug Administration's Model Food Code and the Michigan Food Law of 2000, as amended. The food program activities consist of one or two food inspections per year (based on the number of months of operation and the level of food preparation), plan reviews for new or remodeled facilities, the investigation of customer complaints, the investigation of foodborne illness reports, the inspection of temporary food operations, the education of food service workers and management, consultative visits and enforcement actions. In addition, more inspections may be conducted at a facility if health and safety conditions are found to be out of compliance. The number of food facilities regulated by the District fluctuates between 1,000 and 1,100.

There were 2041 Priority and Priority Foundation health violations found in food service operations from January 2016 – December 2016. The main violations that occurred consisted of improper temperature of cold foods, failure to date mark food, dirty equipment, plumbing problems, expired food, improper chemical storage, and unapproved food sources.

1 Public Health Institute. (2016). Making food systems part of your community health needs assessment: Practical guidance from the Tackling Hunger Project. Retrieved from: http://www.phi.org/resources/?resource=making-food-systems-part-of-your-community-health-needs-assessment
2 Colorado Food Systems Hub. (2016). Colorado food systems report 2; Adams County, CO. Retrieved from: https://www.communitycommons.org/

3 https://www.apha.org/topics-and-issues/environmental-health

## General Environmental Health

The district received 202 environmental complaints from January 2016 – December 2016. The table below shows the complaint classifications.

| Complaint Classifications | Total |
| --- | --- |
| Residential septic systems | 81 |
| Condition of a building or structure | 28 |
| Pest control (rats, bedbugs, cockroaches) | 13 |
| Surface water contamination | 6 |
| Indoor air quality (mold, radon, carbon monoxide | 9 |
| Trash, rubbish | 42 |
| Drinking water quality | 13 |
| Unlicensed campgrounds | 3 |
| Commercial septic system | 3 |
| Outdoor air quality | 2 |

### Drinking Water Quality

The percent of homes with approved new or replacement wells was 32% for 2016 which was up from 30% in 2015. The baseline in 2012 was 27% with an objective to increase the percentage of homes with approved new/replacement wells within the health jurisdiction by 2% annually. The goal for 2018 was 30.4%, so in 2016 DHD #10 has surpassed that goal.

### Radon Levels by county (2015 Calendar Year)

| County | # of samples collected | # of samples that exceed health standards | Highest reading and location |
| --- | --- | --- | --- |
| Crawford | 24 | 1 | 5.1, Grayling |
| Kalkaska | 23 | 0 | NA |
| Lake | 1 | 0 | NA |
| Manistee | 27 | 1 | 5.1, Manistee |
| Mason | 35 | 1 | 5.5, Freesoil |
| Mecosta | 35 | 3 | 7.9, Big Rapids |
| Missaukee | 21 | 3 | 5.7, Merritt |
| Newaygo | 18 | 4 | 6.7, Newaygo |
| Oceana | 17 | 0 | NA |
| Wexford | 30 | 6 | 6.9, Buckley |

### Reported and Confirmed Environmentally Related Illnesses (number of cases) for 2016

See Appendix N.

## SCHOOL-BASED HEALTHCARE

District Health Department #10 has received funding to implement school-based health clinics in three counties in the jurisdiction. These clinics are located in:

**Crawford County**
- Viking Wellness Center inside Grayling High School

**Oceana County**
- Shelby Adolescent Health Center inside Shelby Middle School

**Wexford County**
- Wexford Adolescent Wellness Center inside Cadillac Junior High School
- Manton Adolescent Wellness Center inside Manton High School
- Mesick Adolescent Wellness Center inside Mesick Junior/Senior High School

Many children and adolescents in the DHD #10 communities confront serious health concerns: unintentional injuries; child abuse and other interpersonal violence; alcohol, tobacco, and other drug use; overweight and unhealthy food choices; early pregnancy and childbearing; family conflict; depression and teen suicide.

Many children and adolescents in the rural DHD #10 jurisdiction lack adequate access to the health services needed to prevent and intervene in these health problems.  Increasingly, families cannot afford time away from school and work to seek needed health services.  Many live in areas with limited healthcare providers and lack health insurance, money, transportation, and knowledge of how to use local care systems.

The period of adolescent growth and development is filled with risks and opportunities.  It is also a time of change physically, emotionally, and cognitively. While risk-taking behaviors are normal in the movement though this life cycle, adult and health-related intervention is often necessary to assure that youth emerge safe and healthy.  In the U.S., the adolescent population is the least likely age group to receive needed and appropriate health care services.  The adolescent –specific school-based clinics in the DHD #10 jurisdiction are designed to address this unmet need and provide easy access to services unique to the adolescent population in a "teen friendly" environment.

## REPRODUCTIVE AND SEXUAL HEALTH

Data from pregnancy testing conducted at DHD #10 from FY 2013 to FY 2016 shows that over 50% of pregnancies were reported as unplanned.

**Pregnancy Tests – DHD #10**

| FY 2013 | |
| --- | --- |
| Planned - Positive | 122 |
| Unplanned - Positive | 127 |
| Planned - Negative | 3 |
| Unplanned - Negative | 1 |

**Positive – 51% unplanned**

| FY 2014 | |
| --- | --- |
| Planned - Positive | 141 |
| Unplanned - Positive | 146 |
| Planned - Negative | 1 |
| Unplanned - Negative | 2 |

**Positive – 50.8% unplanned**

| FY 2015 | |
| --- | --- |
| Planned - Positive | 119 |
| Unplanned - Positive | 133 |
| Planned - Negative | 0 |
| Unplanned - Negative | 12 |

**Positive – 52.7% unplanned**

| FY 2016 | |
| --- | --- |
| Planned - Positive | 82 |
| Unplanned - Positive | 115 |
| Planned - Negative | 14 |
| Unplanned - Negative | 57 |

**Positive – 58.4% unplanned**

Data from the Guttmacher Institute 2016 shows women in need of contraceptive services and supplies and women in need of publicly funded contraceptive services and supplies by age and by county within the DHD #10 jurisdiction.

| County | Population of women aged 13-44: 2010 | Total women aged 13 – 44 in need of contraceptive services and supplies: 2010 | Total women aged 13 – 44 in need of publicly funded contraceptive services and supplies: 2014 | Women aged 18-19 in need of contraceptive services and supplies: 2010 | Women aged 20-29 in need of contraceptive services and supplies: 2010 | Women aged 30-34 in need of contraceptive services and supplies: 2010 | Women younger than 18 in need of contraceptive services and supplies: 2010 | Women younger than 20 in need of publicly funded contraceptive services and supplies: 2014 |
|---|---|---|---|---|---|---|---|---|
| Crawford | 2,270 | 1,080 | 710 | 120 | 420 | 410 | 130 | 230 |
| Kalkaska | 3,000 | 1,440 | 900 | 130 | 590 | 570 | 150 | 260 |
| Lake | 1,640 | 780 | 550 | 60 | 320 | 320 | 90 | 140 |
| Manistee | 3,600 | 1,740 | 1,010 | 160 | 690 | 710 | 190 | 320 |
| Mason | 4,930 | 2,430 | 1,740 | 250 | 1,010 | 900 | 270 | 480 |
| Mecosta | 9,440 | 5,320 | 4,000 | 1,040 | 2,740 | 1,210 | 340 | 1,270 |
| Missaukee | 2,610 | 1,240 | 790 | 110 | 510 | 460 | 150 | 250 |
| Newaygo | 9,010 | 4,650 | 3,260 | 400 | 1,870 | 1,990 | 390 | 730 |
| Oceana | 4,720 | 2,280 | 1,720 | 250 | 920 | 850 | 260 | 480 |
| Wexford | 6,090 | 2,970 | 1,870 | 270 | 1,320 | 1,080 | 300 | 530 |

Sources: 1. (2010) Frost JJ, Zolna MR, and Frohwirth L, Contraceptive Needs and Services 2010
Sources: 2 (2014) Contraceptive Needs and Services, 2014 Update, Frost JJ, Zolna MR, and Frohwirth L, 2016
Sources:3 (2014) Special tabulations of data from Frost JJ, Zolna MR, and Frohwirth L, Contraceptive Needs and Services, 2014 Update, New York: Guttmacher Institute, 2016

## STRENGTHS IN THE HEALTH JURISDICTION

While numerous health risks/issues exist within the health jurisdiction, many strengths are also present.

The large majority of adults in the DHD #10 jurisdiction are physically and emotionally healthy, as supported by the following major measures of health status.

- 80.4% perceive their health as good to excellent
- 94.0% are satisfied or very satisfied with their life
- 82.4% say they usually/always receive needed social and emotional support

The large majority of adults in the health jurisdiction have health care coverage and a primary care provider (PCP). Among adults aged 18-64, 88.9% currently have health care coverage. Most have had no problems receiving needed medical care.

Other strengths identified in the DHD #10 2015-16 BRFSS include:

- Strong majority have routine physical checkups and health screening/tests, such as mammograms, Pap tests, PSA tests, and colonoscopies
- Vast majority receiving information on how to manage diabetes, heart attack, angina/CHD, COPD
- Majority of adults aged 65+ immunized against pneumonia and flu
- Most buy fresh fruits/vegetables locally and feel fresh produce is readily available in their community
- Binge drinking is lower in most counties than MI/US

Finally, DHD #10 has a strong history of collaborative efforts both on a local level as well as statewide. Staff holds leadership positions and participates in local collaborative bodies, community coalitions, and professional organizations and groups. All of these strengths illustrate the commitment and efforts of the agency, and its partners, to create and maintain healthy communities.

While all the data collected and analyzed illustrate a multitude of issues facing the health jurisdiction of DHD #10, the struggle will be focusing limited agency resources towards the health risks/issue areas that will provide the greatest public health impact. These identified health risk/issue areas will serve as the foundation on which DHD #10 will build its Community Health Improvement Plan (CHIP). They will be used to identify and determine the agency's public health focus areas for which strategies will be developed and implemented by DHD #10. These focus areas as well as strategies will be shared with our hospital partners so that they can be included in their plans to ensure that a public health approach is part of each hospital's process and plan.

# DHD #10 CHNA Recommendations

DHD #10, as part of a collaborative effort, completed this CHNA process in an attempt to gather and analyze community level health data. These findings will in turn be used to develop a plan to improve and maintain the health of the jurisdiction. Included below are the public health focus areas DHD #10 identified from the CHNA process and upon which it will develop and implement its CHIP. These focus areas were presented as Issue Briefs at local health coalition and Community Collaborative meetings in each county. *Appendix E* includes the Issue Briefs identified for each county and *Appendix F* includes the Community Health Needs Assessment At-a-Glance that was provided to partners in each county. During these meetings in each county, the health issues that were identified in the DHD #10 FY16/17 Community Health Needs Assessment were prioritized and the top three issues were selected as focus areas for each local county.

Each health issue was independently scored using the following five criteria:

1. Severity - Risk of morbidity and mortality associated with problem
2. Magnitude - Number of people impacted by the problem
3. Impact - Improving this issue would have the

greatest effect on health, quality of life and health disparities
4. Sustainability - Resources are available and barriers are surmountable
5. Achievability - Achievable and measurable outcomes are possible within three years

The health issues and priorities identified will be used by District Health Department #10 and community partners to guide health improvement initiatives over the next three years.

Specific strategies for each focus area will be identified by DHD #10 and community partners and presented to the steering committee for approval prior to the development of the CHIP. In addition to these public health focus areas, DHD #10 will also direct its efforts to those areas identified as priorities by its hospital partners. *Appendix M* includes a listing of the hospital partners focus areas. Through the following collaborative efforts, it is anticipated that the partners can build and maintain both healthier communities and residents, as well as create a more successful health jurisdiction.

**Access to Care**

Communities, in which residents have access to medical and dental care, as well as other preventive services, are generally considered to be healthier communities. Regular and reliable access to health services can prevent disease and disability, detect and treat illnesses or other health conditions, reduce medical costs, increase quality of life, reduce the likelihood of premature death, and increase life expectancy. All ten of the counties in the DHD #10 jurisdiction are designated Health Profession Shortage Areas.

Among adults aged 18-64, 88.9% currently have health care coverage.
- Four in ten (40.6%) have coverage through a plan at work or through a union.
- Young adults (age 18-24) and those below the poverty level are more likely than others to have no coverage.

More than one in ten adults (12.4%) had to forgo a needed doctor visit in the past year due to cost.

- Moreover, in the past year, 9.2% delayed seeking medical care because of the general cost of care, and 8.1% delayed seeking medical care because of the cost of co-pays and/or deductibles.

Three in ten (30.5%) DHD #10 jurisdiction adults have visited an Emergency Room in the past year.

While a large majority (78.7%) are at least somewhat confident they can navigate the health care system, 21.4% are not confident.

- Older adults (65+), females, Whites, married individuals, college graduates, and those who have higher incomes ($50K+) are most confident.

- Conversely, low confidence is most often seen among the youngest adults (18-24), males, non-Whites, the unmarried, those who have less than a high school diploma, and those living in households with incomes less than $20K.

**Chronic Disease**

Chronic disease results in serious illness and disability, decreased quality of life, and hundreds of billions of dollars in economic loss every year. Heart disease, stroke, cancer, diabetes, obesity, and arthritis are among the most common and preventable of all health problems. Seven of the top 10 causes of death in the US are chronic disease related and two—heart disease and cancer—together account for nearly 48% of all deaths.  The risk of Americans developing and dying from chronic disease would be substantially reduced if major improvements were made in the US population in diet and physical activity, control of high blood pressure and cholesterol, and tobacco cessation.  It is imperative that community groups and health coalitions work collaboratively to implement best practices and recommendations, including the Blueprint for a Healthier America 2016, the Community Guide for Preventive Services, and the CDC's 6/18 Initiative that aligns evidence-based preventive practices with emerging value-based payment and delivery models to improve health and control health care costs.   According to the "Blueprint for a Healthier America 2016" from the Trust for America's Health, implementation of chronic disease prevention programs such as the National Diabetes

Prevention Program and strategies that link clinical and community resources have shown significant results in reducing diabetes incidence in persons with pre-diabetes.

With the exception of skin cancer, the prevalence estimates of all chronic conditions in the DHD #10 jurisdiction measured are higher than national estimates, while they range from lower to on par to higher than statewide estimates.  The rates are as follows:

- Arthritis (31.3%)
- Asthma (11.0%)
- Diabetes (10.2%)
- COPD (9.0%)
- Cancer (non-skin) (6.9%)
- Angina/coronary heart disease (5.2%)
- Heart attack (5.2%)
- Skin cancer (4.9%)
- Stroke (3.0%)

**Health Disparities**

Health disparities are differences in health outcomes across subgroups of the population.  They are often related to determinants of health; such as less access to good jobs, unsafe neighborhoods, or lack of affordable transportation options. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health on the basis of their racial or ethnic group; religion; socioeconomic status; gender; age, mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location, or other characteristics historically linked to discrimination or exclusion. Many health concerns, such as heart disease, asthma, obesity, diabetes, HIV/AIDS, viral hepatitis B and C, infant mortality, and violence, disproportionately affect certain population. Reducing disparities in health will give everyone a chance to live a healthy life and improve the quality of life for all residents within the DHD #10 jurisdiction.

According to data from the DHD #10 BRFSS 2014-15 there is a direct relationship between health outcomes and both education and income. Positive outcomes are more prevalent among adults with

higher levels of education and adults from households with higher income levels, whereas negative outcomes are more prevalent among those with less education and lower incomes.

The link between both education and income and positive health outcomes goes beyond the direct relationship. Those occupying the very bottom groups, for example no high school diploma and/or household income less than $20K (or living below the poverty line), are most likely to experience the worst health outcomes.

There is also a direct relationship between health outcomes and age. In some cases, negative outcomes are more often associated with younger adult age groups, for example:

- Experiencing psychological distress
- No health care coverage
- Asthma
- Food insufficiency
- No personal health care provider
- No routine physical checkup
- No pap test
- No monitoring of cholesterol levels

In other cases, negative outcomes are more associated with older adult age groups, such as:

- Having hypertension (HBP)
- Having high cholesterol
- Having various chronic diseases:
  - Diabetes
  - Arthritis
  - Skin cancer
  - Other cancer (non-skin)
  - Cardiovascular disease

- It is worth noting that residents from two counties – Crawford and Lake – appear to have more negative health outcomes than residents from the other eight counties within the district. For example:
- Crawford County has more adult residents who are dissatisfied with life, have severe psychological

distress, are smokers, are heavy and binge drinkers, do not eat enough fruits and vegetables, are not screened for cervical cancer, do not have their blood cholesterol checked, and have cancer

- Lake County has more adults residents who have fair/poor general health status, have poor physical health, are at unhealthy weights, have no health care coverage, have no primary care provider, do not get routine check-ups, have visited the ER more than twice in the past year, do not get enough exercise, do not have enough to eat, have high blood pressure, are not screened for breast cancer/ cervical cancer/colon cancer in a timely manner, do not receive dental care, and have arthritis, COPD, and cardiovascular disease

**Healthy Lifestyles**

To create healthier communities, we must promote the health and wellness of individuals, families, and community members. Public health agencies, with their understanding of policy, systems and environmental change approaches, can serve as leaders to facilitate efforts to promote healthy lifestyles and "make the healthy choice, the easy choice." An unhealthy lifestyle leads to increased risk of chronic diseases, many of which are preventable. People who are at a healthy weight and have regular physical activity are less likely to develop risk factors for chronic disease such as high blood pressure and dyslipidemia. They are also less likely to develop chronic diseases, such as type 2 diabetes, heart disease, osteoarthritis, and some cancers.

According to the DHD #10 BRFSS 2014-15, nearly one-third (32.2%) of the adults in the DHD #10 Area are considered to be obese per their BMI, while an additional third (33.9%) are overweight (but not obese).

- Although obesity is a problem across socio-demographic groups, adults who are non-white and those with household incomes under $20,000 have higher rates of obesity (46.9% and 40.2%, respectively)
- Men are more likely than women to be overweight (but not obese)
- Next to cancer, respondents consider obesity to be the second most pressing and prevalent health

issue in their community

Two-thirds of adults in the DHD #10 jurisdiction (67.4%) participate in some form of leisure time physical activity, such as running, calisthenics, walking, golfing, or gardening.

- However, fewer than one-third of adults do muscle-strengthening activities.

Few adults in the jurisdiction (16.7%) consume an adequate amount (five or more servings) of fruits and vegetables per day.

- Adults' average fruit (including 100% fruit juice) and vegetable consumption is 1.4 and 1.5 times per day, respectively. Taken together, adults' average fruit and vegetable consumption is 2.9 times per day.

## Maternal, Infant and Child Health

The well-being of mothers, infants, and children determines the health of the next generation and helps predict future public health challenges for families, communities, and the medical care system. Moreover, healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential. Despite major advances in medical care, critical threats to maternal, infant, and child health still exist. Factors that have been linked to maternal, infant, and child health outcomes include race and ethnicity, age, income level, educational attainment, medical insurance coverage, access to medical care, pre-pregnancy health, and general health status.

Healthy reproductive and sexual practices can play a critical role in enabling people to remain healthy and actively contribute to their community. Planning and having a healthy pregnancy is vital to the health of women, infants, and families and is especially important in preventing teen and unintended pregnancy and childbearing, which will help raise educational attainment, increase employment opportunities, and enhance financial stability. Access to quality health services and support for safe practices can improve physical and emotional well-being and reduce teen and unintended pregnancies,

HIV/AIDS, viral hepatitis, and other sexually transmitted infections.

Vaccines are among the most cost-effective clinical preventive services and are a core component of any preventive services package. Childhood immunization programs provide a very high return on investment. On average, 42,000 deaths per year are prevented among children who receive recommended vaccines.

Child abuse and neglect rates are also a concern. Children raised in safe and nurturing families and neighborhoods, free from maltreatment and other social problems, are more likely to have better outcomes as adults.

## Substance Use Disorders

Substance use disorders—involving drugs, alcohol, or both—are associated with a range of destructive social conditions, including family disruptions, financial problems, lost productivity, failure in school, domestic violence, child abuse, and crime. In addition, substance use disorders contribute to a number of negative health outcomes and public health problems, including cardiovascular conditions, pregnancy complications, HIV/AIDS, sexually transmitted infections, domestic violence, child abuse and neglect, motor vehicle crashes, homicide and suicide. Improved evaluation of community-level prevention has enhanced researchers' understanding of environmental and social factors that contribute to the initiation and abuse of alcohol and illicit drugs, leading to a more sophisticated understanding of how to implement evidence-based strategies in specific social and cultural settings. Estimates of the total overall costs of substance abuse in the United States, including lost productivity and health- and crime-related costs, exceed $600 billion annually.

More than half (58.7%) of DHD #10 Area adults are considered non-drinkers of alcohol, meaning they consumed no alcohol in the past month. One-third (33.6%) are light to moderate drinkers, and 7.7% are heavy drinkers.

- 16.0% of adults are binge drinkers, meaning they have consumed at least 4 (if female) or 5 (if male) drinks on at least one occasion in the past month.
- Binge drinking is most common among males,

those with the highest household incomes ($75K+), and those under 55 years of age.

There is a shortage of local data related to substance use disorders available in the jurisdiction. The DHD #10 2014-15 BRFS includes data on alcohol consumption and tobacco use by adults and the MiPHY survey provides data on students grades 7 to 11 on alcohol, tobacco and other drugs. In 2016 DHD #10 conducted a survey on Alcohol and Other Drug Attitudes Among Young Adults in Mason County. The results of this survey are included in *Appendix M*. Also, the 2016 County Health Rankings includes data on drug overdose deaths. The chart below shows this data from DHD #10 counties.

| County | # Drug overdose deaths | Drug overdose mortality rate |
|---|---|---|
| Crawford | | |
| Kalkaska | | |
| Lake | | |
| Manistee | 10 | 14 |
| Mason | | |
| Mecosta | 12 | 9 |
| Missaukee | | |
| Newaygo | 13 | 9 |
| Oceana | 14 | 18 |
| Wexford | 16 | 16 |
| Michigan | | 16 |

County Health Rankings 2016 (Data from 2012-2014)

**Tobacco Use**

According to The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General, the epidemic of smoking-caused disease in the twentieth century ranks among the greatest public health catastrophes of the century, while the decline of smoking as a result of tobacco control efforts is surely one of public health's greatest successes. However, the current rate of progress in tobacco control is not fast enough, and much more needs to be done to end the tobacco epidemic. Unacceptably high levels of smoking-attributable disease and death and the associated costs, will persist for decades

without changes in our approach to slowing and even ending the epidemic. Tobacco use rates in all ten counties in the DHD #10 jurisdiction are higher than Michigan and the U.S. and maternal smoking rates are also higher in all ten counties than the State of Michigan. Nearly three in ten (29.1%) DHD #10 Area adults smoke cigarettes.

- Among ages 25-34, nearly half (45.5%) smoke cigarettes, and the proportion is similar among those below the poverty level (44.5%). In addition, those without a high school diploma are more likely to smoke than those with more education, and non-Whites and males are more likely to smoke than Whites and females, respectively.

# Next Steps

The DHD #10 focus areas identified will serve as the foundation upon which the agency's Community Health Improvement Plan will be developed. To set the course for the development of the CHIP, DHD #10 will proceed as follows:

- Present the identified and prioritized focus areas from each county to the steering committee for approval
- Present the prioritized focus areas to community stakeholders to identify evidence-based public health strategies to address the top three focus areas identified in each county
- Identify specific public health focused objectives and strategies for each focus area
- Create a DHD #10 health jurisdiction CHIP
- Share and disseminate the CHIP
- Update the DHD #10 strategic plan to include CHIP activities
- Monitor and evaluate CHIP progress

It is important to note that the strategies identified by DHD #10 represent only one component of the complete plan. The other pieces that will make up the plan will be provided by our partners. It will be through this combined approach that we will achieve the greatest impact in improving and maintaining the health of our communities and residents.

# Appendices

A.       DHD #10 Community Health Assessment Plan

B.       DHD #10 County Profiles and Link to Chartbooks

C.       DHD #10 Community Survey:  What Matters Most?

D.       Findings from the Community Conversations

E.       County Specific Community Health Needs Assessment At-a-Glance

F.       County Specific Issue Briefs

G.       County One-Page Summaries

H.       Community Health Needs Assessment Advisory Committee Meeting Agendas and Meeting Minutes

I.       2015-16 MiPHY Data Summary Chart

J.       DHD #10 Food Systems Analysis 2016

K.       Links to Hospital Partners CHNA Plans

L.       Hospital Partners Focus Areas

M.       Alcohol and Other Drug Attitudes Among Young Adults in Mason County 2016

N.       Reported and Confirmed Environmentally Related Illnesses (number of cases)