

Upper Peninsula Community Health Needs Assessment 2018



**Reporting on the Health Status of
Michigan's Upper Peninsula Residents
Second Edition**

Upper Peninsula Community Health Needs Assessment 2018

Second Edition

Downloadable at www.wupdhd.org/upchna



"Si Quaeris Peninsulam Amoenam Circumspice"

(Michigan's Motto: If you seek a pleasant peninsula, look about you)

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Partner Acknowledgements

This report brings together data and analysis from a regional community health needs assessment led by Western U.P. Health Department in conjunction with all other U.P. local public health departments and 26 additional partners who care deeply about the health of the Upper Peninsula’s more than 300,000 residents.

All partners, including the project’s largest funder, the Michigan Health Endowment Fund, have contributed their energy, ideas and dollars to make this regional health needs assessment possible on an unprecedented scale – across 15 counties. The partners are listed alphabetically below:

- | | |
|---|---|
| Aspirus Iron River Hospital | Munising Memorial Hospital |
| Aspirus Ironwood Hospital | Northcare Network |
| Aspirus Keweenaw Hospital | Northpointe Behavioral Health Systems |
| Aspirus Ontonagon Hospital | OSF St. Francis Hospital |
| Central U.P. Planning & Development
Regional Commission | Pathways Community Mental Health |
| Chippewa County Health Department | Public Health of Delta & Menominee Counties |
| Copper Country Community Mental Health | Schoolcraft Memorial Hospital |
| Dickinson County Healthcare System | Superior Health Foundation |
| Dickinson-Iron District Health Department | Upper Great Lakes Family Health Center |
| Gogebic County Community Mental Health | Upper Peninsula Health Care Solutions |
| Helen Newberry Joy Hospital | Upper Peninsula Health Group |
| Luce-Mackinac-Alger-Schoolcraft District
Health Department | Upper Peninsula Health Plan |
| Marquette County Health Department | U.P. Health System-Bell |
| Michigan Health Endowment Fund | U.P. Health System-Marquette |
| Michigan Technological University | U.P. Health System-Portage |
| | War Memorial Hospital |
| | Western U.P. Health Department |

This report is intended to inform health practitioners, planners, policymakers, and the public. It can be read as a snapshot of the region’s health status and used to identify priorities for community health improvement. If knowledge is power, it is hoped that this report will empower citizens and health care professionals alike to work effectively for improved health and wellbeing in the Upper Peninsula.

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EXECUTIVE SUMMARY

Introduction

The 2018 Upper Peninsula Community Health Needs Assessment (CHNA) is a bold new initiative led by the six local health departments serving the 310,000 residents of Michigan’s Upper Peninsula region and their 26 community partners. For the first time, all U.P. counties will not only have a robust assessment in hand, they will also have the ability to look at similarities and differences across the region. The CHNA will provide U.P. policy makers, stakeholders and residents with a vast pool of data which can serve as a springboard for a thoughtful, data-driven Community Health Improvement Plan (CHIP). Not only does the current data tell us where we are on a number of community health issues; it can also serve as a baseline against which to measure the progress made as communities implement program and policy changes. On-going CHNA, done every three years, will inform regional efforts for decades to come.

Social Determinants of Health

Historically, when we talked about health in a community, we examined rates of diabetes or cancer, heart disease or stroke. We also looked at personal health behaviors such as tobacco use, physical activity and healthy eating, and their impact on overall health. It is becoming increasingly clear, however, that as important as these factors are to health outcomes, focusing on specific disease prevention and management alone will not be enough to create the healthy communities we desire.

Disease and health do not develop in a vacuum. To a large extent, the conditions of the environments in which we live and work, go to school and age, determine our quality of life and health outcomes. These conditions are called Social Determinants of Health (SDOH), and they explain why some people face a more difficult challenge in achieving and maintaining good health. The diagram below, from the Centers for Disease Control and Prevention (CDC), outlines the five key areas of SDOH.



Per the CDC, each of these five determinant areas reflects a number of key issues that are underlying risk or protective factors in the arena of SDOH.

Economic Stability:

- Employment
- Food Insecurity
- Housing Instability
- Poverty

Education:

- Early Childhood Education and Development
- Enrollment in Higher Education
- High School Graduation
- Language and Literacy

Social and Community Context:

- Civic Participation
- Discrimination
- Incarceration
- Social Cohesion

Health and Health Care:

- Access to Health Care
- Access to Primary Care
- Health Literacy

Neighborhood and Built Environment:

- Access to Foods that Support Healthy Eating Patterns
- Crime and Violence
- Environmental Conditions
- Quality of Housing

Another way to think about this is that the neighborhood you live in, whether you experience racism or other discrimination, have access to a decent job or quality education, are safe walking down your sidewalk or even have a sidewalk upon which to travel, may be as important or even more important to your lifelong health than whether you have a doctor to call when you are sick.

Differences in SDOH lead to health disparities not only between individuals but also between large groups. One example is the markedly higher infant mortality rate for African American babies compared to non-Hispanic Caucasian babies. Another is the poorer long-term health for those who experience multiple adverse childhood experiences (discussed in the Maternal and Child Health chapter). Health equity for all will require understanding and addressing Social Determinants of Health.

This is why, in this first iteration of our U.P. wide health needs assessment, you will find data on areas like poverty, education, employment and childhood abuse and neglect as well as access to health care, health insurance, chronic disease rates and tobacco use.

Key Themes

Although this assessment provides a wealth of information on many varied issues related to health, a few key themes are seen throughout the data and emerge as a focus for our region:

1. The impact of an aging population: In the Upper Peninsula, nearly 20 percent of the non-incarcerated population is age 65 or older, compared with 15 percent statewide. In Keweenaw and Ontonagon Counties, greater than 30 percent of the population is 65 years or older. Since the chronic disease burden is higher in older adults, and aging adults have greater needs for home health services, assisted living and nursing home care, the shifting of a community's age distribution toward older cohorts has profound implications on the needs for health care and elder services.

2. The importance of prevention: Chronic diseases such as cancer, heart disease, diabetes and stroke are the leading causes of death in the U.P. and across much of the globe. Cancer and heart disease alone account for about half of all U.P. deaths. They are also largely preventable. Curtailing tobacco use, obesity and the abuse of alcohol and other drugs alone would dramatically reduce morbidity and mortality among U.P. residents. As noted elsewhere in this document, tobacco is still the leading preventable cause of death in the U.S., but the emerging opioid epidemic is taking its toll in the region through its broad impact on maternal and child health, child abuse and neglect, neonatal drug addiction/withdrawal, incarceration and employment.

3. The powerful correlation between socio-economic status and health: Although the U.P. spans over 16,000 square miles and comprises approximately one third of Michigan's land mass, its residents are more alike than they are different. In fact, the reader will note that income and education, i.e. socioeconomic status, are greater determinants of health status and access than geography in the U.P. And, as communities move forward in community health improvement planning, it will be important that non-traditional partners in healthcare be at the table such as educators, volunteer organizations, leaders in the business community, and governmental entities such as city council members, county commissioners and legislators.

4. Health care access under a changing political landscape: Prior to implementation of the Affordable Care Act (ACA) in 2014, 18.5 percent of U.P. residents age 18-64 did not have health insurance. By 2017, that rate had declined to an estimated 7.0 percent due to Michigan's Medicaid expansion and the newly created health insurance marketplace. Regardless of one's view of the ACA, it has clearly succeeded in expanding the pool of individuals with health insurance coverage, hence reducing one of the barriers residents experience in accessing healthcare. The impact of on-going amendments to the ACA remains to be seen.

The U.P. Community Health Issues and Priorities Survey

A glimpse at the U.P. Community Health Issues and Priorities Survey, found in the last chapter of this document, demonstrates that U.P. residents intuitively understand that a wide variety of issues impact their health and the health of their community. The top four priority issues identified from among 16 listed concerns were:

- Health insurance is expensive or has high costs for co-pays and deductibles
- Drug abuse
- Lack of health insurance
- Unemployment, wages, and economic conditions

These four selections reflect 3 of the 5 key areas of SDOH: health and health care, economic stability and social/community context. The high profile of drug abuse as a community concern is relatively new to the U.P. and reflects the national, state and local opioid epidemic. This epidemic is challenging not only our healthcare system with rapidly increasing needs for treatment but also local law enforcement, courts, support agencies assisting families impacted by substance use, public health and even employers who are struggling to hire a healthy workforce.

However, as noted in later text, all 16 issues received at least 60 percent combined support for the “fairly important” and “very important” answers. These issues included lack of programs to support an aging population, lack of access to affordable healthy foods, obesity and overweight and a lack of facilities and programs for year round physical activity. Any or all of these areas of concern could be reasonable issues to address in a Community Health Improvement Plan.

Final Note

Achieving “Healthy People in Healthy Communities”, a goal articulated by the CDC, will require U.P. communities to embrace the idea that health is about more than personal behaviors, it is about the homes we grow up in, the families we are part of, the schools we attend and the neighborhoods in which we live. Health is not something we achieve in isolation, health is something we can and must help each other attain. This goal of this first U.P. Community Health Needs Assessment is to serve as an important first step in a long and robust journey toward health equity for all.

INTRODUCTION

Project Background

This report documents findings from the regional community health needs assessment conducted in 2017-2018 by Western Upper Peninsula Health Department (WUPHD) in collaboration with 31 community partners listed on page 5, including all six local health departments, hospitals and clinics, behavioral health agencies, regional planners, health foundations, and major funder the Michigan Health Endowment Fund. The assessment covers the 15 counties of Michigan's Upper Peninsula, the rural, rugged and remote home to more than 300,000 residents.

Data for the community health needs assessment were gathered from a wide array of published sources, from a survey of 4,820 residents of the 15 counties, and from health care providers. External, or secondary, data sources include the U.S. Census Bureau and its American Community Survey (ACS), as well as statistics compiled by the Michigan Department of Health and Human Services (MDHHS), the federal Centers for Disease Control and Prevention (CDC), and other government and private agencies.

The regional adult health survey was the most ambitious and unique element of this project. A shortcoming of national and state health surveys is that the samples are designed to represent the national or state population as a whole. This means that in small population cohorts, like Upper Peninsula counties, not enough residents are included in the sample to make reasonable annual estimates at the county level. The addition of local survey data to this report helps us understand the health needs of our residents more thoroughly and measure changes over time.

The survey was patterned after the Behavioral Risk Factor Surveillance System (BRFSS) survey conducted by the CDC and state health departments. In consultation with our partners, additional topics were included in the local survey, including questions on mental health, substance abuse, access to care, dementia and elder care, and a section for ranking the perceived importance of 16 broad community health issues.

Western U.P. Health Department thanks the many people and organizations who backed this project and generously contributed their time and encouragement. And above all, a debt of gratitude is owed the nearly 5,000 U.P. residents who completed the lengthy health survey in the service of improving community health. May we honor their contributions by working together for healthier communities.

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How to Use This Report

Report Organization

The report begins with brief acknowledgements of the contributions of project partners, an executive summary, and this introductory section. Chapters with data from secondary sources follow, beginning with statistics describing the demographics (population counts and characteristics) of the region, including data on selected social determinants of health such as poverty and education levels. Access to care is assessed next. From there the report follows the chronology of life, beginning with measures of maternal and infant well-being from MDHHS data reports, followed by data on adolescent risk factors taken from school surveys conducted by 14 Communities That Care coalitions across the U.P. Data on county-level immunization rates on all age groups from the Michigan Care Improvement Registry (MCIR) are presented next. Data on infectious diseases from the Michigan Disease Surveillance System (MDSS) are followed by chronic disease and mortality statistics. Selected mental health and substance abuse data are presented from local and national sources, and include a focus on both suicide and opioid use. The report concludes with the complete findings of the locally conducted regional adult health survey in two chapters –one on personal health data and another on the respondents’ rankings of 16 community health issues. In addition to the complete set of local survey findings appearing at the end of this report, local findings relevant to particular topics are interspersed throughout the document, easily recognizable by the following text box format:

2017 Regional Adult Health Survey Data – Hep C Testing

The survey found that overall, an estimated 18 percent of Upper Peninsula adults had ever been screened for hepatitis C. Screening varied by county; 30 percent of Mackinac County residents were screened for hepatitis C while only 11 percent of residents in Ontonagon County were screened. Screening rates did not vary greatly by income, gender, or education. Fewer adults age 65 years and older reported they had been screened for hepatitis C (13 percent) compared to younger adults (20 percent).

Data Types

Data included in the report are generally summarized in one of four forms: trends over time, single-year tabulations, multi-year tabulations, or snapshots in time. Trends are shown when multiple years of data are available and when examining an indicator over time tells something meaningful about a problem that is increasing, being resolved, or not responding to intervention efforts. Single-year tabulations or snapshots are used when a single year’s worth of data or a snapshot gives a reasonably representative picture of an indicator, or when trend data are not available. Multi-year tabulations are used for rare or low-probability events where single-year calculated rates fluctuate greatly with a change of relatively few events. The distinction between a single-year tabulation and a snapshot is that a single-year tabulation is a count of events within a defined period, such as the number of new cases of pertussis reported in a county within a calendar year; whereas a snapshot measures a prevalence on a particular

date, for instance the rate of completed immunization status for all children in a jurisdiction who are age 19-35 months on December 31.

Understanding Health Statistics

Incidence vs. Prevalence

Two main types of rates appear in this report: incidence and prevalence. Incidence is the rate of new (or newly diagnosed) cases of the disease occurring within a period of time (e.g., per month, per year). It is more meaningful for comparison's sake when the incidence rate is reported as a fraction of the population at risk of developing the disease (e.g., percent or per 100,000 population).

Prevalence is the number of cases alive with the disease either during a period of time (period prevalence) or at a particular date in time (point prevalence). Period prevalence provides the better measure of the disease load since it includes all new cases and all deaths between two dates, whereas point prevalence only counts those alive on a particular date. An example of point prevalence is found in Survey Table 19 on 240-241, the percentage of survey respondents ever told by a health professional they had diabetes. This rate is a prevalence rate because it estimates the percent of adults within the population living with diabetes. An incidence, by contrast, might estimate the number of newly diagnosed individuals in a particular year expressed as a rate per 100,000 population.

Population Statistics

It is important to understand several statistical concepts when using this report. Wherever possible, data resulting from an accounting of all individuals appear in the report. Examples of these types of data are population statistics taken from the U.S. Census, and annual birth and death counts. For the time period in which they were collected, these data have little to no uncertainty associated with them.

Estimates and Confidence Intervals

Another type of statistic commonly found in this report is an estimate based on a survey administered to a random sample of the population. Examples of this type of data are educational attainment estimates produced by the American Community Survey and rates of binge drinking prevalence calculated from the Michigan Behavioral Risk Factor Survey. Sampling error is unavoidable and arises from estimating a population characteristic by looking at a sampling of the population rather than a count of the entire population. The degree of uncertainty introduced into these estimates by sampling error is conveyed to the reader by the use of confidence intervals. These intervals do not take into account response errors, which occur if data is incorrectly requested, provided, or recorded.

In this report, 95 percent confidence intervals are most commonly used. A confidence interval is a range around a measurement that conveys how precise the measurement is. Narrower confidence intervals indicate more precise estimates. For example, suppose a survey given to a random sample of Michigan adults indicated that $20.4\% \pm 1.0\%$ of those adults were current smokers (95 percent confidence interval indicated). This means that there is a 95 percent chance that between 19.4% and 21.4% of Michigan

adults are current smokers. There is a 5 percent chance that the current adult smoking rate is lower than 19.4% or higher than 21.4%.

When comparing estimates that have confidence intervals associated with them, non-overlapping confidence intervals are an indication that a statistically significant difference exists between the two groups being compared. If confidence intervals overlap, then a statistically significant difference may or may not exist. The span of the confidence interval is dependent principally on the sample size, so readers will note that Michigan rates given in this report, which are drawn from thousands of data points, generally are narrower or more precise than county estimates which are drawn from only several hundred respondents each.

Infrequent Events and Their Effect on Rates

The rate of a particular event occurring within a population is calculated by dividing the number of events by the number of persons in the population of interest. A small number of events in the numerator of this calculation results in a rate that is highly sensitive to small changes in the numerator. For example, two events versus one doubles the observed rate, as do four events versus two. In general, less than 20 events in a numerator tends to yield an unreliable result with little or no predictive value. For this reason, some secondary sources do not publish rates for events that occur fewer than six, 10 or 20 times over a specified time interval. Additionally, sensitive health data are often suppressed when there are few events in a given time period at the county level in order to protect privacy. When the number or rate is not available, that fact will be connoted by using the (*) symbol in data tables.

Geographic Scope of the Report

This community health needs assessment covers the 15 Upper Peninsula counties of Michigan: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft counties, an area bounded by Lake Superior to the north, and the state of Wisconsin and lakes Michigan and Huron to the south.

DEMOGRAPHICS

Demography, the starting point for community health needs assessment, is the study of statistical characteristics of a population; of its various cohorts such as age, gender and ethnic groups; and of trends and rates of change. Demographics provide a count of people living in a county, region, or catchment area for health care services. Trends in population growth or decline are useful in planning for future programs and resource allocations. Furthermore, the distribution of a population among its subsets or cohorts can be used to understand the needs of residents in greater detail.

Population counts and characteristics are commonly, but not exclusively, based on the decennial census counts of all residents in the United States, including citizens and non-citizens. This community health needs assessment falls between the 2010 U.S. Census and the 2020 Census. The source of much of the population data for this report is the 2015 American Community Survey, conducted on an ongoing basis by the U.S. Census Bureau.

Demographics are established with the U.S. Census Bureau based on *usual residence*. This so-called usual residence is not necessarily the same as the person's voting residence or legal residence, but rather the place where a person lives and sleeps most of the time. Two notable impacts of the usual residence principle are that full-time college students are counted toward the population of the county in which the campus is located, and incarcerated persons are counted toward the population of the county in which the correctional facility is located.

The most sizable college student populations in the U.P. are Michigan Technological University in Houghton County, Northern Michigan University in Marquette County, and Lake Superior State University in Chippewa County. Other institutions of higher learning in the Upper Peninsula include Keweenaw Bay Ojibwa Community College, Finlandia University, Gogebic Community College, Bay Mills Community College, and Bay De Noc Community College, which have smaller enrollments and fewer students from afar, and consequently less impact on age distribution within their respective counties.

State correctional facilities are located in Gogebic, Baraga, Marquette, Alger, and Luce counties, with two facilities in Chippewa County. All seven facilities house only males. These males, the majority of whom are between the ages of 20 and 45 years old, are counted in their respective U.P. county populations, but were excluded from rates calculated in the adult health survey.

Age and gender are the two most important demographic characteristics in health assessment. Many health conditions, diagnoses and procedures, such as pregnancy, or prostate cancer, are gender-exclusive. And age is a primary factor in planning for prevention and health care services. The health care needs of infants, pre-adolescents, teens, young adults and older adults vary greatly. Guidelines for preventive services like immunizations and cancer screenings are age-specific.

In general, rates of disease, disability and mortality increase with age. An area with many older adults and a large group of Baby Boomers (residents born roughly between 1946 and 1964) can expect to have higher gross rates of the diseases associated with aging such as heart disease, cancer, stroke, chronic lower respiratory disease (CLRD), dementia and Alzheimer's disease.

In addition to age and gender, race and ethnicity are often-cited demographic characteristics, because health disparities (differences in behaviors, rates of disease, health outcomes, and access to and quality of care) are often observed between racial and ethnic groups in the United States, as with the higher rate of infant mortality among African Americans in southeast Michigan. The U.P. is less racially diverse than Michigan as a whole, with Native Americans representing the largest minority group.

The total population of the Upper Peninsula declined by about 3 percent from 2000 to 2015, with large declines in Ontonagon, Gogebic, Iron, Luce, and Mackinac Counties. Ontonagon County lost nearly 20 percent of its population between 2000 and 2015. Declining populations affect both the need for services and the resources available. Declining school enrollments over time inevitably lead to closing of facilities and consolidation; and declining tax bases further diminish communities' resources and services.

Throughout history, the search for economic opportunity has been an impetus for migration. As young adults leave an area in search of work, the remaining population becomes relatively older, and birth rates decline. In the Upper Peninsula, about 19 percent of the non-incarcerated population is age 65 or older, compared with 15 percent statewide. In Keweenaw and Ontonagon Counties, greater than 30 percent of the population is 65 years or older. The gradual shifting of age distribution toward the older cohorts has profound implications on the needs for health care and elder services.

Local Focus

- The population of the Upper Peninsula is declining, as population and economic growth in the United States continues to bleed away from the Upper Midwest toward the Sun belt, both coasts, and high-tech meccas. Declining populations make it more difficult to sustain health care services in outlying areas.
- The U.P. has a large proportion of senior citizens and relatively fewer younger people, excluding the few counties with a sizable college student population. The U.S. Census Bureau estimates that 20 percent of Americans will be aged 65 or older by 2030; a benchmark already exceeded in all but 4 U.P. counties. Therefore, now is the time to plan for how to meet the medical and social needs of seniors, as many U.P. communities already have greater than one-third of their populations age 65 and older. The U.P. can be seen as a laboratory for service delivery models for America's future – for better or for worse.
- Unemployment and poverty are high in the U.P. Poverty has significant health impacts, and poverty during childhood can impact health as well as impair future economic potential. As long as the United States has employer-based health insurance and high out-of-pocket costs as opposed to a more universal health coverage, unemployment and poverty will have an impact on access to, and quality of, care. Both poverty and low educational attainment correlate with poorer health outcomes.
- Native Americans form the largest minority group in the region, which brings benefits in terms of culturally competent Tribal health services, and challenges in terms of disparities in health outcomes.

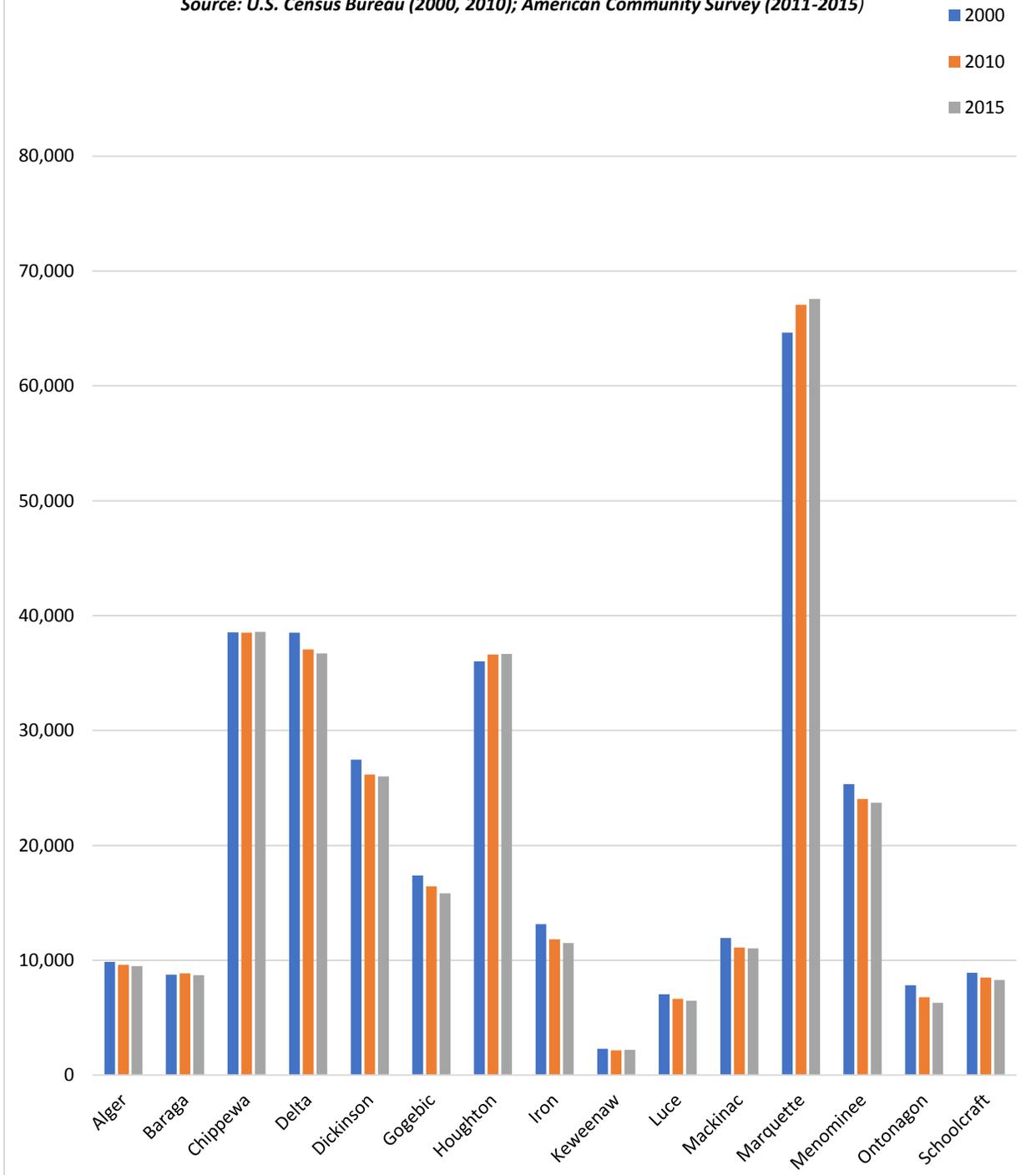
Population Change

The table below and graph on the next page show changes in the population from the 2000 Census count to the 2015 American Community Survey population estimate. Between 2000 and 2015, nearly all counties in the U.P. experienced decreases in population. Ontonagon (19 percent decrease) and Iron (12 percent decrease) counties had the greatest declines. Ten other counties had losses of between 0.6 percent and 8.9 percent, representing thousands of people. Three counties experienced small to moderate growth. Marquette County reported a 4.6 percent increase in population during the 15-year time period, Houghton County reported a more modest 1.8 percent increase, and Chippewa County had a 0.1 percent increase. These three counties have economies and populations buoyed in part by the presence of the region's three state universities. In the table below, counties shaded green increased in population and counties shaded blue declined, with color gradients reflecting percentage ranges.

Population changes from 2000 to 2015				
<i>Source: U.S. Census Bureau (2000, 2010); American Community Survey (2011-2015)</i>				
	2000	2010	2015	% Change (2000 to 2015)
Michigan	9,938,444	9,883,640	9,900,571	-0.4
Alger	9,862	9,601	9,476	-3.9
Baraga	8,746	8,860	8,690	-0.6
Chippewa	38,543	38,520	38,586	0.1
Delta	38,520	37,069	36,712	-4.7
Dickinson	27,472	26,168	26,012	-5.3
Gogebic	17,370	16,427	15,824	-8.9
Houghton	36,016	36,628	36,660	1.8
Iron	13,138	11,817	11,507	-12.4
Keweenaw	2,301	2,156	2,198	-4.5
Luce	7,024	6,631	6,477	-7.8
Mackinac	11,943	11,113	11,044	-7.9
Marquette	64,634	67,077	67,582	4.6
Menominee	25,326	24,029	23,717	-6.4
Ontonagon	7,818	6,780	6,298	-19.4
Schoolcraft	8,903	8,485	8,288	-6.9

Population changes from 2000 to 2015

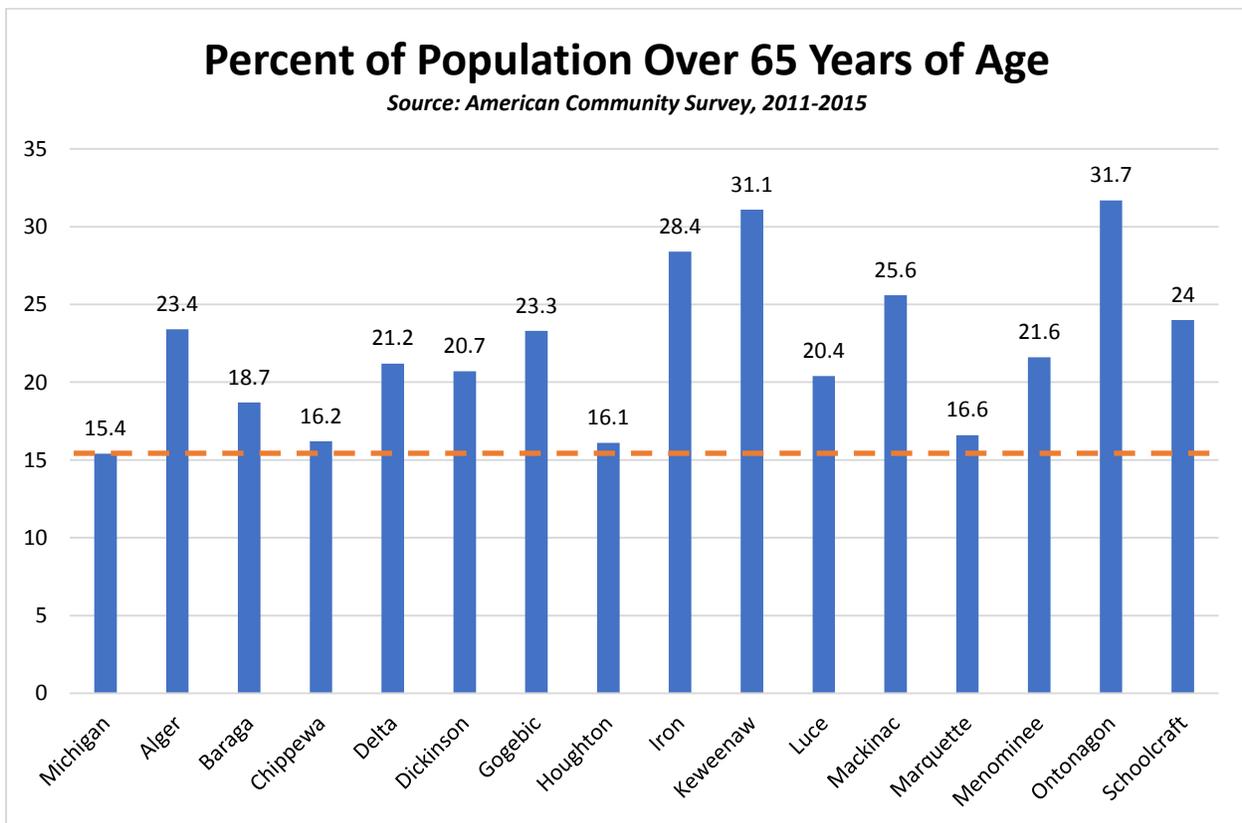
Source: U.S. Census Bureau (2000, 2010); American Community Survey (2011-2015)



Marquette County is the region's most populous county. Keweenaw County has the state's smallest population; Luce County is second-smallest statewide after subtracting its prison population, but Ontonagon County will soon challenge Luce for second-smallest.

Age Distribution

Every county in the U.P. has a higher proportion of elderly residents compared to the state and national estimates, so it's not surprising that most counties have experienced declining populations in recent decades. When young people of childbearing age leave in search of economic opportunities, the remaining population is consequently older. College student enrollment in Houghton, Marquette, and Chippewa counties increases the proportion of younger adults and decreases the proportion of elderly in those counties. However, when you remove the 'extra' 18-24 year olds from those counties, many of whom will not locate there permanently, and the extra young men in many counties' penitentiaries, you are left with an overall picture across the region of a more elderly population. Consequences of this include higher non-age-adjusted rates of chronic disease, and potential shortages of caregivers among the younger population.



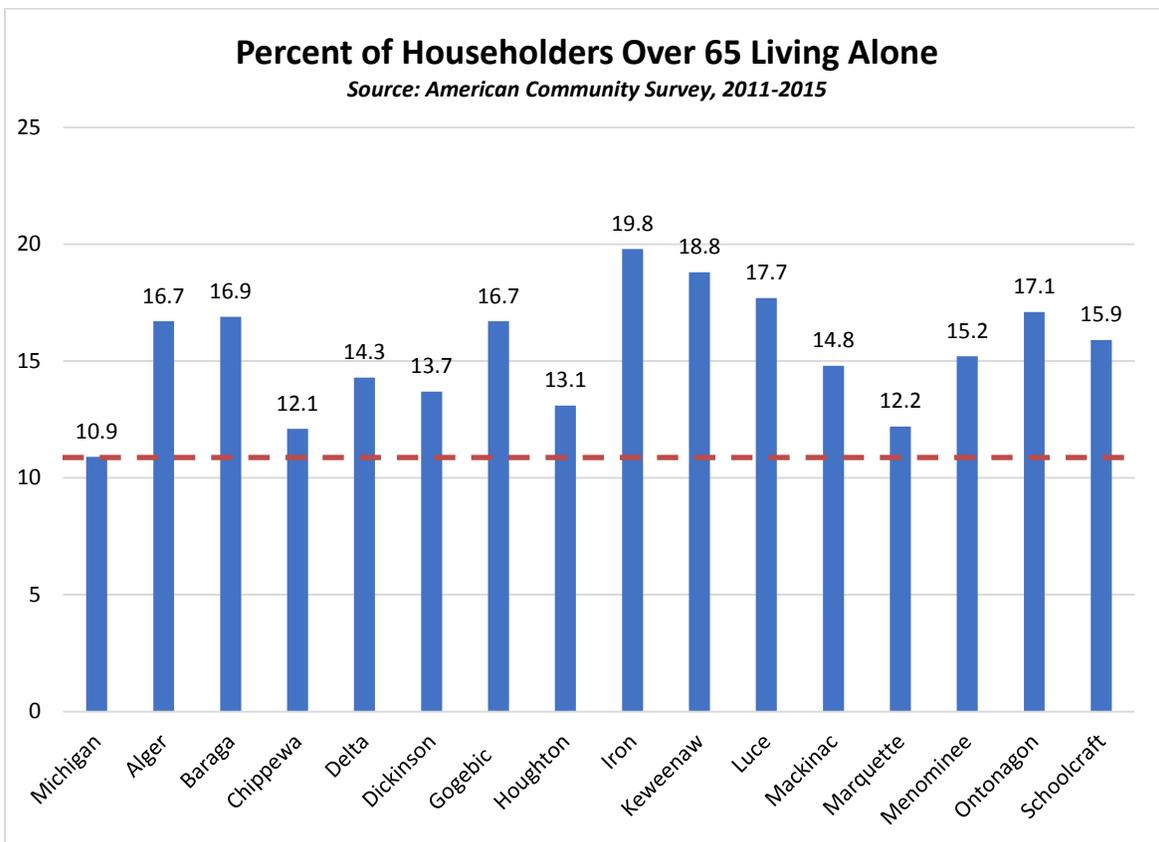
2017 Regional Adult Health Survey Data – Senior Health Status

The survey found that among respondents aged 65 and older, an estimated 21.5 percent rated their health as only fair or poor; 38.9 percent reported they had a disability; 35.3 percent had activity limited by a disability; 19.8 percent used special equipment such as a wheelchair or cane; 45.4 percent said arthritis limited their activity; 30.4 percent had ever received a cancer diagnosis; 22.0 percent had ever been told they had heart disease; and 19.8 percent had been told they had diabetes; all at rates much higher than those for younger respondents.

Seniors Living Alone

The following graph shows the percentage of occupied housing units for which the household is age 65 or older and living alone, according to the 2015 American Community Survey estimates. The householder refers to the person in whose name the housing unit is owned or rented. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is intended to be occupied as separate living quarters. Not included are group quarters such as dormitories, prisons, or nursing homes where 10 or more unrelated persons live.

U.P. counties had higher percentages of occupied housing units with householders 65 and older living alone than Michigan as a whole, with a few at nearly double the statewide rate. Communities should plan for the future medical and social support needs of this growing population of seniors living alone.



2017 Regional Adult Health Survey Data – Community Health Issues and Elder Care

Most survey respondents rated elder care issues as fairly to very important. Among all respondents, a weighted estimate of 75.8 percent rated “lack of programs and services to help seniors maintain their health and independence” as fairly or very important. An estimated 73.6 percent rated “shortage of long-term care” as important. And 77.1 percent rated “lack of programs and housing for people with Alzheimer’s Disease or dementia” as important. Of course, seniors rated those issues as very important at even higher rates.

Race and Ethnicity

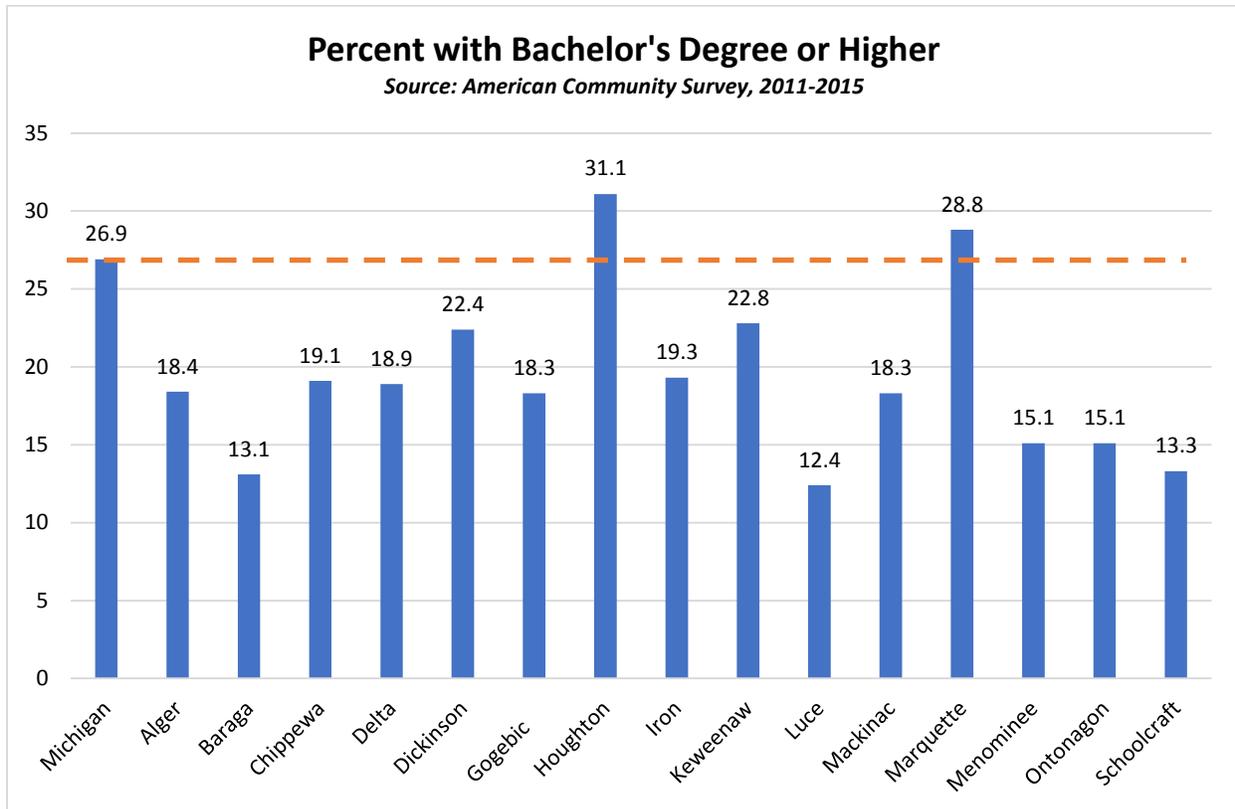
The table below contains data from the 2015 American Community Survey that show the distribution of race within each county as a percentage of the total population. The U.P. is generally more racially homogeneous than the state. Chippewa, Baraga and Mackinac counties have sizeable Native American populations, coinciding with the location of Native American Communities. Additionally, since inmates are included in the census in the county where they are incarcerated, the more racially diverse prison population increases the proportion of residents that identify as Black or African American in the counties where state correctional facilities are located.

	White	Black or African American	American Indian or Alaska Native	Asian	Two or more races	Hispanic or Latino
Michigan	79.0%	14.0%	0.5%	2.7%	2.6%	4.7%
Alger	85.7%	7.7%	2.6%	0.1%	3.8%	1.3%
Baraga	73.8%	4.5%	18.5%	0.6%	2.5%	1.3%
Chippewa	71.6%	6.7%	14.9%	0.9%	5.6%	1.6%
Delta	94.2%	0.3%	2.0%	0.3%	3.2%	1.0%
Dickinson	96.6%	0.5%	0.5%	0.6%	1.7%	1.3%
Gogebic	90.9%	4.6%	2.4%	0.5%	1.5%	1.2%
Houghton	93.6%	0.7%	0.4%	2.9%	2.0%	1.4%
Iron	96.6%	0.5%	0.7%	0.4%	1.6%	1.7%
Keweenaw	98.4%	0.9%	0.5%	0.1%	0.1%	0.9%
Luce	80.4%	8.5%	7.1%	0.2%	3.2%	2.6%
Mackinac	75.3%	1.7%	15.8%	0.6%	5.9%	1.4%
Marquette	93.4%	1.7%	1.3%	0.7%	2.6%	1.4%
Menominee	94.7%	0.3%	2.1%	0.2%	2.7%	1.6%
Ontonagon	96.3%	0.3%	1.1%	0.5%	1.5%	1.1%
Schoolcraft	86.9%	0.5%	5.9%	1.5%	5.0%	0.9%

While the locally conducted 2017 Regional Adult Health Survey did not ask about race or ethnicity because numbers of minority respondents would have been too small to produce statistically significant data, the following information about health disparities affecting Tribal communities nationally comes from the Indian Health Service (IHS): “American Indian and Alaska Native people have long experienced lower health status when compared with other Americans... Diseases of the heart, malignant neoplasm, unintentional injuries, and diabetes are leading causes of American Indian and Alaska Native deaths. American Indians and Alaska Natives born today have a life expectancy that is 5.5 years less than the U.S. all races population (73.0 years to 78.5 years, respectively). American Indians and Alaska Natives continue to die at higher rates than other Americans in many categories, including chronic liver disease and cirrhosis, diabetes mellitus, unintentional injuries, assault/homicide, intentional self-harm/suicide, and chronic lower respiratory diseases.”

Educational Attainment

The graph below shows the proportion of individuals age 26 or older in the population who attained a bachelor's degree or higher. The high proportion of residents with a bachelor's degree or higher in Houghton and Marquette counties is likely due to the presence of universities in those counties. Excluding Houghton and Marquette counties, residents of the U.P. are much less likely to have achieved a bachelor's degree, which has implications for health status, behaviors and access; and employment and economic development.

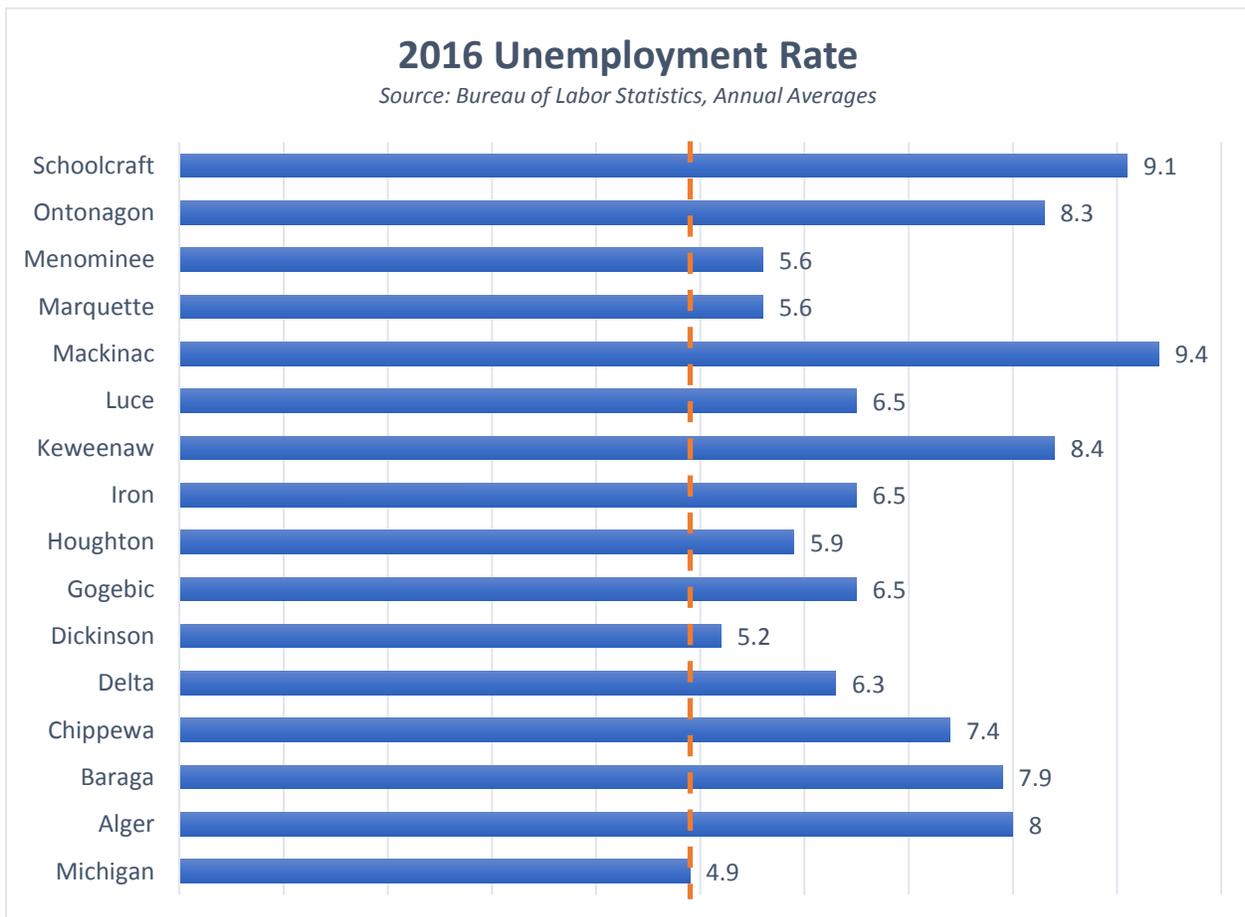


2017 Regional Adult Health Survey Data – Education Levels and Health Disparities

Higher levels of educational attainment are associated with better health status, access and health behaviors, as evidenced throughout the regional survey. Here are a few of the many examples from the data: An estimated 49.5 percent of those who didn't complete high school rated their health only fair or poor, compared with just 4.0 percent for respondents with a 4-year degree. 52.4 percent of the lowest educational attainment group had no dental care in the past 12 months, compared with just 17.0 percent for college graduates. For obesity, the rates for those two groups (no high school diploma vs. college degree) were 46.1 vs. 28.8 percent; for current smoker, 30.2 vs. 7.1 percent; for 5-a-day fruits and vegetables, 5.3 vs. 17.0 percent.; for no leisure-time physical activity, 29.2 vs. 3.8 percent, respectively. Rates of chronic disease were also disparate by educational attainment, for instance, 22.3 percent of the lowest educated group had ever been told they had diabetes, vs. just 5.3 percent for the highly educated group.

Unemployment

The following chart displays data from the Bureau of Labor Statistics of the proportion of individuals who are without a job but are currently seeking a job and available to work. In 2016, 4.9% of individuals in Michigan were unemployed. All counties in the U.P. had higher unemployment rates than the state average. Mackinac and Schoolcraft Counties had nearly twice the unemployment rate of the state average, with over 9% of the population unemployed. In many counties, seasonal rates exceed 10-15 percent in certain months. Unemployment is especially important to community health in the United States because for individuals younger than 65, health insurance is often tied to employment.

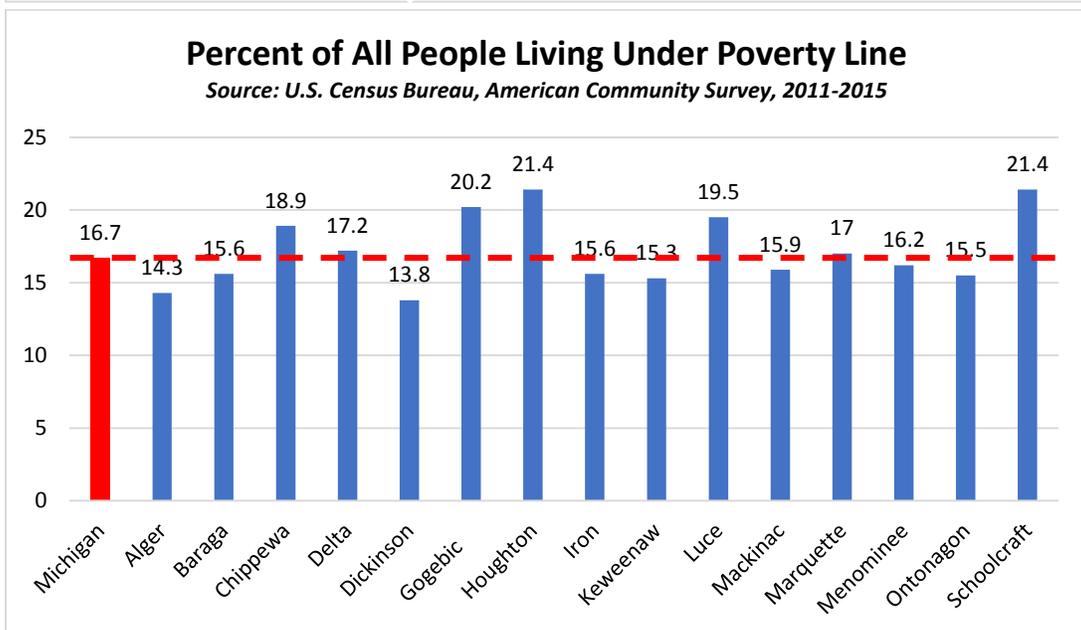
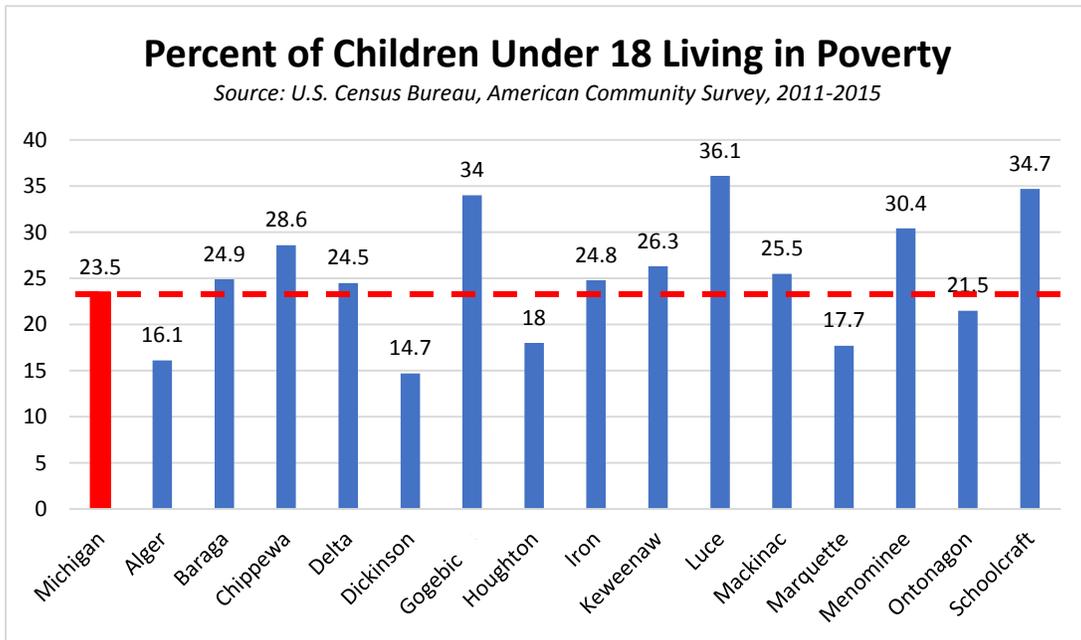


2017 Regional Adult Health Survey Data – Unemployment as a Community Priority

Among survey respondents, a weighted estimate of 54.5 percent rated “unemployment, wages and economic conditions as very important, and another 37.5 percent rated it as fairly important, a combined 92 percent. In four counties, greater than two thirds of adults rated it very important as a community issue – Ontonagon at 74.9 percent, Gogebic at 72.9 percent, Schoolcraft at 68.5 percent, and Baraga at 67.7 percent.

Poverty

The following graphs are from the American Community Survey and show the percentage of individuals living in poverty. The poverty level is set by the federal government and is adjusted annually for inflation. The poverty level considers household size and income and is used to determine eligibility for many governmental assistance programs. Half the counties in the U.P. have poverty rates above the state average. The difference is more striking for children living in poverty. In 10 of the U.P. counties, 1-in-4 children under 18 are living in poverty. Please see the next page for data on disparities by income.



Health Disparities By Income

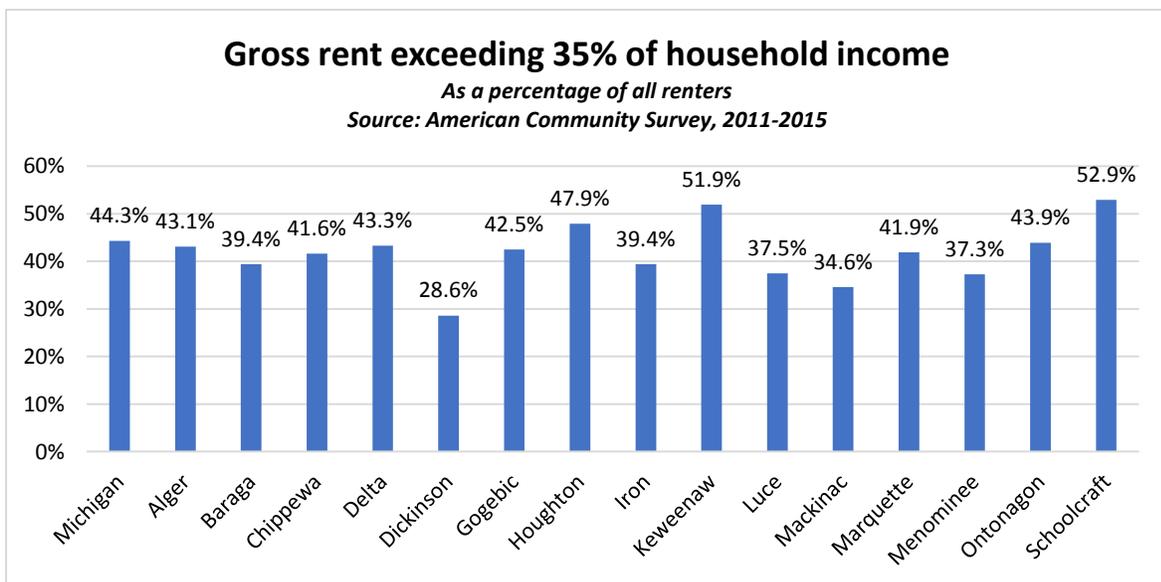
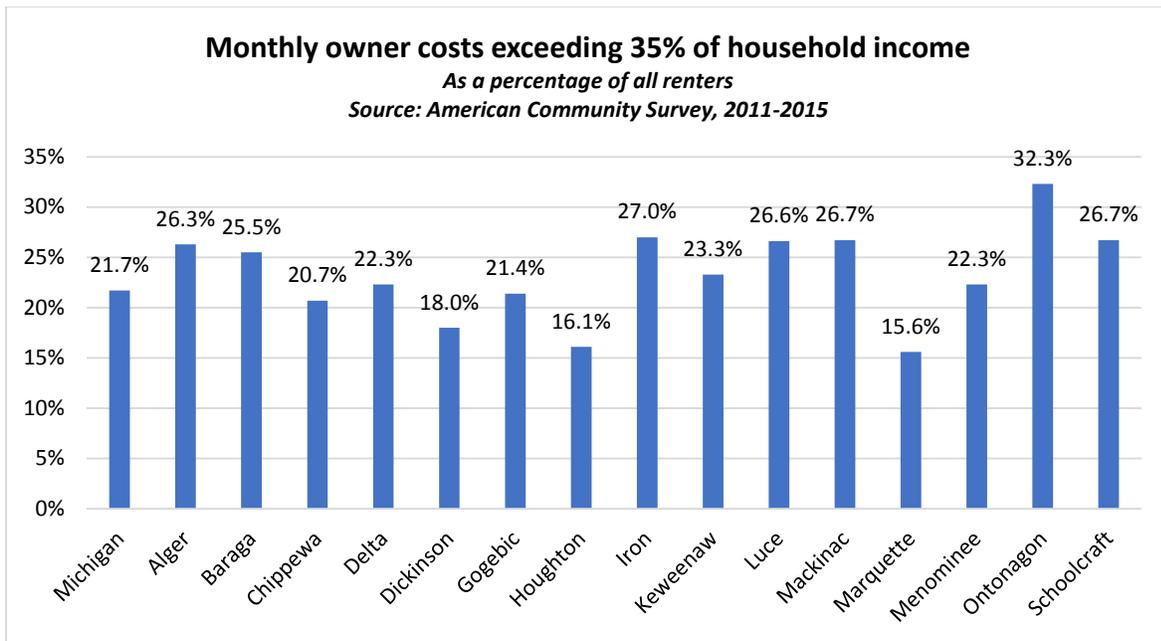
2017 Regional Adult Health Survey Data – Health Disparities by Household Income

For many national, state and local health statistics, differences in health status, access to care and health behaviors correlate with household income. In the table below, U.P. wide weighted rates are shown by household income for various indicators from the survey. For more information on survey methodology, indicator definitions, and complete findings, please see pages 195-283.

Indicator	Less than \$25,000	\$25,000 to \$49,999	\$50,000 or greater
Health Status Fair or Poor	29.9%	22.1%	5.1%
Poor Physical Health 14+ Days in Past 30 Days	32.9%	19.9%	7.1%
Poor Mental Health 14+ Days in Past 30 Days	29.0%	15.0%	6.5%
Activity Limitation 14+ Days in Past 30 Days	26.9%	14.6%	5.0%
Any Disability	47.0%	34.4%	15.1%
No Health Insurance Age 18-64	10.6%	7.7%	4.9%
Unable to Access Healthcare Due to Cost	19.2%	20.4%	11.3%
Unable to Access Care Due to Transportation	13.0%	2.1%	1.6%
No Dental Care Past 12 Months	55.1%	33.2%	18.1%
Current Smoker	31.9%	17.3%	10.5%
5+ Daily Fruit and Vegetable Servings	8.6%	9.1%	12.8%
No Leisure-Time Physical Activity	22.7%	13.3%	10.4%
Diabetes Diagnosis Lifetime Prevalence	15.6%	13.7%	6.5%
Ever Had Heart Attack	8.2%	7.1%	3.4%
Ever Told Heart Disease	12.0%	11.7%	6.4%
Ever Had Stroke	6.8%	3.2%	1.3%
Chronic Lower Respiratory Disease	14.0%	9.0%	3.0%
Activity Limited By Arthritis	44.4%	39.0%	21.4%
Ever Diagnosed With Depression	37.6%	25.1%	19.7%
Ever Diagnosed With Anxiety	28.4%	20.8%	18.1%
Medication for Mood Past 12 Months	32.1%	28.6%	17.3%
Mental Health Counseling Past 12 Months	11.2%	9.7%	4.6%
Marijuana Use Past 30 Days	15.2%	6.7%	4.5%
Has Medical Marijuana Card	7.1%	4.5%	1.4%
Alcohol or Drug Treatment Past 12 Months	4.0%	1.2%	0.2%
Ever had PSA Test, Men Age 50+	53.0%	64.0%	79.5%
Appropriately Timed Colorectal Cancer Screening, Age 50+	64.6%	72.8%	81.0%

Housing costs

The following graphs show the percentage of individuals whose rent or ownership costs for housing is 35 percent or more of the household income, according to American Community Survey estimates. The typical recommendation is that housing costs should not exceed 30 percent of the household income. Renters were much more likely to exceed the recommended portion of income dedicated to housing. In Keweenaw and Schoolcraft counties, more than 50 percent of renters spend more than 35 percent of their income on rent. In most counties in the U.P., a higher proportion of U.P. home owners paid more than what is recommended. Property taxes are included in owner housing costs, so a senior citizen living on a fixed income could have no mortgage but still have high costs due to property tax.



ACCESS TO CARE

One of the most important aspects of community health is access to care, which simply means creating conditions where people can get the health care they need. Therefore, it is a national Healthy People 2020 Goal to improve access to comprehensive, quality health care services. Access to care is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans. Access to care is generally thought to include three main components: insurance coverage, health services, and timeliness of care. When considering access to health care, it is important to also include oral health care, mental health care, and the ability to obtain necessary prescription drugs.

Access to health services means "the timely use of personal health services to achieve the best health outcomes," according to the U.S. Department of Human Services' Agency for Healthcare Services Quality's (AHSQ) 2011 National Healthcare Disparities Report. According to AHSQ, it requires 3 distinct steps:

- Gaining entry into the health care system (usually through insurance coverage)
- Accessing a location where needed health care services are provided (geographic availability)
- Finding a health care provider whom the patient trusts and can communicate with (personal relationship)

Barriers to health services include:

- High cost of care
- Inadequate or no insurance coverage
- Lack of availability of services
- Lack of transportation
- Lack of culturally competent care

These barriers lead to:

- Unmet health needs
- Delays in receiving appropriate care
- Inability to get preventive services
- Financial burdens
- Preventable hospitalizations

Access to care often varies based on race, ethnicity, socioeconomic status, age, sex, disability status, sexual orientation, gender identity, and residential location. Certainly in rural regions like the Upper Peninsula, location is an important factor in disparities of access, as many areas experience provider shortages and little to no specialty care.

The Affordable Care Act of 2010 improved access to care for Americans as measured by: significant reductions in uninsured adults nationwide; expansion of services covered by health insurance plans; inclusion of individuals with pre-existing conditions; increased funding for preventive care and through programs like Federally Qualified Health Centers (FQHC), which provide care to both insured and uninsured populations and allow for payment on a sliding fee scale. But the sustainability of these gains is in question as federal and state lawmakers aim to “repeal and replace” key provisions of the sweeping health care reform law. Time will tell whether the United States, which spends more money per capita on health care than any other country, will move forward or regress in terms of access to care.

The following pages have information on three main topics: 1) Health Professional Shortage Area (HSPA) designations, including provider shortages in each county for primary care, dental or mental health care; 2) Healthy Michigan Plan enrollment, which has led to steep declines in rates of uninsured adults age 19-64; and 3) findings of the 2017 Regional Adult Health Survey related to insurance coverage, personal health care providers, and barriers to receiving primary care, oral and behavioral health services.

Local Focus

- All U.P. counties have multiple federal designations for health professional shortages, known as Health Professional Shortage Areas (HPSA), either for the entire county, a part of the county, or a specific population within the county.
- While some HPSA designations are county-wide, based on the ratio of residents to providers, others are for special populations. For primary care, many counties are HPSA for the low-income population; for dental care, there is commonly a shortage of Medicaid services; and for mental health care, in most cases the entire county is a shortage area.
- Enrollment in the Healthy Michigan Plan, Michigan’s Medicaid Expansion insurance program which provides insurance for low-income adults under age 65, has led to a considerable reduction in uninsured adults since 2014, with an estimated 7 percent uninsured according to the regional survey, compared with 18.5 percent in the 2013 Michigan BRFSS data for the U.P.
- Cost, inability to find a provider, and to a lesser extent, transportation, are cited by survey respondents as barriers to accessing health care, dental care and behavioral health services.
- “Health insurance is expensive or has high costs for co-pays and deductibles,” was the highest ranked community health priority by survey respondents. Health care access issues overall were frequently cited by respondents as priorities for improvement.

Health Shortage Population Area (HSPA) Designations

HPSA designation is given when an area, population or facility meets a standard set of federal criteria.

Health Professional Shortage Areas (HPSAs) are designations that indicate provider shortages in:

- Primary care;
- Dental health; or
- Mental health

These shortages may be geographic-, population-, or facility-based:

- **Geographic Area**
 - A shortage of providers for the entire population within a defined geographic area.
- **Population Groups**
 - A shortage of providers for a specific population group(s) within a defined geographic area (e.g., low income, migrant farmworkers, and other groups)
- **Facilities**
 - **Other Facility (OFAC)**—public or non-profit private medical facilities serving a population or geographic area designated as a HPSA with a shortage of health providers
 - **Correctional Facility**—medium to maximum security federal and state correctional institutions and youth detention facilities with a shortage of health providers
 - **State Mental Hospitals**—state or county hospitals with a shortage of psychiatric professionals (mental health designations only)
 - **Automatic Facility HPSAs (Auto HPSAs)**—a facility that is automatically designated as a HPSA by statute or through regulation without having to apply for a designation. These are as follows:
 - **Federally Qualified Health Centers (FQHCs)**—health centers that provide primary care to an underserved area or population, offer a sliding fee scale, provide comprehensive services, have an ongoing quality assurance program, and have a governing board of directors. All organizations receiving grants under Health Center Program Section 330 of the Public Health Service Act are FQHCs.
 - **FQHC Look-A-Likes (LALs)**—LALS are community-based health care providers that meet the requirements of the federal Health Resources & Services Administration (HRSA) Health Center Program, but do not receive Health Center Program funding.

- **Indian Health Facilities**—Federal Indian Health Service (IHS), Tribally-run, and Urban Indian health clinics that provide medical services to members of federally recognized Tribes and Alaska Natives.
- **IHS and Tribal Hospitals**—Federal Indian Health Service (IHS), Tribally-run hospitals that provide inpatient and outpatient medical services to members of federally recognized Tribes and Alaska Natives.
- **Dual-funded Community Health Centers/Tribal Clinics**—health centers that receive funding from Tribal entities and HRSA to provide medical services to members of federally recognized Tribes and Alaska Natives.
- **CMS-Certified Rural Health Clinics (RHCs) that meet National Health Service Corps (NHSC) site requirements**—outpatient clinics located in non-urbanized areas that are certified as RHCs by CMS and meet NHSC Site requirements including accepting Medicaid, CHIP, and providing services on a sliding fee scale.

Aside from Auto HPSAs and HPSAs for federal correctional facilities, state Primary Care Offices (PCOs) must submit applications to designate all HPSAs. HRSA reviews these applications to determine if they meet the eligibility criteria for designation. The main eligibility criterion is that the proposed designation meets a threshold ratio for population to providers. The table below, continued on the next page, lists the current HPSA designations for the 15 U.P. counties.

Upper Peninsula Health Shortage Population Area (HSPA) Designations

County	Primary Medical Care HSPA	Dental Health Care HSPA	Mental Health Care HSPA
Alger	Native American Tribal Population Low-Income Population	Native American Tribal Population Medicaid Eligible Population	Native American Tribal Population Entire Geographic County
Baraga	Native American Tribal Population	Native American Tribal Population Medicaid Eligible Population Entire Geographic County	Native American Tribal Population Entire Geographic County
Chippewa	Native American Tribal Population Low-Income Population	Native American Tribal Population Medicaid Eligible Population Entire Geographic County	Native American Tribal Population Entire Geographic County
Delta	Low-Income Population	Medicaid Eligible Population Entire Geographic County	Entire Geographic County

Dickinson	None	Entire Geographic County	Entire Geographic County
Gogebic	Low-Income Population	Native American Tribal Population Medicaid Eligible Population	Native American Tribal Population
Houghton	Low-Income Population	Low-Income Population	Entire Geographic County
Iron	Low-Income Population	Medicaid Eligible Population	Entire Geographic County
Keweenaw	Low-Income Population	Medicaid Eligible Population	Entire Geographic County
Luce	Low-Income Population	Medicaid Eligible Population	Entire Geographic County
Mackinac	Native American Tribal Population Low-Income Population	Native American Tribal Population	Native American Tribal Population Entire Geographic County
Marquette	Low-Income Population	Medicaid Eligible Population	None
Menominee	Entire Geographic County Native American Tribal Population	Medicaid Eligible Population	Entire Geographic County
Ontonagon	Low-Income Population	Medicaid Eligible Population	Entire Geographic County
Schoolcraft	Low-Income Population	Medicaid Eligible Population	Entire Geographic County

Healthy Michigan Plan Enrollment

A key provision of the Affordable Care Act (ACA) implemented nationally on January 1, 2014 was the Medicaid Expansion, an option to help states finance health insurance for low-income adults aged 19-64 as a way to lower the rate of uninsured Americans and increase access to care. As of June 2018, 34 states (including the District of Columbia) had adopted Medicaid Expansion, three were considering expansion, and 14 had turned down federal funding. The State of Michigan began accepting applications for the Healthy Michigan Plan (Michigan's Medicaid expansion program) on April 1, 2014.

The Healthy Michigan Plan provides health care coverage for individuals who:

- Are age 19-64 years
- Have income at or below 133% of the federal poverty level under the Modified Adjusted Gross Income methodology
- Do not qualify for or are not enrolled in Medicare
- Do not qualify for or are not enrolled in other Medicaid programs
- Are not pregnant at the time of application
- Are residents of the State of Michigan

Per federal requirement, individuals eligible for services under the Healthy Michigan Plan must have access to the following 10 Essential Health Benefits:

- Ambulatory patient services
- Emergency services
- Hospitalization
- Maternity and newborn care
- Mental health and substance use disorder treatment services, including behavioral health treatment
- Prescription drugs
- Rehabilitative and habilitative services and devices
- Laboratory services
- Preventive and wellness services and chronic disease management
- Pediatric services, including oral and vision care

The Healthy Michigan Plan will cover other medically necessary services as appropriate.

Healthy Michigan Plan participants may be subject to cost-sharing obligations.

Michigan is now planning to add a work requirement for Healthy Michigan Plan enrollees, as newly allowed by federal law. Michigan will require some 600,000 able-bodied adults to work 80 hours per month to be enrolled in the plan beginning in January 2020. The future of the Healthy Michigan Plan and the Affordable Care Act are hard to predict as the program also known as "Obamacare" is politically contentious. While viewpoints on the merits of the Act vary, it is certainly true that millions of Americans have gained access to health insurance over the last four years as a result of the federal program and state-managed Medicaid Expansion plans.

Healthy Michigan Plan enrollment data in the table below come from actual counts from Michigan Department of Health and Human Services (MDHHS) monthly enrollment data. Population estimates come from the American Communities Survey.

	Healthy Michigan Plan Enrollment, March 2018	Noninstitutionalized Population, Ages 18-64	Percent of Noninstitutionalized Population Enrolled in Healthy Michigan Plan
Michigan	671,227	6,085,205	11%
Alger	461	4,847	9.5%
Baraga	427	3,465	12.3%
Chippewa	1,489	21,149	7.0%
Delta	2,091	21,188	9.9%
Dickinson	1,222	15,175	8.0%
Gogebic	1,052	8,349	12.6%
Houghton	2,035	23,194	8.8%
Iron	657	6,251	10.5%
Keweenaw	131	1,140	11.5%
Luce	396	3,139	12.6%
Mackinaw	460	6,305	7.3%
Marquette	3,503	42,621	8.2%
Menominee	1,120	13,846	8.1%
Ontonagon	393	3,380	11.6%
Schoolcraft	510	4,652	10.9%

The combination of four main factors – Medicaid Expansion, ACA Marketplace plans, young adults staying on their parents’ insurance plans through age 25, and the availability of coverage for people with pre-existing conditions – has led to dramatic declines in the rate of uninsured adults in Michigan and nationwide (especially in the states that adopted Medicaid Expansion.) **In Michigan, in the last four years, the rate of uninsured adults age 19-64 has been reduced by more than half statewide and by nearly two-thirds in the U.P.**

2017 Regional Adult Health Survey Data – Health Care Access

The survey found that an estimated 7.0 percent of U.P. adults age 18-64 had no health insurance in 2017, compared with 9.9 percent in Michigan as a whole in 2016. Lack of coverage was higher in younger adults and in adults with lower reported income, but did not differ between men and women or by education. Locally and nationwide the rates of uninsured adults have declined (improved) by half to two-thirds since the implementation of new insurance programs in 2014 under the Affordable Care Act. For comparison, the U.P. had about 18.5 percent uninsured in 2013.

Local Survey Data

Many of the questions on the 2018 Regional Health Adult Health Survey dealt with access to care, both in sections about personal health access and barriers, and in the section on community health issues and priorities. Key findings from the survey related to access to care are summarized below:

2017 Regional Adult Health Survey Data – Health Access and Barriers

- Health insurance coverage rates for adults under 65 years old in the Upper Peninsula were similar to Michigan rates, with an estimated 7 percent of adults lacking coverage. Very few adults (1 percent) in Dickinson County reported no health insurance. Lack of coverage was higher in younger adults and in adults with lower reported income, but did not differ between men and women or by education. Locally and nationwide the rates of uninsured adults have declined (improved) by half to two-thirds since the implementation of new insurance programs in 2014 under the Affordable Care Act. (The U.P. uninsured rate was 18.5 percent in the state's regional estimate from 2013.)
- About 1-in-6 adults reported they did not have a medical provider that they considered their personal health care provider. Nearly 25 percent of adults age 18-39 years old did not identify a personal health care provider, while only 5 percent of adults over 65 reported they did not have a personal health care provider. These rates did not differ by gender, education, or income.
- Similar to Michigan rates, about 1-in-6 adults reported that cost prevented them from accessing health care in the last year. Fewer adults (5 percent) reported a lack of transportation prevented them from accessing health care. Reported difficulty accessing health care due to cost and transportation decreased with age, and increased with education and higher income, perhaps because persons with employer-sponsored plans were more aware of rising costs of co-pays and deductibles than those with the Healthy Michigan (Medicaid Expansion) Plan.
- One in four adults in the Upper Peninsula said they did not get a regular preventive physical exam in the last year. Rates were similar across all income and education levels and did not differ between men and women. Younger adults were more likely to have not had a recent check-up than older adults; 40 percent of adults 18-39 years old had not had a recent check-up, while only 10 percent of adults over 65 years old reported no recent check-up. While not optimal, this is not unexpected; younger adults often don't have a regular doctor or access well care visits, whereas regular health screenings tend to become habitual around age 40.
- Similar to Michigan rates, 1-in-3 Upper Peninsula adults do not have dental insurance and a similar number have not had dental care in the previous year. While lack of insurance increases with age, lack of dental care was similar across all age groups. Nearly 60 percent of adults over 65 years old lack dental insurance. Reported lack of insurance and lack of dental care decreased as education and income increased.

2017 Regional Adult Health Survey Data (Continued) – Mental Health Access

- Seven percent of adults in the Upper Peninsula delayed or did not receive mental health care due to cost; 5 percent delayed or did not receive care due to a lack of available mental health professionals. Younger adults and men had higher rates of reported delays in treatment due to cost and availability. Nine percent of men and 5 percent of women delayed or did not receive treatment because of cost. These barriers to mental health care were not different in adults by education or income level. Transportation was rarely reported as a cause of delayed or missed mental health care.

Community Health Issues and Priorities

Access to care figured prominently among issues identified in community forums sponsored by various healthcare entities across the U.P. in recent years. Not surprisingly, access issues were among the highest ranked priorities by this assessment’s regional survey respondents. Below are selected access-to-care issues from the 2018 Regional Adult Health Survey, with data weighted to show estimates of public opinion U.P. wide.

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Lack of health insurance	4.7	5.3	33.0	57.1
Health insurance is expensive or has high costs for co-pays and deductibles	3.1	3.2	22.6	71.1
Shortage of mental health programs and services, or lack of affordable mental health care	6.6	13.9	42.1	37.5
Shortage of substance abuse treatment programs and services, or lack of affordable care	6.6	14.5	41.4	37.6
Shortage of dentists, or lack of affordable dental care	11.7	20.3	37.7	30.3
Lack of programs and services to help seniors maintain their health and independence	7.9	16.4	40.4	35.4
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	8.8	17.6	38.9	34.7
Lack of programs and housing for people with Alzheimer’s Disease and dementia	7.1	15.9	40.1	37.0

MATERNAL AND CHILD HEALTH

According to the federal Centers for Disease Control and Prevention (CDC), improving the health of mothers, infants, and children is an important public health goal for the United States. Their well-being determines the health of the next generation and can help predict future public health challenges for families, communities, and the health care system. Reductions in maternal and infant mortality as well as preterm and low birthweight births, are important Healthy People 2020 goals.

Although pregnancy-related mortality for women has declined in the United States, approximately 1000 women still die of pregnancy-related causes each year and 50,000 have serious health complications, according to the CDC. In 2015, the United States ranked as the worst among developed countries for maternal death, with 26 deaths per 100,000 births, compared to fewer than 10 deaths per 100,000 in Canada, Australia, and nearly all countries in Western Europe. Furthermore, maternal mortality worsened in the United States between 2000 and 2015, whereas improvements were made in much of the rest of the world. Many studies show that an increasing number of pregnant women in the United States have chronic health conditions such as obesity, high blood pressure, diabetes, or heart disease that may put them at higher risk of adverse pregnancy outcomes.

Over 23,000 infants less than 1 year old died in the United States in 2016. The most common causes of death were congenital malformations and low birth weight, each accounting for more than 100 deaths per 100,000 births. Many infants born under 5.5 pounds suffer from early health complications, such as breathing difficulties, and long-term impacts, such as developmental delays. Low birth weight is caused by preterm birth (before 37 weeks of pregnancy), chronic maternal conditions (such as high blood pressure), and smoking or being exposed to smoke during pregnancy, among other factors. Preterm births are also expensive; a newborn delivered prematurely stays in the hospital an average of 11 days longer and costs 25 times more than a newborn born at term without complications.

A wide range of social determinants impact the wellbeing of women, infants and children, including: income, educational attainment, geography (rural versus urban), access to health care, and the physical environment. There are also significant racial and ethnic disparities in maternal and infant health in the United States. Black women are nearly 3.5 times more likely to die than white women due to pregnancy-related causes, and black women are twice as likely to give birth to a low birth weight infant as non-Hispanic white women.

The risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality care before, during and after pregnancy. A healthy gestation and birth as well as early identification and treatment of health problems among infants, can prevent death or disability and help children to reach their full potential. Access to nutritional information, such as folic acid recommendations prior to conception and breastfeeding education and support can prevent disease and improve health. Improving pre-conception health among women, such as reducing obesity and stopping tobacco use, reduces the risk of pregnancy complications and harm to

mothers and their infants. A few key points from the CDC's Pregnancy Risk Assessment Monitoring System (PRAMS) and other sources include:

- In 2015, approximately 9 percent of women nationally reported smoking during the last 3 months of pregnancy. In Michigan that number was 13 percent. Tobacco use during pregnancy is associated with an increased risk of poor outcomes including low birthweight, prematurity, birth defects and sudden unexpected infant death (SUID).
- In 2015, approximately 48% of U.S. women were overweight or obese prior to conception. In Michigan this percentage was 46 percent. Overweight and obesity places women at higher risk of diabetes, longer hospital stays and caesarean section. They are also at risk for complications later in life including diabetes, heart disease and some cancers. Their infants are at higher risk of being stillborn, preterm, high birth weight, and birth defects.
- Only 75 percent of U.S. women and 80 percent of Michigan women report adequate prenatal care in 2016, as assessed by the Kessner Index, a commonly used algorithm for evaluating the adequacy of prenatal care. In the U.S., 6 percent of women did not receive any prenatal care or began care in the third trimester. In Michigan, only 2 percent of women received late or no prenatal care, but that does not conflict with the statistic that 80 percent had adequate care. Many women receive care in too little frequency to meet the Kessner Index definition, but still receive some care before the third trimester.
- According to a large study of more than 4,000 women, approximately one in seven women was identified with and treated for depression during the 39 weeks before pregnancy through 39 weeks after pregnancy, and more than half of these women had recurring indicators for depression. Maternal depression has been associated with inadequate prenatal care, poor nutrition, higher preterm birth and low birth weight and may have a profound impact on the social-emotional and cognitive development of infants. In 2015, 14 percent of women in Michigan and 12 percent of U.S. women reported significant post-partum depressive symptoms.
- Breastfeeding provides health benefits to both the mother and infant. Infants who are breastfed have lower risk of asthma, diabetes, and sudden infant death syndrome (SIDS). Women who have breastfed have lower risk of breast and ovarian cancer, as well as Type 2 Diabetes. While most mothers indicate they plan to initiate breast feeding (85 percent of infants in the U.S. and 87 percent of infants in Michigan), less than 20 percent of infants are exclusively breastfed at 6 months, because many mothers stop breast feeding after a few days, weeks or months, well short of the 6-month recommendation.
- Routine vaccination of women before and during pregnancy as outlined by the CDC can positively impact the health of their infants. Similarly, timely administration of recommended childhood vaccines can protect infants and children from a broad array of vaccine-preventable illnesses.

Local Focus

- Adequate prenatal care, initiated in the first trimester, has a significant positive effect on maternal and infant health. Between 25 and 40 percent of pregnant women in the U.P. did not receive adequate prenatal care.
- HIV testing, which is recommended as a standard component of prenatal care, was especially lacking in Chippewa and Menominee Counties.
- In the U.P., cigarette smoking during pregnancy far exceeds state levels; 12 counties reported at least 1-in-4 women smoked during pregnancy and seven counties reported at least 30 percent of women smoked during pregnancy. As described above, prenatal exposure to cigarette smoke increases the risk of preterm birth, low birthweight, and SIDS.
- Many communities in the U.P. are more than 60 minutes away from a birthing center, and there is only one neonatal intensive care unit (NICU) in the U.P. While the population may be sparse in many areas, the extended distance to a birthing center may limit a woman's ability to access pre- and post-natal care and impact her ability to obtain the needed level of obstetrical and/or neonatal care in a timely manner. This can affect outcomes for both mother and infant. In addition, the financial and emotional burdens placed on a family with an infant in the NICU are likely exacerbated by distance, given that the single NICU serving the region is in Marquette.
- A high BMI or excessive weight gain during pregnancy is harmful to both the baby and mother and increases the risk for later obesity in the child. In the U.P., 40-60 percent of mothers gained excessive weight during pregnancy. This may contribute to the on-going U.P. obesity epidemic.
- Breast feeding is associated with decreased risk of chronic disease and cancer in women and decreased chronic and infectious diseases in children. Yet at best, only 50 percent of U.P. mothers initiated breastfeeding, and in Schoolcraft County only 9 percent of mothers ever breastfed. Given the significant drop-offs in breast feeding that occur at two months and beyond, very few babies are likely to reach the recommended six months of exclusive breastfeeding. In Baraga, Gogebic, Houghton, Keweenaw, and Menominee Counties, more women actually breastfed than indicated they planned to do so; in Baraga and Gogebic counties, twice as many women breastfed as had planned to do so. In the remaining counties, significantly fewer women breastfed than had indicated they planned to do so, indicating there are many other factors that affect breast feeding beyond intention. Despite the need to support post-partum women with breast feeding, there is a shortage of lactation consultants across the UP. Health departments are attempting to address this professional shortage by utilizing peer educators and increasing the trained consultant workforce.

- In two-thirds of the counties, more than half of 2015 births were covered by Medicaid. This speaks to the prevalence of children living in households which are struggling economically.
- Enrollment and use of WIC resources for supplemental food was higher for children than for pregnant women in all counties except Schoolcraft, and WIC enrollment was higher in the U.P. than the state overall. The lower utilization rate for mothers indicates an area of concern; women in need may be unaware of or unwilling to seek or accept assistance during pregnancy thereby placing themselves and their babies at unnecessary risk for poor health outcomes.

Maternal Risk Factors

The next series of tables report data for maternal factors correlated with an increased likelihood of poor health outcomes for mothers and their infants.

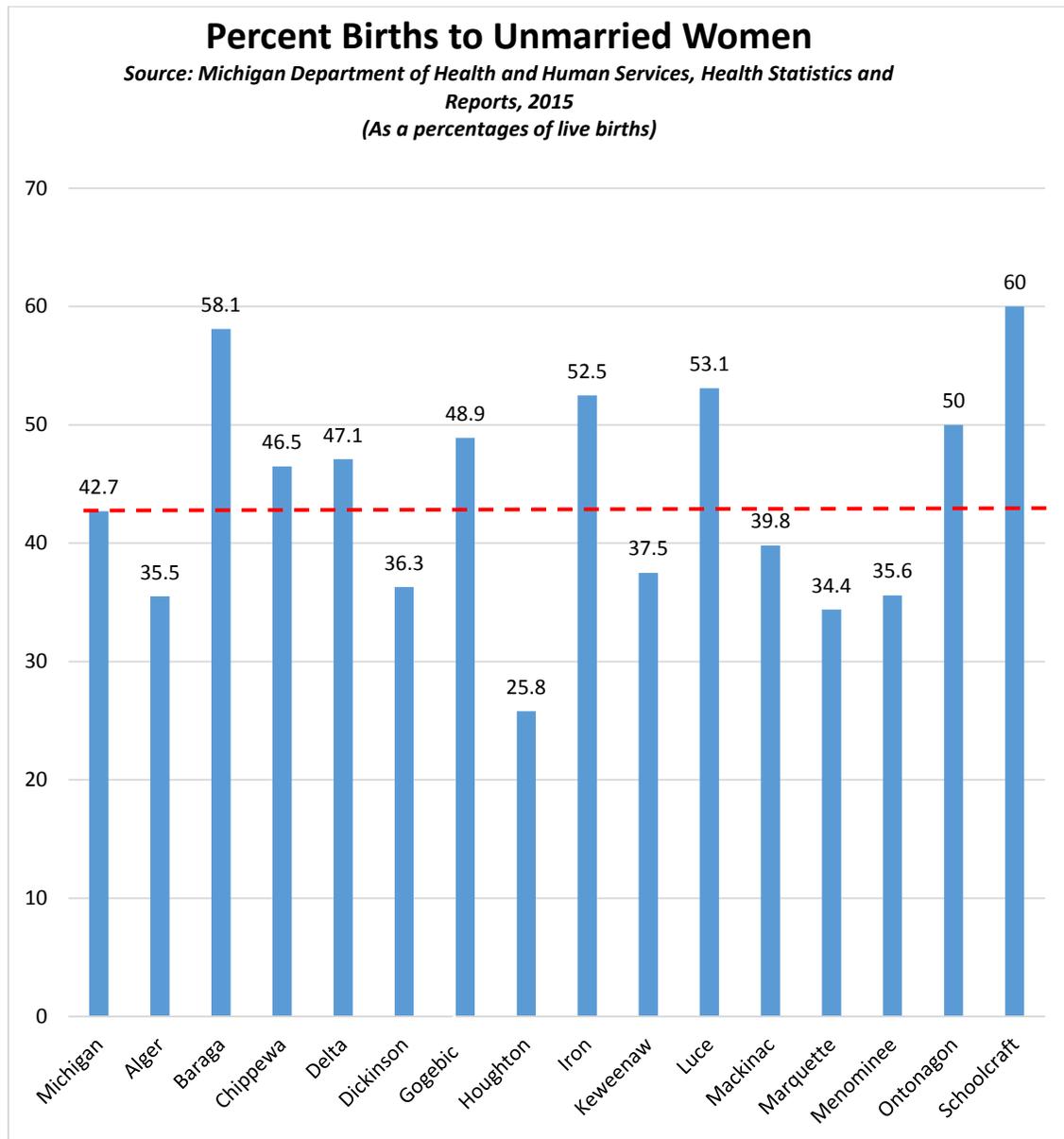
Births to Teens

Teens are less likely to access adequate prenatal care and are more likely to deliver preterm and low birth weight babies. Teen mothers and their children are more likely to drop out of high school and have lower educational attainment. In addition, infants born to teen mothers are more likely to live in poverty. Teen pregnancy rates, like birthrates overall, have been gradually declining locally and nationwide since 1990. Six of the 11 U.P. counties with reliable data reported the proportion of infants born to teenage mothers was above the state average.

Percent births to mothers under age 20 <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	5.7
Alger	*
Baraga	6.8
Chippewa	5.8
Delta	6.6
Dickinson	4.6
Gogebic	7.6
Houghton	4.3
Iron	10.0
Keweenaw	*
Luce	*
Mackinac	6.0
Marquette	3.7
Menominee	7.3
Ontonagon	*
Schoolcraft	16.4
*Indicates that data were suppressed due to small number of records	

Births to Unmarried Women

Births to unmarried women historically have been associated with increased risk for poorer health outcomes. Unmarried women are less likely to access adequate prenatal care or care within the first trimester, more likely to give birth to a low birth weight baby, more likely to smoke while pregnant, and less likely to breastfeed. While unplanned pregnancies can occur at any age and regardless of marital status, as more women choose to cohabit, remain unmarried and plan pregnancies, these patterns of risk may change. More than half of the births in Baraga, Iron, Luce, Ontonagon, and Schoolcraft Counties were to unmarried women in 2015.



Maternal Education

Low maternal educational attainment is often correlated with young maternal age, and low income. These characteristics are also associated with a decreased probability of receiving early and adequate prenatal care, increased probability of smoking during pregnancy, and poor birth outcomes, such as preterm birth and low birth weight. Marquette and Houghton Counties have much lower rates of low maternal educational attainment compared to the state average and the remainder of the U.P. counties.

Percent births to mothers with less than 12 years of education <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	12.1
Alger	8.1
Baraga	14.9
Chippewa	10.7
Delta	9.7
Dickinson	7.6
Gogebic	13.0
Houghton	5.1
Iron	20.0
Keweenaw	*
Luce	14.3
Mackinaw	12.0
Marquette	5.0
Menominee	10.7
Ontonagon	*
Schoolcraft	*
*Indicates that data were suppressed due to small number of records	

Early Prenatal Care

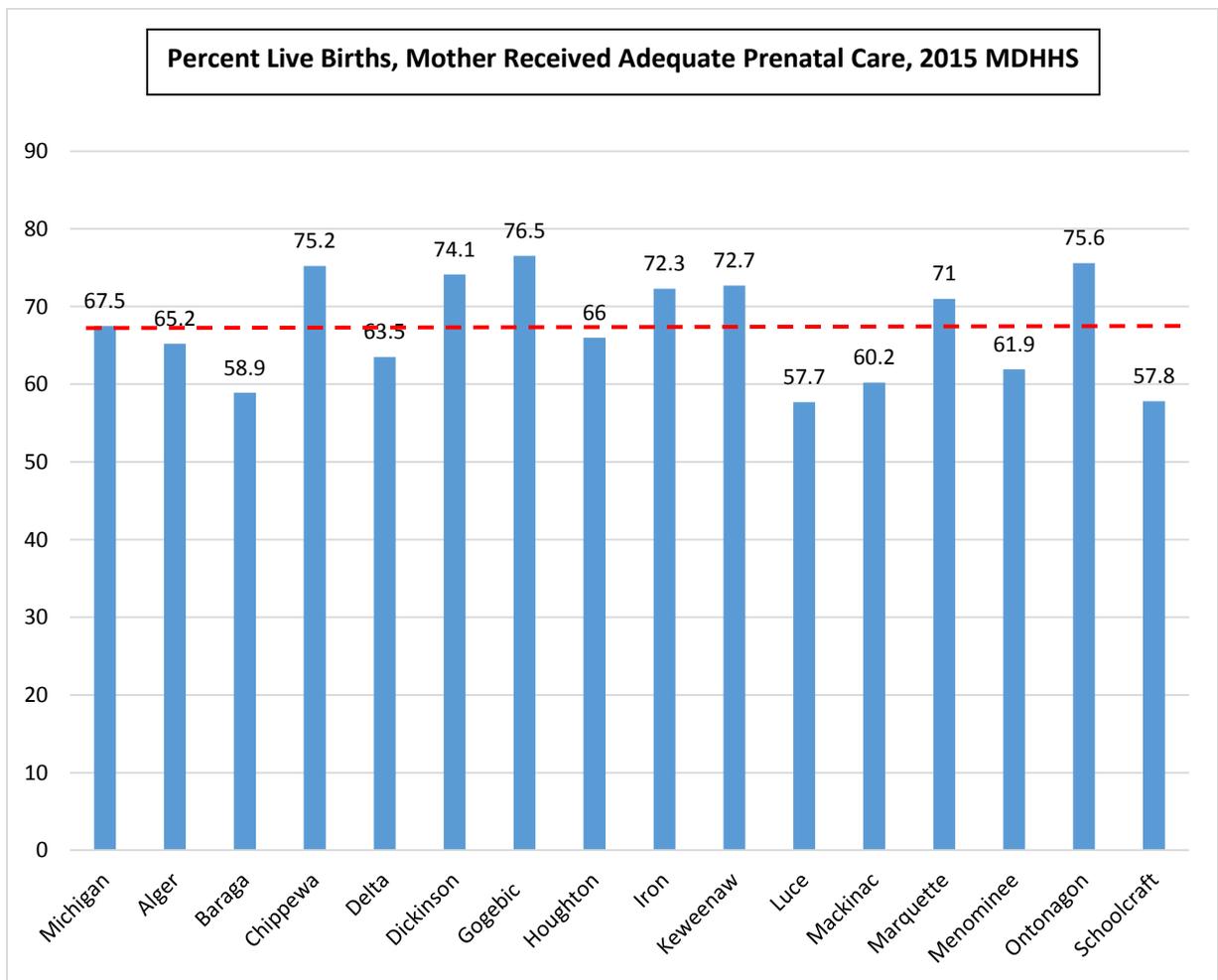
Early, quality prenatal care is widely recognized as a key strategy to improve maternal and infant health and reduce maternal death, preterm birth, and low birthweight. The American College of Obstetricians and Gynecologists (ACOG) recommends the initial prenatal care visit should occur within the first trimester (three months). Delays in prenatal care are associated with certain maternal characteristics, such as age, education, income level, and whether or not the pregnancy was planned. Limited access to quality prenatal care may also decrease a woman’s ability to enter care early in her pregnancy. Nearly half the women in Delta County and an astonishing 60 percent of the women in Menominee County (according to the table below) do not begin prenatal care during the first trimester, from MDHHS birth record data collected for all registered live births to Michigan residents by county of residence, regardless of the location of delivery; however, since women in Menominee County receive care in neighboring Marinette, Wisconsin, incomplete interstate reporting may account for the apparent disparity seen in Michigan data reports.

Percent received prenatal care during first trimester <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	72.3
Alger	67.7
Baraga	77.0
Chippewa	77.7
Delta	54.6
Dickinson	75.5
Gogebic	73.3
Houghton	74.5
Iron	68.8
Keweenaw	62.5
Luce	81.6
Mackinac	74.7
Marquette	78.1
Menominee	39.5
Ontonagon	75.0
Schoolcraft	67.3

Adequate Prenatal Care

Adequate, quality prenatal care is widely recognized as a key strategy to improve maternal and infant health and reduce maternal death, preterm birth, and low birthweight. The American College of Obstetricians and Gynecologists (ACOG) recommends monthly prenatal care visits beginning in the first trimester until 28 weeks of pregnancy and every two weeks thereafter. Adequate prenatal care is defined as beginning care in the first trimester and receiving 80 percent of the recommended number of visits, with a national Healthy People 2020 goal of 77.6 percent of women meeting the standard.

Prenatal care rates vary widely across the U.P., and they somewhat but not entirely correspond with the presence of birthing centers in counties. Less than 60 percent of women in Baraga, Luce, and Schoolcraft counties received adequate prenatal care as defined, but in seven counties more than 70 percent of women received adequate prenatal care. Those three counties lack hospital birthing centers; but another county with no labor and delivery, Ontonagon County, has a relatively high rate of adequate prenatal care, perhaps because of the presence of an FQHC clinic. Houghton County, despite two hospitals with obstetric services, had a rate below the State average.



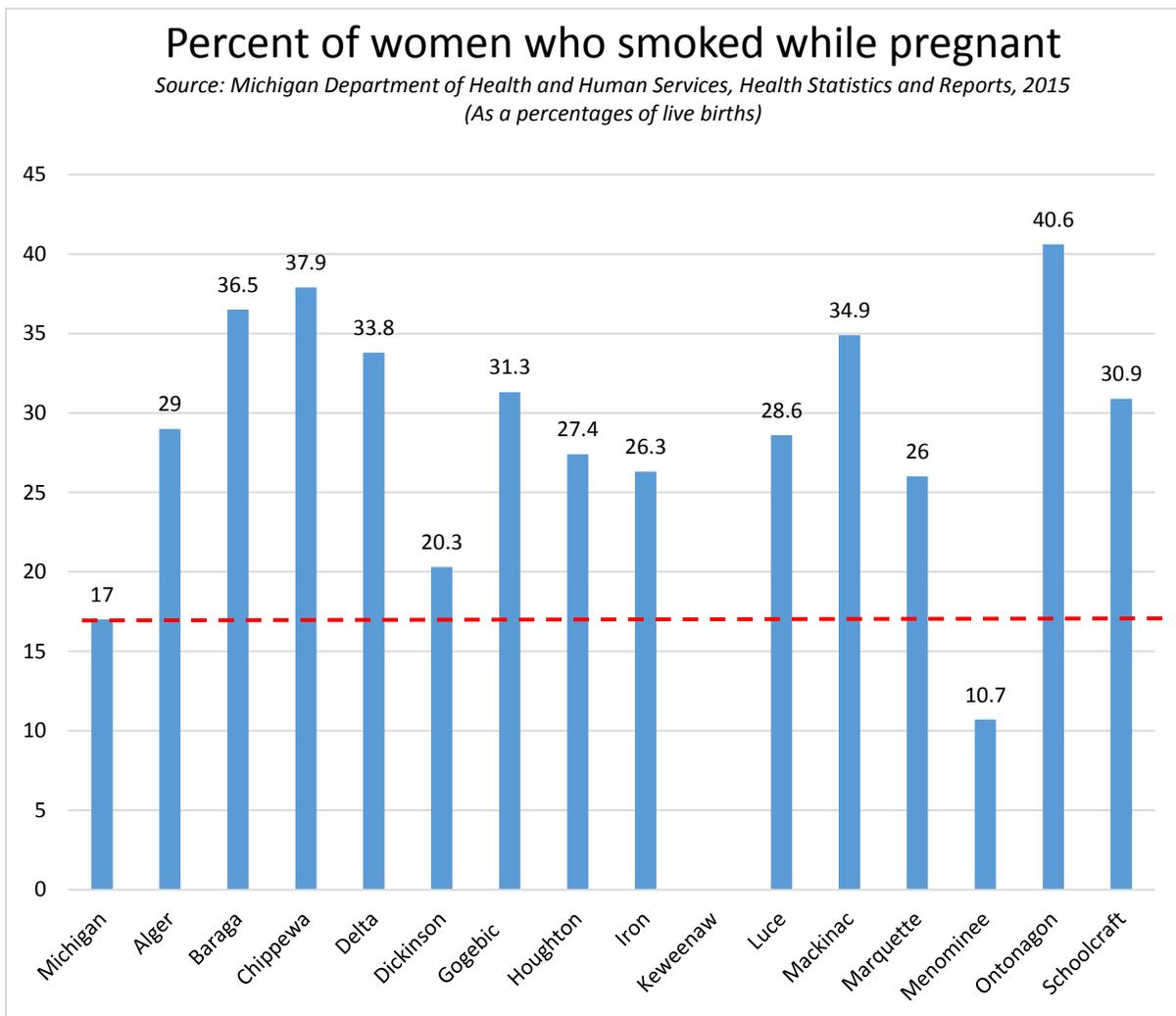
HIV Testing During Pregnancy

HIV can be transmitted from a mother to her baby during pregnancy, delivery or during breastfeeding. Early identification and treatment can reduce this risk of transmission from 25 percent to less than 2 in 100, according to a 2017 March of Dimes study. The CDC recommends all women get an HIV test early in each pregnancy to identify infections and start treatment, in order to improve maternal health and prevent perinatal transmission. HIV screening in pregnancy varies widely across the U.P. Adherence to recommendations is very low in Menominee and Chippewa Counties, where less than 20 percent of women were tested for HIV during pregnancy. Again, as women in Menominee County access care in Wisconsin, incomplete reporting may account for their low reported rate.

Percent births where HIV test performed during pregnancy <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	82.1
Alger	87.1
Baraga	75.7
Chippewa	17.1
Delta	56.8
Dickinson	46.0
Gogebic	72.5
Houghton	79.8
Iron	60.0
Keweenaw	68.8
Luce	61.2
Mackinac	30.1
Marquette	80.8
Menominee	13.2
Ontonagon	93.8
Schoolcraft	72.7

Smoking During Pregnancy

Tobacco use is associated with a broad range of poor health outcomes for smokers in general, and for infants who live in a household with smokers or are born to women who smoke during pregnancy. Aside from the impact of other components in cigarettes, nicotine decreases placental blood flow and can decrease the growth of the fetus leading to preterm delivery or a low birth weight infant. In addition, maternal smoking during and after pregnancy, is associated with an increased risk of Sudden Infant Death Syndrome (SIDS). Data on smoking is collected from birth certificates and reflects smoking during any part or all of the pregnancy. Smoking in the U.P. is generally higher than for Michigan and the U.S. The high rates of prenatal tobacco exposure in the U.P. evidenced below are disturbing and represent an ongoing health issue of alarming proportion. Menominee County stands out in a positive way with 90 percent of women reporting not smoking during any portion of their pregnancy.



Data from Keweenaw County were suppressed due to a small number of records.

Pregnancy Weight Gain

Recommendations for appropriate weight gain during pregnancy are based on pre-pregnancy body mass index (BMI); the recommended weight gain is higher for women who are underweight and lower for those women who are overweight or obese before they become pregnant. Gaining below or above the recommended weight can lead to health problems. Low weight gain is associated with delivery of a low birthweight baby, which can lead to an increased risk of infant mortality, developmental delays, and other health complications. Excessive weight gain during pregnancy is associated with a high birthweight infant, cesarean delivery, and childhood obesity.

Weight gain during singleton pregnancy <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>			
	Low weight gain	Recommended weight gain	Excessive weight gain
Michigan	19.9	29.6	46.6
Alger	21.0	33.9	43.5
Baraga	24.3	27.0	44.6
Chippewa	19.6	29.2	50.3
Delta	23.8	34.9	39.8
Dickinson	19.0	31.2	48.4
Gogebic	26.7	22.9	48.9
Houghton	19.0	33.8	47.0
Iron	15.0	28.8	56.3
Keweenaw	*	37.5	43.8
Luce	18.4	28.6	51.1
Mackinac	29.1	30.4	39.2
Marquette	25.1	32.3	40.7
Menominee	19.2	28.1	52.2
Ontonagon	25.0	15.6	59.4
Schoolcraft	21.8	25.5	50.9
*Indicates that data were suppressed due to small number of records			

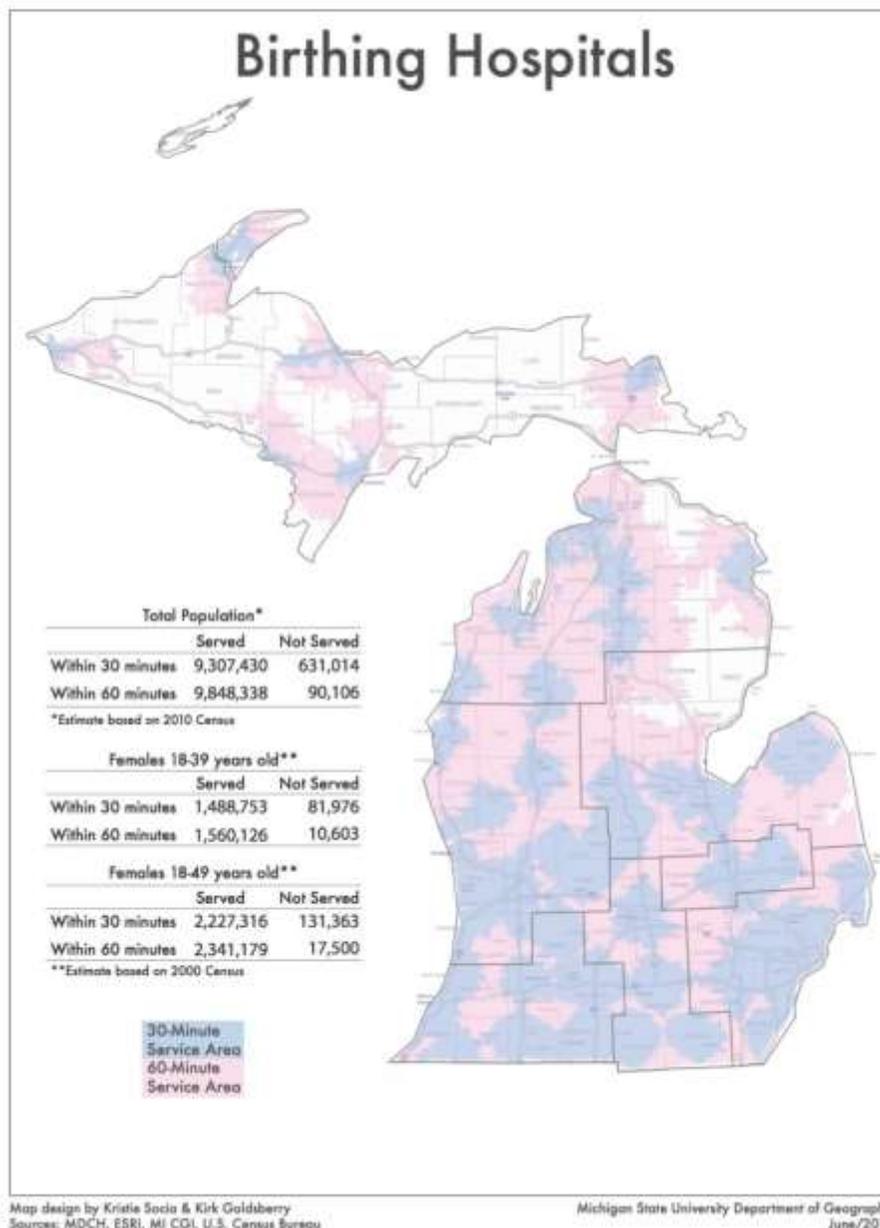
WIC During Pregnancy

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federally funded program that provides supplemental food, health care referrals, and nutrition education to low-income pregnant and post-partum women and children under 5 years old. By improving the nutrition of pregnant women, post-partum women, and breastfeeding mothers, the WIC program seeks to improve maternal health, reduce the likelihood of a low birthweight infant, and reduce infant mortality. With the exception of Alger and Marquette counties, enrollment and receipt of supplemental food from WIC during pregnancy was higher than Michigan rates, indicative of both a prevalence of low- to moderate income young families, and effective public health and Tribal health outreach efforts. In Schoolcraft County, more than 2-in-3 pregnant women were eligible and received food support through WIC.

Percent women receiving WIC food during pregnancy <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	41.6
Alger	32.3
Baraga	59.5
Chippewa	59.5
Delta	57.1
Dickinson	50.6
Gogebic	58.8
Houghton	42.6
Iron	66.3
Keweenaw	43.8
Luce	61.2
Mackinac	61.4
Marquette	38.6
Menominee	55.6
Ontonagon	56.3
Schoolcraft	70.9

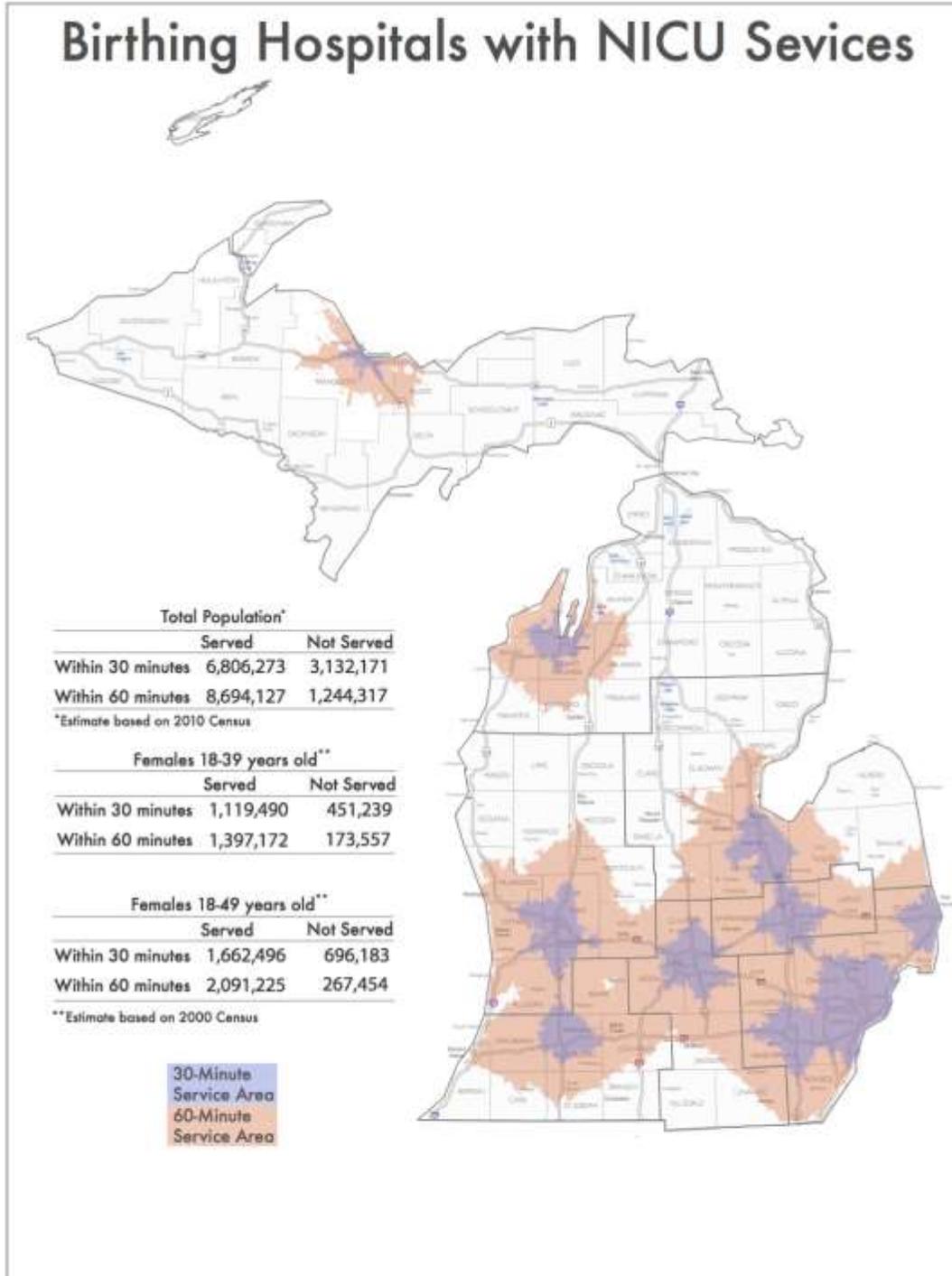
Obstetric Care

Access to obstetric care in rural areas across the United States has been declining for over a decade. With few births, maternity services become cost-inefficient for hospitals to maintain, leaving women with few options. Quality of care, access to prenatal care, and out-of-hospital births are affected by lack of access to birthing hospitals. In the U.P., winter weather conditions may further constrain access to obstetric care. As the map shows, there are no birthing centers in (west to east) Ontonagon, Keweenaw, Baraga, Iron, Menominee, Alger, Schoolcraft, Luce and Mackinac counties, but in most counties, satellite prenatal services are provided at least biweekly by providers from neighboring counties.



Proximity to Neonatal Intensive Care Unit (NICU)

The U.P.'s only NICU is located in Marquette.



Map design by Kristie Socia & Kirk Goldsberry
Sources: MDCH, ESRI, MI CGI, U.S. Census Bureau

Michigan State University Department of Geography
June/2011

Births Paid By Medicaid

In Michigan, pregnant women with no health insurance and a household income below 185 percent of the federal poverty level qualify for Medicaid. The federal poverty level is determined annually and is based on household and/or family size. The table below shows a five-year trend in the percentage of births paid by Medicaid, a reliable measure of low to moderate income levels among families with infants. Overall, rates declined slightly or leveled off in most U.P. counties between 2010 and 2015. Notable exceptions are Alger County, which has seen a marked decrease from 2010 to 2015, and Luce County, where rates increased over the time period.

	Percent of Births Paid by Medicaid					
	<i>Source: Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics. (As a percentages of live births)</i>					
	2010	2011	2012	2013	2014	2015
Michigan	45.3	45.1	44.0	43.9	42.8	43.5
Alger	75.4	52.8	60.0	60.6	53.6	40.0
Baraga	62.4	55.8	63.0	60.8	56.4	62.5
Chippewa	57.9	52.3	49.6	51.6	54.2	54.8
Delta	46.1	49.9	54.3	50.8	51.7	53.3
Dickinson	49.6	44.4	38.8	49.3	44.4	44.5
Gogebic	54.5	63.6	47.9	58.5	59.6	62.6
Houghton	41.3	41.0	37.8	33.1	32.5	34.4
Iron	53.3	64.2	52.2	59.1	61.9	63.0
Keweenaw	50.0	54.5	41.2	43.8	40.9	43.8
Luce	56.3	56.1	60.0	60.5	72.4	68.8
Mackinac	67.7	53.9	46.4	51.0	55.6	51.2
Marquette	45.2	45.5	42.6	43.9	47.2	43.8
Menominee	16.7	48.5	45.6	48.2	48.0	52.2
Ontonagon	52.6	68.6	50.0	46.4	54.2	56.3
Schoolcraft	65.7	65.7	57.9	68.2	57.8	61.8

Caesarean Birth Rates

The percentage of Caesarean deliveries steadily rose from 1996 and peaked in 2009 when 1-in-3 births were delivered by Caesarean. Significant efforts by the public health and medical communities have resulted in a reversal of the trend nationally, particularly among low-risk births. Throughout the U.P., women were more like to have a Caesarean delivery than women in Michigan overall, particularly women in Baraga and Delta counties.

Percent of Women with a Caesarean Delivery <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>		
	Cesarean delivery	Low-risk, first births that were Cesarean delivery
Michigan	31.9	16.5
Alger	37.1	20.0
Baraga	45.9	20.3
Chippewa	40.2	21.5
Delta	44.6	24.7
Dickinson	37.1	16.9
Gogebic	35.9	14.9
Houghton	30.1	14.8
Iron	30.0	21.1
Keweenaw	*	*
Luce	34.7	15.2
Mackinac	38.6	15.5
Marquette	40.1	19.2
Menominee	31.7	16.8
Ontonagon	34.4	16.7
Schoolcraft	38.2	14.3
*Indicates that data were suppressed due to small number of records		

Infant Risk Factors

The next series of tables report data for infant factors correlated with an increased likelihood of poor health outcomes for infants.

Infant Mortality

Infant mortality is defined as deaths occurring in individuals less than 1 year of age. Infant mortality rates are calculated as the number of infant deaths in a population divided by the total number of live births in the same population, times 1,000. For instance, a county with 1,000 births and 10 deaths in infants less than 1 year old or a county with 200 births and 2 deaths in infants less than 1 year old would each have an infant mortality rate of 10 per 1,000.

Infant mortality is often used as a key measure of the overall health of a population. In the United States, the top causes of infant mortality are birth defects, preterm birth, and low birth weight. In the U.P., the number of infant deaths is low and infant mortality rate cannot be reliably reported in many counties. Available data indicates infant mortality rates in the U.P. are similar to the overall Michigan rates. Even in the case of an outlier data point like Gogebic County's five-year rate below, examination of 10-year and longer time spans shows the U.P. tends toward an infant mortality rate of about 6 per 1,000, similar to the Michigan rate for Whites.

Infant Mortality Rate per 1000 live births, 2012-2016	
<i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports</i>	
Michigan	6.8
Alger	*
Baraga	*
Chippewa	4.0
Delta	6.0
Dickinson	5.4
Gogebic	9.9
Houghton	4.3
Iron	*
Keweenaw	*
Luce	*
Mackinac	*
Marquette	3.7
Menominee	*
Ontonagon	*
Schoolcraft	*
*Indicates that data were suppressed due to small number of records	

Low Birth Weight

Low birth weight (less than 5.5 pounds at birth) is the second leading cause of death among infants less than 1 year old in the United States. Babies may be born at low birth weight because of prematurity or due to growth restriction during pregnancy. Low birth weight babies are at increased risk of respiratory difficulties, vision loss, and chronic conditions later in life such as diabetes and high blood pressure. Menominee and Chippewa Counties reported about 50 percent fewer low birthweight infants than the state rate. About 1-in-8 infants born in Mackinac County were low birthweight, about 50 percent higher than the state rate, but in counties with only a few dozen births per year, a few cases more or less in a given year can have a considerable effect on rates. For this reason, it is important to look at trends over time. Over a longer time frame, U.P. low birth weight rates compare favorably to Michigan's rate.

Percent of births born with low birthweight <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>	
Michigan	8.5
Alger	*
Baraga	6.8
Chippewa	4.6
Delta	8.0
Dickinson	7.6
Gogebic	6.1
Houghton	6.1
Iron	7.5
Keweenaw	*
Luce	*
Mackinac	12.0
Marquette	8.3
Menominee	4.4
Ontonagon	*
Schoolcraft	10.9
*Indicates that data were suppressed due to small number of records	

Premature Birth

Preterm birth (birth at less than 37 weeks of gestation) increases the risk of death and disability to the infant. Preterm infants are more likely to be low birth weight, have respiratory difficulties, hearing and vision problems, and require advanced hospital care. In the United States, about 1 in 10 babies are born before 37 weeks of pregnancy, but rates differ significantly by race. African-American women are twice as likely to give birth prematurely compared with white women, and disparities persist across all income levels. Mackinac, Baraga, Marquette and Iron counties had slightly higher percentages of preterm births (12-14 percent of all births) while Menominee and Chippewa counties had fewer preterm births (4-5 percent of all births).

Percent of births born before 37 weeks pregnancy <i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i> <i>(As a percentages of live births)</i>		
	Late preterm (34-36 weeks)	Preterm (<37 weeks)
Michigan	7.0	9.8
Alger	*	*
Baraga	10.8	12.2
Chippewa	3.8	5.5
Delta	5.8	9.7
Dickinson	8.0	8.9
Gogebic	8.4	9.9
Houghton	4.8	6.4
Iron	11.3	11.3
Keweenaw	*	*
Luce	*	*
Mackinac	9.6	14.5
Marquette	8.9	11.4
Menominee	3.9	4.4
Ontonagon	*	*
Schoolcraft	9.1	10.9
*Indicates that data were suppressed due to small number of records		

Breastfeeding Rates

Breastfeeding imparts health benefits to both the mother and the baby. Women who breast feed are less likely to have breast cancer, heart disease, and Type 2 Diabetes. Infants who breast feed benefit from a reduced risk of multiple poor health outcomes. These benefits include a lower risk of asthma, ear and respiratory infections, and sudden infant death syndrome. Mothers who are less than 20 years old, have less than a high school degree, and are unmarried are less likely to breastfeed. Dickinson, Iron, and Schoolcraft counties far exceeded the Michigan rates for planned breastfeeding (around 70 percent) but had the lowest rate of initiation (less than 15 percent).

Percent of births with breastfeeding planned and initiated <i>Source: Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics.</i> <i>(As a percentages of live births)</i>			
	Breastfeeding not planned	Breastfeeding planned	Breastfeeding initiated
Michigan	17.9	36.8	44.0
Alger	16.1	51.6	30.6
Baraga	20.3	28.4	50.0
Chippewa	17.9	41.9	38.7
Delta	21.6	57.9	19.7
Dickinson	15.2	71.3	13.5
Gogebic	19.8	26.0	52.7
Houghton	7.2	38.8	52.7
Iron	17.5	72.5	10.0
Keweenaw	*	37.5	50.0
Luce	16.3	63.3	20.4
Mackinac	21.7	27.7	47.0
Marquette	14.0	53.9	30.2
Menominee	5.9	42.4	51.2
Ontonagon	*	46.9	40.6
Schoolcraft	21.8	69.1	9.1
*Indicates that data were suppressed due to small number of records			

WIC Enrollment

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federally funded program that provides supplemental food, health care referrals, and nutrition education to low-income pregnant and post-partum women and children under 5 years old. The goal of this program is to improve the nutrition and health of children in low-income families. Children in the U.P. are enrolled in WIC at higher rates than children across Michigan. From 2010-2015, the rates across each county were consistent. Baraga, Iron, Luce, and Schoolcraft Counties had consistently higher enrollment, where more than 70 percent of children were enrolled in this program. Those counties also have high rates of families meeting income eligibility, based on 185 percent of poverty.

	Percent of Children, ages 0-4, Participating in WIC					
	<i>Source: Michigan Department of Health and Human Services, Michigan WIC Program</i>					
	2010	2011	2012	2013	2014	2015
Michigan	50.5	51.2	51.4	52.0	51.1	49.1
Alger	58.1	60.2	62.3	67.5	58.6	53.6
Baraga	81.1	83.2	87.2	85.6	83.7	78.0
Chippewa	68.3	64.5	67.3	71.2	69.3	67.4
Delta	55.1	58.0	56.5	64.7	62.7	62.9
Dickinson	59.5	60.8	61.3	64.4	60.6	57.7
Gogebic	60.8	62.4	64.6	73.3	77.6	77.9
Houghton	49.5	50.8	50.8	50.7	48.9	47.9
Iron	81.7	75.4	70.9	81.4	73.6	75.3
Keweenaw	46.9	34.9	34.3	39.6	45.2	52.6
Luce	74.1	74.7	75.7	75.9	78.0	80.2
Mackinac	69.9	63.1	71.8	73.8	68.4	61.1
Marquette	46.4	46.7	43.1	44.8	44.4	44.3
Menominee	69.5	72.2	72.5	66.8	62.2	63.2
Ontonagon	63.6	61.0	65.4	68.9	72.2	69.3
Schoolcraft	74.5	73.9	80.6	69.5	69.9	70.7

Induced Abortions

Nearly all abortions in the U.S. are related to unintended pregnancy. Unintended pregnancies may be a result of incorrect contraceptive use, lack of access to contraceptives, or lack of use of contraceptives. The abortion rate is calculated as the number of reported induced abortions per 1,000 women aged 15-44 years old. The abortion rate in the U.P. is significantly lower than the state average. This may, in part, reflect the very limited access to abortion services in the region.

Abortion Rate per 1,000 women	
<i>Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2015</i>	
Michigan	13.1 ±0.1
Alger	2.1 ±1.6
Baraga	*
Chippewa	5.1 ±1.0
Delta	0.9 ±0.5
Dickinson	0.8 ±0.5
Gogebic	*
Houghton	0.9 ±0.4
Iron	*
Keweenaw	*
Luce	3.8 ±2.4
Mackinac	10.7 ±3.0
Marquette	2.6 ±0.5
Menominee	*
Ontonagon	*
Schoolcraft	3.1 ±1.8
*Indicates that data were suppressed due to small number of records	

Adverse Childhood Experiences

No discussion of maternal and child health would be complete without recognition of the role Adverse Childhood Experiences (ACEs) have on lifelong health-related outcomes. This area of research really took off when Kaiser Permanente, a managed care entity with an enormous patient base, conducted a study of 17,000 enrollees between 1995 and 1997. Individuals completed a survey that asked both about their childhood life experiences and adult health status to see if there was a correlation between negative childhood events and long term health outcomes. The results have forever altered the way we think about the influences of environment on lifelong health.

What ACEs research has demonstrated is the strong relationship between what happens to us in childhood and how healthy or unhealthy we are as adults. The graphic below from the CDC explains the mechanism by which this happens.



Adverse experiences before the age of 18 years which impact health include, but are not limited to: personal emotional, physical and sexual abuse, witnessed domestic abuse, household substance abuse and/or mental illness, parental separation or divorce, incarceration of a household member, as well as emotional and physical neglect.

The Kaiser study demonstrated that Adverse Childhood Experiences (ACEs) are common. Per the CDC, “almost two-thirds of study participants reported at least one ACE, and more than one in five reported three or more ACEs. The ACE score, a total sum of the different categories of ACEs reported by participants, is used to assess cumulative childhood stress. Study findings repeatedly reveal a graded dose-response relationship between ACEs and negative health and well-being outcomes across the life course.” In short, this means that as the number of ACEs increases for any individual, the greater that individual’s risk of engaging in risky health behaviors, developing chronic health conditions, having a low life potential and experiencing an early death. Specific negative outcomes include the following (next page):

Alcoholism and alcohol abuse * Chronic obstructive pulmonary disease * Depression * Fetal death*
 Lower health-related quality of life * Illicit drug use * Ischemic heart disease * Liver disease *
 Poor work performance * Financial stress * Risk for intimate partner violence * Multiple sexual
 partners * Sexually transmitted diseases * Smoking * Suicide attempts * Unintended pregnancies*
 Early initiation of smoking * Early initiation of sexual activity * Adolescent pregnancy * Risk for
 sexual violence * Poor academic achievement*

Nationally, the CDC has added an ACEs survey module to the BRFSS and states have been gradually adding this piece on to their surveys. The following tables describe the overall prevalence of ACEs, by category, for participants completing the ACE module on the 2010 national BRFSS, as well as the score prevalence.

ACE Category	Women	Men	Total
	Percent (N =32,539)	Percent (N =21,245)	Percent (N =53,784)
ABUSE			
Emotional Abuse	34.1%	35.9%	35.0%
Physical Abuse	15.8%	15.9%	15.9%
Sexual Abuse	15.2%	6.4%	10.9%
HOUSEHOLD CHALLENGES			
Intimate Partner Violence	15.6%	14.2%	14.9%
Household Substance Abuse	27.2%	22.9%	25.1%
Household Mental Illness	19.3%	13.3%	16.3%
Parental Separation or Divorce	23.1%	22.5%	22.8%
Incarcerated Household Member	5.2%	6.2%	5.7%

Number of Adverse Childhood Experiences (ACE Score)	Women	Men	Total
	Percent (N =32,539)	Percent (N =21,245)	Percent (N =53,784)
0	40.0%	41.4%	40.7%
1	22.4%	24.9%	23.6%
2	13.4%	13.2%	13.3%
3	8.0%	8.1%	8.1%
4 or more	16.2%	12.4%	14.3%

Note: Reports and articles that use data from other years and/or other states may contain different estimates.

Source: Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System Survey ACE Module Data, 2010*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2015. Available from <https://www.cdc.gov/violenceprevention/acestudy>.

Clearly, a large number of Americans experience a significant number of ACEs and are at risk for negative outcomes. Prevention and early intervention is critical. Strategies for reducing ACEs include the following from the CDC (next page):

What *can* Be Done About ACES?

These wide-ranging health and social consequences underscore the importance of preventing ACES before they happen. **Safe, stable, and nurturing relationships and environments (SSNREs)** can have a positive impact on a broad range of health problems and on the development of skills that will help children reach their full potential. Strategies that address the needs of children and their families include:



Local child abuse and neglect data gives us an idea about the prevalence of ACES in our communities but not all children experiencing ACES come to the attention of service agencies or are reported to the Michigan Department of Health and Human Services. The growing epidemic of opioid abuse, high rates of suicide, increasing incarcerations-particularly of women due to substance use-related crimes, and persistent poverty all suggest that many U.P. children are likely experiencing ACES and are at risk for negative long term outcomes.

U.P. Child Abuse and Neglect Data

Child abuse and neglect data are indicative of the annual incidence of a particular kind of serious Adverse Childhood Experience.

On the next two pages are data supplied to Michigan Department of Education's Great Start Collaboratives, from the Michigan Department of Health and Human Services source data on child abuse and neglect. The first of two tables gives numbers, and rates per 1,000, of substantiated cases of abuse and neglect per county for each of five years from 2011 to 2015. The second table shows numbers and rates for investigated cases. Statewide, about four cases are investigated for every one substantiated case, and U.P. data show a similar pattern, with many more cases investigated than those that are eventually classified as substantiated.

Larger population areas will generally have more cases investigated and substantiated, but the rates per 1,000 children age 0-8 allow for comparing jurisdictions on a per capita basis. A rate per 1,000 is equal to ten times the percentage of cases among the population age 0-8. For instance, a rate of 75 per 1,000 is equal to 7.5 percent. Rates per 1,000 are calculated by dividing the number of cases by the total population age 0-8, then multiplying by 1,000. For instance, if there are 200 cases and 2,000 children, dividing 200 by 2,000 equals 0.10, multiplied by 1,000 equals a rate of 100 cases per 1,000.

Counts and Rates of Substantiated Abuse and Neglect, Ages 0-8

Years	Number of Children Ages 0-8 Who Are Substantiated Victims of Abuse or Neglect					Rate per 1,000 Children Ages 0-8 Who Are Substantiated Victims of Abuse or Neglect				
	FY11	FY12	FY13	FY14	FY15	FY11	FY12	FY13	FY14	FY15
Michigan	21,056	21,288	22,013	21,887	25,036	19.1	19.7	20.6	20.6	23.8
<i>Alger</i>	4	14	6	29	29	*	20.5	9.0	46.0	46.0
<i>Baraga</i>	24	16	17	11	22	30.8	21.3	23.0	14.5	29.7
<i>Chippewa</i>	99	102	148	131	123	27.2	27.7	40.7	37.2	35.6
<i>Delta</i>	50	71	63	58	109	13.6	19.8	17.5	16.5	31.5
<i>Dickinson</i>	71	70	80	56	63	28.6	29.0	33.8	23.8	26.4
<i>Gogebic</i>	36	21	36	56	44	27.6	16.7	28.5	45.7	36.8
<i>Houghton</i>	38	72	46	47	37	9.8	19.3	12.3	13.0	10.2
<i>Iron</i>	29	26	24	50	46	31.5	28.0	26.5	55.4	52.9
<i>Keweenaw</i>	0	3	1	1	0	*	*	*	*	*
<i>Luce</i>	12	29	30	17	19	21.7	53.4	55.2	31.5	37.8
<i>Mackinac</i>	22	34	23	17	29	24.3	38.3	27.2	20.6	36.5
<i>Marquette</i>	123	119	124	108	128	20.1	19.4	20.2	17.8	20.8
<i>Menominee</i>	37	48	35	48	52	16.5	22.4	16.9	23.4	24.6
<i>Ontonagon</i>	11	8	15	6	17	24.5	19.3	39.6	17.1	53.8
<i>Schoolcraft</i>	25	17	23	12	11	33.5	23.2	33.1	17.4	16.3

For Michigan, the numbers and rates of substantiated cases of abuse and neglect rose gradually over the five-year period from 2011 to 2015. In U.P. counties, there was greater variability. For smaller population groups like U.P. counties, which have from a few hundred to a few thousand children age 0-8 compared with about a million children statewide, numbers and rates can vary greatly from year to year depending on fluctuations in cases reported, staffing and resources available for investigation and enforcement.

The numbers of cases per year in each county give a sense of numbers of children experiencing this type of Adverse Childhood Experience, and the rates, ranging from roughly 10 to 55 per 1,000, represent between 1 and 5.5 percent of the county's age 0-8 population. The statewide rate per 1,000 equals around 2 percent per year.

Counts and Rates of Investigated Abuse and Neglect, Ages 0-8

Years	Number of Children Ages 0-8 Who Lived in Families That Were Investigated for Child Abuse or Neglect					Rate per 1,000 Children Ages 0-8 Who Lived in Families That Were Investigated for Child Abuse or Neglect				
	FY11	FY12	FY13	FY14	FY15	FY11	FY12	FY13	FY14	FY15
Michigan	96,220	119,548	116,276	122,548	142,200	87.4	110.6	108.7	115.5	135.2
<i>Alger</i>	59	107	53	106	106	80.9	156.7	79.5	168.0	168.3
<i>Baraga</i>	102	160	110	103	132	130.8	213.3	148.8	135.7	178.4
<i>Chippewa</i>	446	638	654	676	644	122.5	173.5	179.8	192.1	186.3
<i>Delta</i>	308	536	523	500	714	83.8	149.3	145.0	142.1	206.4
<i>Dickinson</i>	243	322	270	257	413	97.9	133.5	114.0	109.3	172.8
<i>Gogebic</i>	201	209	172	192	182	154.4	165.9	136.4	156.7	152.2
<i>Houghton</i>	188	352	256	303	342	48.7	94.2	68.7	83.7	94.6
<i>Iron</i>	132	166	180	199	212	143.3	178.9	199.1	220.6	244.0
<i>Keweenaw</i>	0	7	9	6	1	*	35.7	49.7	34.1	*
<i>Luce</i>	85	123	118	145	153	154.0	226.5	217.3	268.5	304.8
<i>Mackinac</i>	107	135	89	90	120	118.1	152.0	105.1	109.0	150.9
<i>Marquette</i>	494	590	736	713	861	80.6	96.3	120.0	117.2	139.7
<i>Menominee</i>	203	267	206	271	325	90.4	124.8	99.4	132.1	153.7
<i>Ontonagon</i>	56	61	55	37	51	124.7	147.3	145.1	105.4	161.4
<i>Schoolcraft</i>	100	108	82	79	110	133.9	147.5	118.2	114.5	162.7

For Michigan, the numbers and rates of investigated cases of abuse and neglect rose steadily over the five-year period from 2011 to 2015, which may indicate greater staffing and resources devoted to investigation and enforcement activities. In U.P. counties, there was greater variability. For smaller population groups like U.P. counties, which have from a few hundred to a few thousand children age 0-8 compared with about a million children statewide, numbers and rates can vary greatly from year to year depending on fluctuations in cases, staffing and resources available for investigation and enforcement.

The numbers of cases per year in each county give a sense of numbers of children who may possibly be experiencing this type of Adverse Childhood Experience, and the rates, ranging from roughly 50 to 300 per 1,000, represent between 5 and 30 percent of the county's age 0-8 population. By comparison, the statewide rates per 1,000 rose from about 9 to 14 percent. The single-year rates of investigated cases in many U.P. counties were substantially higher than statewide rates, in some cases by more than double.

ADOLESCENT RISK FACTORS

During the transition from childhood to adulthood, adolescents establish patterns of behavior and make lifestyle choices that affect both their current and future health. Serious health and safety issues such as motor vehicle crashes, violence, substance use, depression and anxiety, and risky sexual behaviors can adversely affect adolescents and young adults acutely and over their lifetime. This is also a time when adolescents have an opportunity to recognize and adopt positive behaviors that could decrease their risk of developing chronic diseases in adulthood, such as eating nutritiously, engaging in regular physical activity, and choosing not to use tobacco. Environmental factors such as family, peer group, school, and community characteristics also impact adolescent health and risk behaviors. It is important that during this time of rapid change and development, teens access regular preventive care including well child exams, mental health and risk behavior screenings, recommended immunizations and reproductive health services to prevent pregnancy and sexually transmitted infection.

The Brain in Adolescence and Young Adulthood

For years, it was widely accepted that brain development was essentially complete by the time of adolescence. As research has progressed and brain imaging has improved, it has become clear that biological brain maturation is not actually complete until well into one's 20's. According to Dr. Laurence Steinberg, a psychologist at Temple University specializing in adolescent development, "Risk-taking increases between childhood and adolescence as a result of changes around the time of puberty in the brain's socioemotional system that lead to increased reward (pleasure) seeking, especially in the presence of peers. Risk-taking declines between adolescence and adulthood because of changes in the brain's cognitive control system—changes which improve individuals' capacity for self-regulation which occur gradually and over the course of adolescence and young adulthood."

Changing Brains Mean that Adolescents Act Differently From Adults

Pictures of the brain in action show that adolescents' brains work differently than adults when they make decisions or solve problems. Their actions are guided more by the emotional and reactive part of the brain (amygdala) and less by the thoughtful, logical frontal cortex. Research has also shown that exposure to drugs and alcohol during the teen years can change or delay these developments.

According to the American Academy of Child and Adolescent Psychiatry, based on the stage of their brain development, adolescents are more likely to:

- act on impulse
- misread or misinterpret social cues and emotions
- get into accidents of all kinds
- get involved in fights
- engage in dangerous or risky behavior

Adolescents are less likely to:

- think before they act
- pause to consider the consequences of their actions
- change their dangerous or inappropriate behaviors

These brain differences don't mean that young people can't make good decisions or tell the difference between right and wrong. It also doesn't mean that they shouldn't be held responsible for their actions. But these biologically set timelines for brain maturation may mean that development can't be hurried along. Educational programs geared for teens and young adults increase knowledge but may not always be effective at changing behavior. As Dr. Steinberg and others have suggested, it may be more helpful to change the context in which adolescent behavior occurs than to simply depend upon knowledge changing behavior. Examples of this strategy can be seen in initiatives like limiting the number of peers in the car with a young driver, increasing the legal drinking and tobacco use age, improving surveillance of alcohol sales, making contraceptives more easily accessible and improving access to mental health services.

An awareness of brain development differences between youth and adults can help parents, teachers, advocates, and policy makers understand, anticipate, and manage the behavior of adolescents.

National Adolescent Risk Factor Data

How does this discordance between early activation of the reward-driven part of the brain and later development of the self-regulation part of the brain manifest in health behaviors and outcomes? The Centers for Disease Control and Prevention (CDC) June 2018 report on the results of the 2017 Youth Risk Behavior Survey (YBRS) holds some answers. Every other year, thousands of teens in public and private high schools across the country take this nationally representative survey. Here a few of the main findings:

Sex

Teens' experiences with sex are changing. Fewer are initiating sex, fewer are currently sexually active, they're having fewer partners, and they're using more effective hormonal birth control methods. In 2007, nearly 48 percent of teens said they'd had sex at least once. A decade later, it's 39.5 percent. Unfortunately, there has been a recent decline in condom use. In 2007, 61.5 percent of teens said they'd used a condom during their last sexual encounter. By last year, that rate had dropped to 53.8 percent. The decrease might be due, at least in part, to a decrease over time in requirements that schools cover HIV and sexually transmitted diseases in health education programs, according to the CDC. According to the report, young people aged 15-24 account for half of the roughly 20 million new STDs reported each year. Another negative trend in the report related to non-consensual sexual activity: More than one in 10 young women (11.3 percent) reported being forced to have sex.

Drugs

When it comes to illicit drugs — like cocaine and heroin — teen use is way down, from 22.6 percent in 2007 to 14 percent in 2017. For the first time, though, the survey also asked teens if they have ever misused prescription opioids. Fourteen percent said they had. The CDC report says further study is needed to understand the role of youth in the opioid epidemic.

Violence

The survey also asked high-schoolers about bullying and violence at school. One in 5 said they'd been bullied at school. Fifteen percent said they'd been bullied electronically. The rate of students who said they'd been threatened or injured with a weapon at school has dropped significantly in the past decade. But students of color are still far more likely than white students to say they missed school because of safety concerns at school or in their communities.

Mental Health

Perhaps the biggest red flags were in the section devoted to mental health. Roughly a third of teens surveyed said they'd experienced persistent feelings of sadness or hopelessness. The news is even worse for students who identify as lesbian, gay or bisexual. Nearly two-thirds reported persistent feelings of sadness or hopelessness. In fact, in every category, LGB teens were at higher risk than their heterosexual classmates. They were twice as likely to report being bullied in school or electronically, three times as likely to seriously consider suicide and four times as likely to attempt suicide.

Local CTC Survey Data

Because of the importance of adolescents' risk-taking behaviors vis-à-vis their current and future health and safety, this chapter will focus on selected self-reported health risk behaviors and characteristics excerpted from recent-year youth surveys conducted in most, but not all, schools across the Upper Peninsula. The data in this chapter come not from the YBRS referenced above, but a similar, yet more detailed youth survey known as the Communities That Care (CTC) Youth Risk and Protective Survey, also known as the Bach Harrison Survey.

The graphs and tables that follow are based on data from recent surveys conducted by 13 CTC coalitions covering 14 U.P. counties in late 2016, 2017 or early 2018. Data from Chippewa County were not available for publication. The Houghton-Keweenaw CTC covers two counties but there is no high school in Keweenaw County. Most CTC coalitions conduct the youth surveys in schools every two years at grades 6-8-10-12 to gauge youth behaviors and community risk and protective factors, but Menominee County did not survey 12th graders and Houghton County did not survey 6th graders.

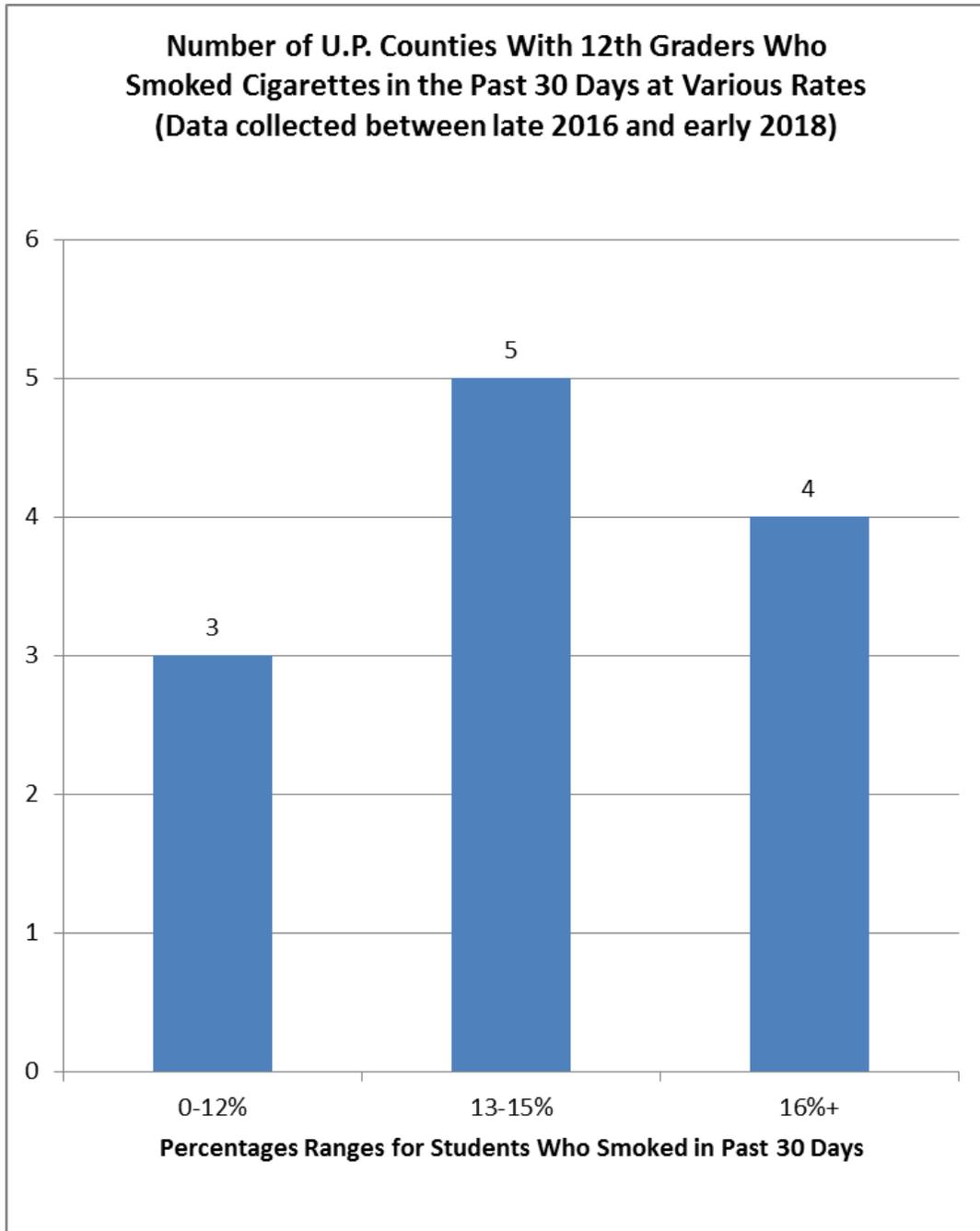
The data were excerpted from longer reports furnished by the CTC groups through Northcare Network, which helps fund U.P. CTC efforts. There are 14 CTC coalitions serving all 15 counties of the Upper Peninsula. These coalitions work together collectively as the U.P. Coalition Network. Research has shown that CTC helps lower the rates of youth problem behavior like alcohol/drug use, delinquency, depression, and more. The goal of CTC groups is simple: create communities in the Upper Peninsula where youth can thrive. CTC says that happier, healthier young people grow into healthier adults. Professionals, parents, youth, and other community members are welcome to participate in CTC.

Local Focus

On the following pages are four graphs related to U.P. teen rates for tobacco, alcohol and marijuana use as well as depression, followed by recent-year data from 13 CTC coalitions (2016-18). The four graphs look at prevalence for risk factors at grade 12, so only 12 counties' data are referenced, as Menominee County did not survey 12th graders during the recent round of CTC surveys. The data used to create the four graphs come from the most recent available surveys in each of 10 counties, from surveys taken at different times in each county, from December 2016 to early 2018.

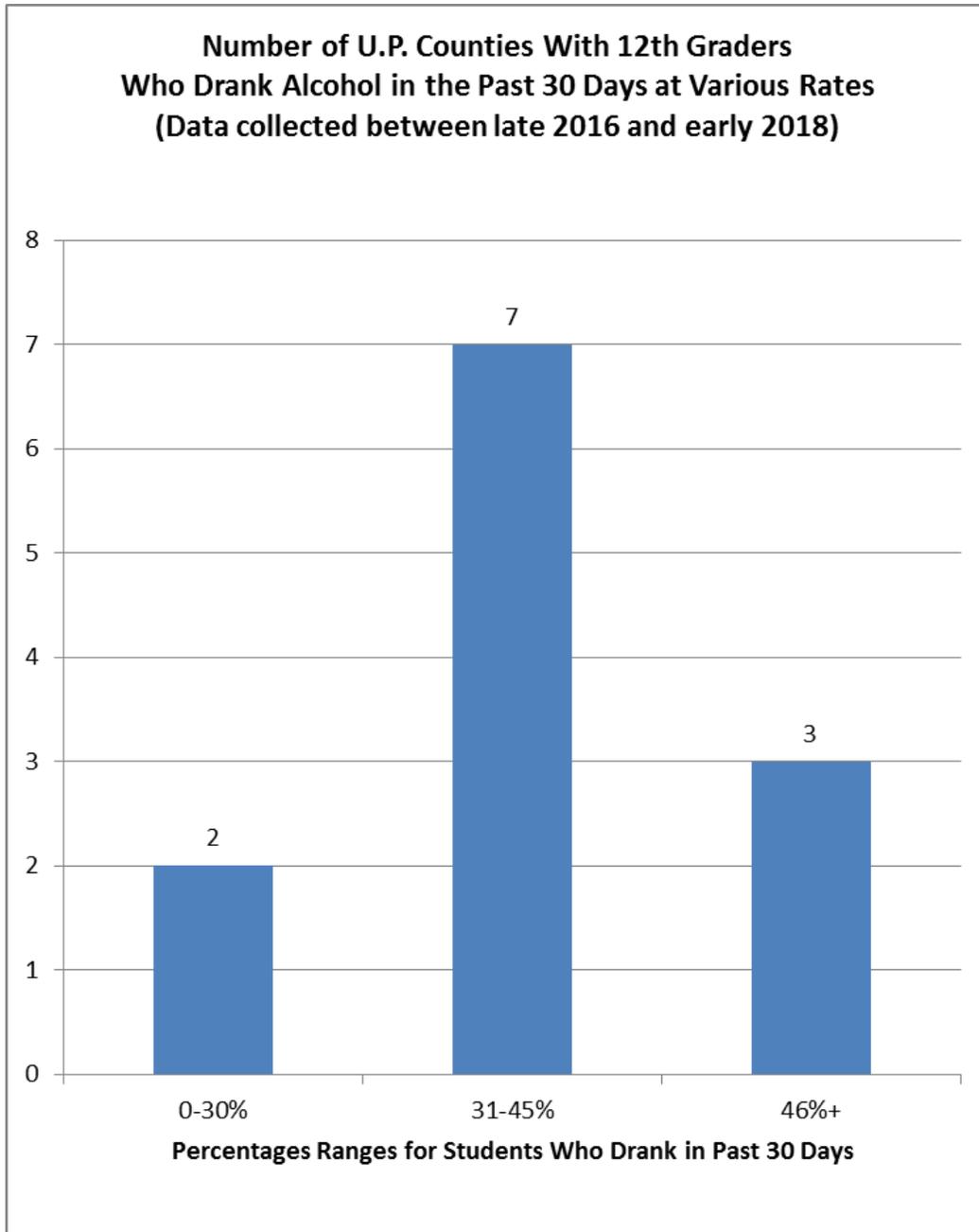
Youth Tobacco Use

Tobacco use primarily begins and becomes a sustained or lifelong habit during adolescence. The Centers for Disease Control and Prevention (CDC) estimate that if smoking continues at its current rate among the country's youth, 5.6 million of today's Americans younger than 18 will die early of a smoking-related illness. In 2015, the Department of Health and Human Services reported that approximately 6 percent of 12th graders smoked in the last 30 days. Most U.P. counties have a higher incidence of 12th graders who smoke than the national estimates.



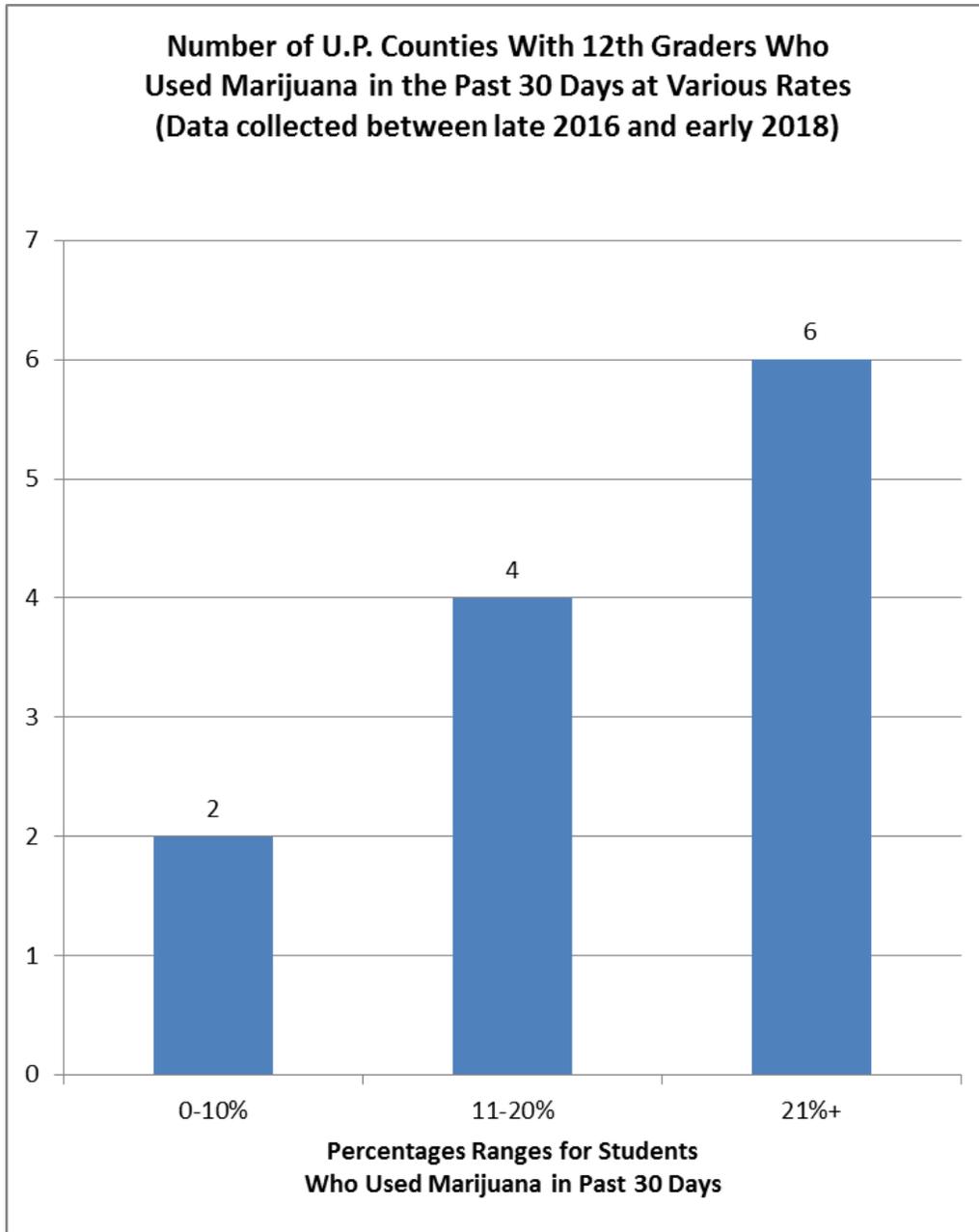
Youth Alcohol Use

Even though the national drinking age in the U.S. is 21, adolescents between the ages of 12 and 20 drink 11 percent of the alcohol consumed in this country. Youth who drink are more likely to have school, social, legal, and physical problems related to their alcohol use. Also, research has found that adolescents who start drinking before the age of 15 are six times more likely to develop alcohol dependence or abuse problems as adults. According to the Monitoring the Future Study, 33 percent of 12th graders in the U.S. had consumed alcohol during the past 30 days.



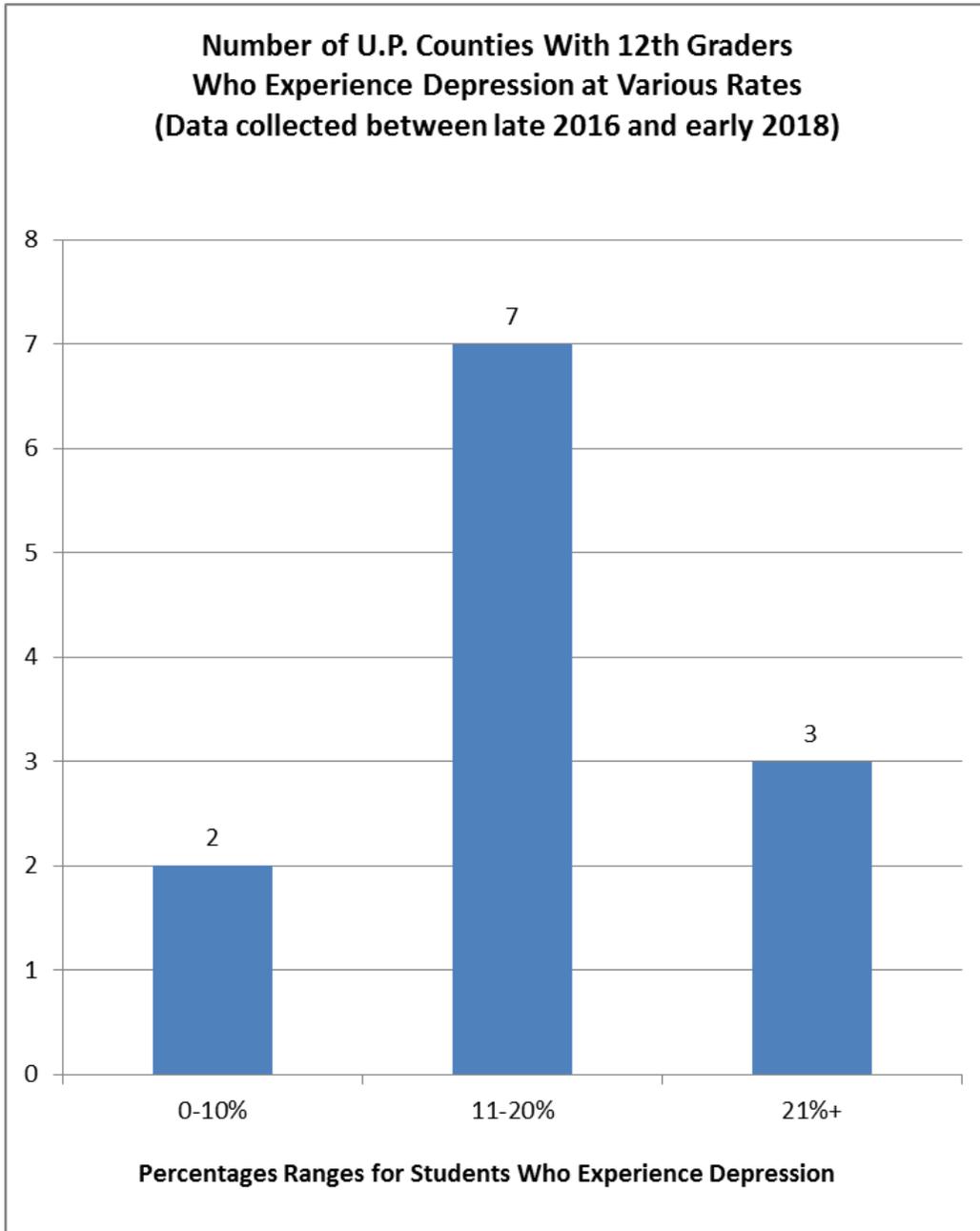
Youth Marijuana Use

Teen brains are still developing and can be permanently damaged by marijuana use. Marijuana can negatively impact school performance through difficulty in thinking and problem solving, impaired coordination and difficulty maintaining attention. Teens who use marijuana regularly are also at increased risk for mental health issues, impaired driving and addiction. According to the National Institute on Drug Abuse, approximately 23 percent of 12th graders have used marijuana in the past 30 days.



Youth and Depression

Teen depression has become a greater focus of public health in recent years as teen suicide rises. There are many risk factors for depression in teens, including being a victim of violence or abuse, experiencing ongoing pain, having a physical disability, holding certain personality traits, and living in an unsupportive environment. Family history of depression or other mental health diagnosis, substance abuse, suicide, familial dysfunction, or recent stressful life events also increase the risk of teen depression.



Alger County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6th grade	8th grade	10th grade	12th grade
Never	100%	94.6%	86.4%	75.4%
Once or twice; once in a while but not regularly	0%	4.1%	10.6%	15.3%
Regularly in the past; regularly now	0%	1.4%	3.0%	9.2%
Frequency of use of smokeless tobacco during the past 30 days				
	6th grade	8th grade	10th grade	12th grade
Never	100%	98.6%	95.5%	84.6%
Once or twice	0%	1.4%	3.0%	7.7%
3-5 times per week; about once or twice a day	0%	0%	0%	3.1%
More than once a day	0%	0%	1.5%	4.6%
Ever smoked cigarettes				
	6th grade	8th grade	10th grade	12th grade
Never	97.3%	89.0%	82.1%	60.0%
Once or twice, once in a while but not regularly	2.7%	11.0%	16.5%	35.4%
Regularly in the past; regularly now	0%	0%	1.5%	4.6%
Frequency of smoking cigarettes during the past 30 days				
	6th grade	8th grade	10th grade	12th grade
Not at all	100%	98.6%	95.5%	87.7%
Less than one cigarette per day	0%	1.4%	4.5%	9.2%
Between one cigarette and half a pack a day	0%	0%	0%	0%
About one pack per day	0%	0%	0%	3.1%
Smoked at least 100 cigarettes in your entire life				
	6th grade	8th grade	10th grade	12th grade
No	100%	98.6%	97.0%	92.2%
Yes	0%	1.4%	3.0%	7.8%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6th grade	8th grade	10th grade	12th grade
0	93.5%	80.8%	56.1%	33.8%
1-9	6.5%	17.8%	34.8%	41.5%
10-39	0%	1.4%	6.0%	15.4%
40+	0%	0%	3.0%	9.2%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	91.7%	86.4%	60.0%
1-9	0%	8.3%	12.1%	33.9%
10-39	0%	0%	1.5%	4.6%
40+	0%	0%	0%	1.5%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	95.9%	94.0%	80.0%
1-5	0%	4.1%	6.0%	16.9%
6-9	0%	0%	0%	1.5%
10+	0%	0%	0%	1.5%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	94.5%	81.8%	64.6%
1-9	0%	5.5%	10.5%	21.6%
10-39	0%	0%	4.5%	3.1%
40+	0%	0%	4.5%	10.8%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	98.6%	93.9%	80.0%
1-9	0%	1.4%	1.5%	12.3%
10-39	0%	0%	4.5%	1.5%
40+	0%	0%	0%	6.2%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	100%	97.0%	93.8%
1-9	0%	0%	3.0%	4.6%
10-39	1.3%	0%	0%	0%
40+	0%	0%	0%	1.5%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	100%	98.5%	98.5%
1-2	0%	0%	1.5%	0%
10-19	0%	0%	0%	1.5%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	27.3%	38.9%	37.4%	37%

Baraga County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	92.3%	72.9%	62.5%	56.7%
Once or twice; once in a while but not regularly	6.4%	20%	28.1	26.6%
Regularly in the past; regularly now	1.3%	7.2%	9.4%	16.7%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.7%	87.0%	87.5%	78.3%
Once or twice; once or twice per week	1.3%	10.1%	4.7%	6.7%
3-5 times per week; about once a day	0%	1.4%	1.6%	0%
More than once a day	0%	1.4%	6.3%	15.0%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	92.2%	72.9%	67.2%	55.0%
Once or twice, once in a while but not regularly	7.8%	24.3%	26.6%	34.9%
Regularly in the past; regularly now	0%	2.9%	6.3%	10.0%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100%	94.3%	90.5%	83.3%
Less than one cigarette per day	0%	2.9%	4.8%	3.3%
Between one cigarette and half a pack a day	0%	2.9%	3.2%	13.4%
About one pack per day	0%	0%	1.6%	0%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	98.7%	94.3%	92.2%	83.3%
Yes	1.3%	5.7%	7.8%	16.7%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	87.0%	78.3%	51.6%	30.0%
1-9	9.1%	20.2%	26.5%	26.6%
10-39	2.6%	2.9%	15.7%	20.0%
40+	1.3%	1.4%	6.3%	23.3%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	94.8%	89.9%	81.3%	55.0%
1-9	3.9%	8.7%	15.6%	35.0%
10-39	1.3%	1.4%	3.1%	8.3%
40+	0%	0%	0%	1.7%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	97.2%	85.9%	73.3%
1-5	0%	1.4%	12.2%	25.0%
6-9	0%	1.4%	0%	1.7%
10+	0%	0%	1.6%	0%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.2%	92.8%	76.6%	67.8%
1-9	3.9%	2.8%	12.6%	10.2%
10-39	0%	0%	4.7%	8.5%
40+	0%	4.3%	6.3%	13.6%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	95.7%	87.5%	84.7%
1-9	1.3%	0%	11.0%	8.5%
10-39	0%	2.9%	1.6%	3.4%
40+	0%	1.4%	0%	3.4%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	98.6%	98.4%	93.2%
1-9	0%	0%	1.6%	5.1%
10-39	0%	1.4%	0%	1.7%
40+	0%	0%	0%	0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	100%	100%	96.6%
1-2	0%	0%	0%	3.4%
10-19	0%	0%	0%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	45.5%	33.3%	40.7%	25%

Delta County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.2%	95.9%	83.7%	66.2%
Once or twice; once in a while but not regularly	1.5%	4.1%	11.7%	24.3%
Regularly in the past; regularly now	0%	0%	4.6%	9.6%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	98.1%	93.5%	87.5%
Once or twice; once or twice per week	0%	.2%	4.3%	8.1%
3-5 times per week; about once a day	0%	0%	.6%	1.5%
More than once a day	0%	0%	1.5%	2.9%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	94.8%	87%	79.2%	55%
Once or twice, once in a while but not regularly	5.2%	11.9%	15.8%	32.8%
Regularly in the past; regularly now	0%	1.1%	5%	11.7%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	99.1%	98.3%	94.4%	95.8%
Less than one cigarette per day	.9%	1.4%	3.4%	2.5%
Between one cigarette and half a pack a day	0%	.3%	1.9%	1.4%
About one pack per day	0%	0%	.3	.4%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	99.7%	99.7%	94.1%	85.4%
Yes	.3%	.3%	5.9%	14.6%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	83.7%	74.7%	45.5%	24.1%
1-9	14.9%	20.8%	31.4%	27%
10-39	.9%	3.6%	15.4%	23.4%
40+	.6%	.8%	7.7%	25.5%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	95.5%	91.3%	71.1%	53.3%
1-9	4.5%	8.2%	26.2%	40.9%
10-39	0%	.6%	2.1%	3.7%
40+	0%	0%	.6%	2.2%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.5%	96.3%	86.9%	66.4%
1-5	1.5%	3.4%	12.2%	32.2%
6-9	0%	.3%	.3	.7%
10+	0%	0%	.6%	.7%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.9%	91.9%	75.5%	54%
1-9	1.5%	6.1%	11.6%	21.8%
10-39	.3%	.8%	6.5%	5.8%
40+	.3%	1.1%	6.4%	18.2%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.5%	96.7%	86.2%	77.4%
1-9	1.2%	3.1%	9.9%	11.7%
10-39	0%	.3%	2.4%	5.1%
40+	.3%	0%	1.5%	5.8%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	94.9%	98.6%	95.4%	87.6%
1-9	5.1%	.9%	4.3%	11%
10-39	0%	.6%	.3%	0%
40+	-	-	-	-
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.9%	99.4%	99.4%	98.8%
1-2	1.2%	.3%	.6%	.7%
10-19	0%	.3%	0%	.6%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	39.3%	41.5%	40.4%	39%

Dickinson County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	97.0%	92.7%	80.6%	74.4%
Once or twice; once in a while but not regularly	2.5%	6.2%	17.4%	15.5%
Regularly in the past; regularly now	0.4%	1.2%	1.9%	10.1%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.7%	97.3%	91.1%	84.5%
Once or twice; once or twice per week	1.3%	2.3%	7.7%	7.1%
3-5 times per week; about once a day	0.0%	0.0%	1.2%	8.3%
More than once a day	0.0%	0.0%	0.4%	6.5%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	95.5%	91.7%	80.2%	59.1%
Once or twice, once in a while but not regularly	4.5%	7.9%	17.5%	33.3%
Regularly in the past; regularly now	0.0%	0.4%	2.4%	7.5%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100.0%	98.8%	95.6%	84.2%
Less than one cigarette per day	0.0%	0.8%	2.8%	8.9%
Between one cigarette and half a pack a day	0.0%	0.0%	1.6%	6.4%
About one pack per day	0.0%	0.4%	0.0%	0.6%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	99.5%	99.6%	96.8%	92.4%
Yes	0.5%	0.4%	3.2%	7.6%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	85.8%	76.7%	49.8%	30.3%
1-9	12.5%	20.2%	35.4%	22.5%
10-39	1.3%	2.7%	11.6%	23.6%
40+	0.4%	0.4%	3.1%	23.6%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	95.7%	89.8%	76.3%	54.5%
1-9	3.4%	9.8%	22.2%	37.1%
10-39	0.9%	0.4%	1.5%	5.4%
40+	0.0%	0.0%	0.0%	3.0%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	96.0%	89.3%	69.8%
1-5	0.9%	2.8%	10.0%	27.0%
6-9	0.0%	0.4%	0.0%	0.6%
10+	0.4%	0.8%	0.8%	2.5%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	96.9%	80.9%	59.0%
1-9	1.3%	2.4%	13.2%	19.2%
10-39	0.0%	0.8%	4.3%	17.4%
40+	0.0%	0.0%	3.9%	11.4%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.1%	99.2%	91.4%	80.1%
1-9	0.9%	0.8%	7.1%	13.8%
10-39	0.0%	0.0%	1.2%	3.6%
40+	0.0%	0.0%	0.4%	2.4%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	97.7%	96.5%	92.1%
1-9	1.3%	2.0%	3.1%	7.2%
10-39	0.0%	0.4%	0.0%	0.6%
40+	0.0%	0.0%	0.4%	0.0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.1%	98.8%	99.6%	97.0%
1-2	0.9%	0.8%	0.4%	3.0%
10-19	0.0%	0.4%	0.0%	0.0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	39.6%	37.5%	44.6%	41.4%

Gogebic County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.1%	95.2%	93.1%	61.0%
Once or twice; once in a while but not regularly	0.9%	4.8%	4.6%	31.2%
Regularly in the past; regularly now	0.9%	0%	2.3%	7.8%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	99.0%	97.5%	87.0%
Once or twice; once or twice per week	0%	1.0%	2.3%	7.8%
3-5 times per week; about once a day	0%	0%	0%	0%
More than once a day	0%	0%	0%	5.2%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	96.1%	93.2%	72.0%	46.8%
Once or twice, once in while but not regularly	3.9%	5.8%	21.3%	42.9%
Regularly in the past; regularly now	0%	1.0%	6.6%	10.4%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100%	99.0%	93.3%	89.5%
Less than one cigarette per day	0%	0%	4.0%	5.3%
Between one cigarette and half a pack a day	0%	0%	2.7%	5.3%
About one pack per day	0%	1.0%	0%	0%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	100%	99.0%	94.7%	88.3%
Yes	0%	1.0%	5.3%	11.7%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	92.4%	73.3%	46.4%	24.7%
1-9	7.6%	22.9%	38.0%	33.8%
10-39	0%	2.0%	11.9%	20.8%
40+	0%	1.9%	3.6%	20.8%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.0%	92.4%	76.2%	49.4%
1-9	1.0%	7.6%	22.6%	42.9%
10-39	0%	0%	1.2%	6.5%
40+	0%	0%	0%	1.3%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	97.1%	88.0%	68.8%
1-5	0%	3.0%	10.7%	28.6%
6-9	0%	0%	1.3%	1.3%
10+	0%	0%	0%	1.3%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.1%	92.4%	85.7%	49.4%
1-9	1.9%	4.8%	6.0%	20.8%
10-39	0%	1.0%	6.0%	13.0%
40+	0%	1.9%	2.4%	16.9%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.0%	95.2%	91.7%	76.6%
1-9	1.0%	3.8%	8.4	10.4%
10-39	0%	1.0%	0%	11.7%
40+	0%	0%	0%	1.3%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.0%	94.2%	97.6%	92.2%
1-9	1.0%	3.9%	2.4%	6.5%
10-39	0%	1.0%	0%	0%
40+	0%	1.0%	0%	1.3%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.0%	97.1%	98.8%	97.4%
1-2	1.0%	2.9%	1.2%	2.6%
10-19	0%	0%	0%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	40.0%	36.2%	40.9%	57.2%

Houghton/Keweenaw County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	-	85.7%	71.2%	71.6%
Once or twice; once in a while but not regularly	-	9.9%	20.3%	19.0%
Regularly in the past; regularly now	-	4.3%	8.5%	9.5%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	-	93.8%	85.7%	85.8%
Once or twice; once or twice per week	-	4.4%	6.8%	7.5%
3-5 times per week; about once a day	-	1.8%	2.8%	1.4%
More than once a day	-	0%	4.6%	5.4%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	-	84.1%	72.5%	56.6%
Once or twice, once in a while but not regularly	-	14.7%	22.8%	35.9%
Regularly in the past; regularly now	-	1.2%	4.7%	7.3%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	-	97.4%	90.1%	80.6%
Less than one cigarette per day	-	1.3%	5.3%	11.8%
Between one cigarette and half a pack a day	-	0.6%	4.1%	6.9%
About one pack per day	-	0.6%	0.6%	0%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	-	98.7%	90.1%	89.6%
Yes	-	1.3%	9.9%	10.4%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	82.8%	63.2%	47.6%
1-9	-	15.2%	27%	25.1%
10-39	-	1.3%	6.9%	17.0%
40+	-	0.6%	2.9%	10.2%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	93.6%	83.9%	70.1%
1-9	-	5.8%	14.3%	27.9%
10-39	-	0.6%	1.1%	0.7%
40+	-	0%	0.6%	1.4%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	98.1%	91.3%	84.8%
1-5	-	1.9%	7.5%	15.1%
6-9	-	0%	0.6%	0%
10+	-	0%	0.6%	0%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	95.6%	84.5%	72.8%
1-9	-	3.8%	8.6%	11.6%
10-39	-	0%	4.6%	8.2%
40+	-	0.6%	2.3%	7.5%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	96.8%	94.8%	83.0%
1-9	-	2.5%	3.5%	10.8%
10-39	-	0%	1.2%	4.7%
40+	-	0.6%	0.6%	1.4%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	98.1%	97.1%	97.3%
1-90	-	1.9%	2.2%	2.7%
10-39	-	0%	0%	0%
40+	-	0%	0%	0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	-	99.4%	98.9%	100.0%
1-2	-	0.6%	0.6%	0%
3-5	-	0%	0.6%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	27.0%	33.9%	34.7%	31.9%

Iron County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	90.1%	83.1%	69.7%
Once or twice; once in a while but not regularly	0%	8.4%	15.5%	21.2%
Regularly in the past; regularly now	0%	1.4%	1.4%	9.1%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	95.7%	88.7%	86.4%
Once or twice; once or twice per week	0%	2.8%	8.4%	8.5%
3-5 times per week; about once a day	0%	0%	2.8%	3.0%
More than once a day	0%	1.4%	0%	3.0%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	97.4%	79.2%	71.8%	57.6%
Once or twice, once in a while but not regularly	2.6%	18.1%	22.5%	36.4%
Regularly in the past; regularly now	0%	2.8%	5.6%	6.0%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100.0%	97.2%	93.0%	83.3%
Less than one cigarette per day	0%	2.8%	4.2%	10.6%
Between one cigarette and half a pack a day	0%	0%	1.4%	4.5%
About one pack per day	0%	0%	1.4%	1.5%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	98.7%	97.2%	94.4%	89.2%
Yes	1.3%	2.8%	5.6%	10.8%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	83.1%	63.9%	29.6%	18.2%
1-9	15.6%	29.2%	47.9%	33.3%
10-39	1.3%	5.6%	18.3%	28.8%
40+	0%	1.4%	4.2%	19.7%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.1%	79.2%	56.3%	49.2%
1-9	3.9%	20.9%	38.0%	47.8%
10-39	0%	0%	5.6%	1.5%
40+	0%	0%	0%	1.5%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.4%	88.9%	80.3%	74.2%
1-5	2.6%	11.2%	16.9%	21.2%
6-9	0%	0%	2.8%	1.5%
10+	0%	0%	0%	3.0%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.1%	83.3%	67.6%	59.1%
1-9	3.9%	11.2%	16.8%	15.1%
10-39	0%	1.4%	5.6%	9.1%
40+	0%	4.2%	9.9%	16.7%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	94.3%	78.9%	72.7%
1-9	1.3%	4.3%	15.5%	13.7%
10-39	0%	0%	4.2%	10.6%
40+	0%	1.4%	1.4%	3.0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	94.4%	95.8%	95.5%
1-9	0%	5.6%	2.8%	4.5%
10-39	1.3%	0%	1.4%	0%
40+	0%	0%	0%	0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.7%	98.6%	98.6%	97.0%
1-2	1.3%	1.4%	1.4%	3.0%
10-19	0%	0%	0%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	38.5%	50.7%	57.7%	37.9%

Luce County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100.0%	81.6%	76.7%	77.1%
Once or twice; once in a while but not regularly	0%	16.3%	14.0%	20.0%
Regularly in the past; regularly now	0%	2.0%	9.3%	2.9%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	93.9%	90.7%	85.7%
Once or twice; once or twice per week	0%	4.0%	2.3%	11.4%
3-5 times per week; about once a day	0%	2.0%	0%	0%
More than once a day	0%	0%	7.0%	2.9%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	79.6%	79.1%	79.4%
Once or twice, once in a while but not regularly	0%	20.4%	21.0%	14.7%
Regularly in the past; regularly now	0%	0%	0%	5.9%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100%	98.0%	95.3%	97.0%
Less than one cigarette per day	0%	2.0%	2.3%	3.0%
Between one cigarette and half a pack a day	0%	0%	2.3%	0%
About one pack per day	0%	0%	0%	0%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	100%	100%	97.7%	91.2%
Yes	0%	0%	2.3%	8.8%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.4%	69.4%	60.5%	48.6%
1-9	2.6%	26.6%	37.2%	37.1%
10-39	0%	2.0%	0%	11.4%
40+	0%	2.0%	2.3%	2.9%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	83.7%	88.4%	68.6%
1-9	0%	16.3%	11.6%	31.5%
10-39	0%	0%	0%	0%
40+	0%	0%	0%	0%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	93.9%	93.0%	85.7%
1-5	0%	6.1%	7.0%	14.3%
6-9	0%	0%	0%	0%
10+	0%	0%	0%	0%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	89.8%	83.7%	80.0%
1-9	0%	8.1%	9.3%	5.7%
10-39	0%	0%	7.0%	11.5%
40+	0%	2.0%	0%	2.9%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	100%	97.7%	97.1%
1-9	0%	0%	2.3%	0%
10-39	0%	0%	0%	0%
40+	0%	0%	0%	2.9%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	100%	97.7%	97.1%
1-9	0%	0%	2.3%	0%
10-39	0%	0%	0%	0%
40+	0%	0%	0%	2.9%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	100%	100%	97.1%
1-2	0%	0%	0%	0%
10-19	0%	0%	0%	2.9%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	21.4%	38.7%	34.9%	45.7%

Mackinac County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	97.5%	87.7%	75.0%	62.5%
Once or twice; once in a while but not regularly	1.3%	7.7%	13.1%	20.0%
Regularly in the past; regularly now	1.3%	4.6%	11.9%	17.5%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.8%	95.4%	84.5%	85.0%
Once or twice; once or twice per week	1.3%	3.1%	4.8%	3.8%
3-5 times per week; about once a day	0%	0%	3.6%	1.3%
More than once a day	0%	1.5%	7.1%	10.0%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	95.0%	87.7%	72.6%	61.3%
Once or twice, once in a while but not regularly	5.0%	9.3%	25.0%	32.5%
Regularly in the past; regularly now	0%	3.0%	2.4%	6.3%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	97.5%	95.4%	91.6%	84.8%
Less than one cigarette per day	1.3%	3.1%	3.6%	7.6%
Between one cigarette and half a pack a day	1.3%	1.5%	4.8%	5.0%
About one pack per day	0%	0%	0%	2.5%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	NA	NA	NA	NA
Yes	NA	NA	NA	NA

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	86.3%	73.8%	55.3%	38.8%
1-9	13.8%	23.1%	34.2%	25.1%
10-39	0%	3.0%	4.7%	20.1%
40+	0%	0%	5.9%	16.3%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	93.8%	89.2%	72.9%	60.0%
1-9	6.3%	10.8%	24.8%	33.8%
10-39	0%	0%	2.4%	5.0%
40+	0%	0%	0%	1.3%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.2%	92.3%	80.7%	72.5%
1-5	3.9%	4.5%	13.2%	23.8%
6-9	0%	3.1%	4.8%	1.3%
10+	0%	0%	1.2%	2.5%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.5%	90.8%	73.8%	65.0%
1-9	2.5%	4.5%	12.0%	17.5%
10-39	0%	3.1%	4.8%	6.3%
40+	0%	1.5%	9.5%	11.3%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.8%	92.3%	82.1%	80.0%
1-9	1.3%	6.1%	13.1%	13.8%
10-39	0%	0%	2.4%	1.3%
40+	0%	1.5%	2.4%	5.0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.9%	100%	96.3%
1-9	0%	1.5%	0%	2.6%
10-39	0%	1.5%	0%	1.3%
40+	0%	0%	0%	0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.9%	100%	97.5%
1-2	0%	1.5%	0%	1.3%
3-5	0%	1.5%	0%	1.3%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	38.0%	40.6%	47.7%	41.3%

Marquette County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.0%	95.4%	83.7%	73.5%
Once or twice; once in a while but not regularly	1.6%	3.7%	12.1%	19.2%
Regularly in the past; regularly now	0.4%	0.9%	4.2%	7.4%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	98.8%	99.1%	92.6%	87.2%
Once or twice; once or twice per week	0.8%	0.9%	5.6%	7.9%
3-5 times per week; about once a day	0.4%	0.0%	1.0%	0.5%
More than once a day	0.0%	0.0%	0.9%	4.4%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	93.3%	86.7%	74.6%	66.7%
Once or twice, once in a while but not regularly	5.1%	11.5%	19.7%	19.5%
Regularly in the past; regularly now	1.7%	1.8%	5.6%	13.9%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	98.7%	96.1%	94.3%	85.5%
Less than one cigarette per day	0.8%	2.1%	2.4%	6.7%
Between one cigarette and half a pack a day	0.4%	1.1%	2.9%	6.2%
About one pack per day	0.0%	0.5%	1.6%	0.4%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	98.3%	97.0%	93.4%	88.1%
Yes	1.7%	3.0%	6.6%	11.9%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	89.3%	75.7%	53.8%	37.5%
1-9	8.7%	20.5%	34.8%	33.0%
10-39	1.2%	2.9%	8.9%	17.5%
40+	0.8%	0.9%	2.4%	12.0%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.3%	92.4%	82.0%	65.3%
1-9	3.7%	6.7%	16.1%	31.6%
10-39	0.0%	0.9%	0.9%	2.0%
40+	0.0%	0.0%	0.0%	1.0%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.9%	96.4%	92.0%	77.4%
1-5	2.0%	2.7%	7.5%	21.0%
6-9	0.0%	0.3%	0.5%	1.0%
10+	0.0%	0.6%	0.0%	0.5%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.7%	90.1%	76.9%	62.0%
1-9	2.1%	7.9%	16.0%	15.5%
10-39	0.8%	1.2%	2.3%	11.5%
40+	0.4%	0.9%	4.7%	11.0%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.8%	96.2%	91.0%	82.9%
1-9	1.2%	3.7%	7.1%	13.5%
10-39	0.0%	0.0%	0.0%	0.0%
40+	0.0%	0.0%	0.9%	3.0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	96.7%	98.0%	95.7%	93.9%
1-9	3.3%	1.7%	4.3%	5.1%
10-39	0.0%	0.3%	0.0%	1.0%
40+	0.0%	0.0%	0.0%	0.0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.3%	99.4%	99.5%	99.2%
1-2	0.8%	0.6%	0.5%	0.5%
3-5	0.8%	0.0%	0.0%	0.0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	33.7%	38.3%	48.4%	39.4%

Menominee County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	96.8%	90.3%	85.3%	-
Once or twice; once in a while but not regularly	2.8%	8.6%	12.1%	-
Regularly in the past; regularly now	0.4%	1.2%	2.6%	-
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	99.4%	95.7%	93.3%	-
Once or twice; once or twice per week	0.6%	3.8%	5.7%	-
3-5 times per week; about once a day	0%	0.4%	0.5%	-
More than once a day	0%	0.2%	0.5%	-
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	95.6%	86.1%	78.6%	-
Once or twice, once in a while but not regularly	3.6%	12.6%	17.5%	-
Regularly in the past; regularly now	0.8%	1.4%	3.9%	-
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	99.0%	97.6%	92.5%	-
Less than one cigarette per day	0.8%	1.5%	4.6%	-
Between one cigarette and half a pack a day	0.2%	0.8%	2.4%	-
About one pack per day	0%	0.2%	0.3%	-
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	NA	NA	NA	NA
Yes	NA	NA	NA	NA

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	82.7%	67.4%	44.3%	-
1-9	16.2%	27.1%	40.4%	-
10-39	0.8%	4.4%	10.6%	-
40+	0.2%	1.1%	4.6%	-

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.2%	88.9%	78.8%	-
1-9	2.6%	10.7%	19.3%	-
10-39	0.2%	0.2%	1.0%	-
40+	0%	0.2%	0.8%	-
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.6%	94.9%	90.0%	-
1-5	1.2%	4.8%	8.7%	-
6-9	0%	0.8%	0%	-
10+	0.2%	0.0%	1.3%	-

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.3%	91.9%	78.1%	-
1-9	2.2%	5.5%	11.9%	-
10-39	0.4%	1.0%	3.6%	-
40+	0%	1.7%	6.2%	-
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.2%	94.7%	88.8%	-
1-9	0.8%	4.1%	8.1%	-
10-39	0%	0.4%	0.6%	-
40+	0%	0.8%	2.6%	-
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.9%	93.9%	93.0%	-
1-9	2.1%	5.0%	5.7%	-
10-39	0%	0.4%	1.0%	-
40+	0%	0.8%	0.3%	-
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	99.4%	98.5%	97.4%	-
1-2	0.6%	1.4%	2.6%	-
10-19	0%	0.2%	0%	-

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	NA	NA	NA	NA

Ontonagon County Communities That Care Data

Tobacco

Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	94.4%	92.6%	91.4%	80.6%
Once or twice; once in a while but not regularly	2.8%	7.4%	5.8%	13.9%
Regularly in the past; regularly now	2.8%	0%	2.9%	5.6%
Frequency of use of smokeless tobacco during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	96.3%	97.1%	88.9%
Once or twice; once or twice per week	0%	3.7%	2.9%	8.4%
3-5 times per week; about once a day	0%	0%	0%	0%
More than once a day	0%	0%	0%	0%
Ever smoked cigarettes				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	97.2%	77.8%	88.6%	63.9%
Once or twice, once in a while but not regularly	2.8%	14.8%	11.5%	19.4%
Regularly in the past; regularly now	0%	7.4%	0%	16.7%
Frequency of smoking cigarettes during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100%	92.6%	100%	83.3%
Less than one cigarette per day	0%	7.4%	0%	2.8%
Between one cigarette and half a pack a day	0%	0%	0%	5.6%
About one pack per day	0%	0%	0%	8.3%
Smoked at least 100 cigarettes in your entire life				
	6 th grade	8 th grade	10 th grade	12 th grade
No	100%	92.6%	100%	80.0%
Yes	0%	7.4%	0%	20.0%

Alcohol

Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?				
	6 th grade	8 th grade	10 th grade	12 th grade
0	94.4%	55.6%	79.4%	50.0%
1-9	2.8%	40.7%	5.9%	16.8%
10-39	0%	0%	5.9%	16.7%
40+	2.8%	3.7%	8.8%	16.7%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	97.2%	81.5%	94.1%	69.4%
1-9	2.8%	14.8%	5.8%	19.5%
10-39	0%	3.7%	0%	8.4%
40+	0%	0%	0%	2.8%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.3%	100%	72.2%
1-5	0%	0%	0%	24.9%
6-9	0%	0%	0%	0%
10+	0%	3.7%	0%	2.8%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	85.2%	97.1%	63.9%
1-9	0%	11.1%	0%	11.2%
10-39	0%	0%	0%	8.4%
40+	0%	3.7%	2.9%	16.7%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.2%	97.1%	71.4%
1-9	0%	0%	0%	14.3%
10-39	0%	0%	0%	8.6%
40+	0%	3.8%	2.9%	8.6%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.3%	100%	100%
1-9	0%	3.7%	0%	0%
10-39	0%	0%	0%	0%
40+	0%	0%	0%	0%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	94.4%	92.6%	97.1%	91.7%
1-2	5.6%	3.7%	0%	8.3%
10-19	0%	3.7%	2.9%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	47.2%	40.7%	23.5%	27.8%

Schoolcraft County Communities That Care Data

Tobacco

<i>Ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	83.9%	78.9%	67.9%
Once or twice; once in a while but not regularly	0%	11.3%	15.8%	26.4%
Regularly in the past; regularly now	0%	4.8%	5.3%	5.7%
<i>Frequency of use of smokeless tobacco during the past 30 days</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	100%	91.9%	91.1%	84.9%
Once or twice; once or twice per week	0%	8.1%	7.2%	9.4%
3-5 times per week; about once a day	0%	0%	0%	3.8%
More than once a day	0%	0%	1.8%	1.9%
<i>Ever smoked cigarettes</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
Never	95.0%	85.0%	73.7%	63.5%
Once or twice, once in a while but not regularly	5.0%	11.6%	19.3%	23.1%
Regularly in the past; regularly now	0%	3.3%	7.0%	13.4%
<i>Frequency of smoking cigarettes during the past 30 days</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
Not at all	100%	96.7%	91.2%	86.5%
Less than one cigarette per day	0%	0%	3.5%	3.8%
Between one cigarette and half a pack a day	0%	1.7%	1.8%	3.8%
About one pack per day	0%	1.7%	3.5%	5.8%
<i>Smoked at least 100 cigarettes in your entire life</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
No	100%	96.7%	93.0%	86.5%
Yes	0%	3.3%	7.0%	13.5%

Alcohol

<i>Number of times you have had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime – more than just a few sips?</i>				
	6 th grade	8 th grade	10 th grade	12 th grade
0	95.0%	65.6%	36.8%	23.1%
1-9	5.0%	26.1%	43.8%	32.6%
10-39	0%	6.5%	8.8%	25.0%
40+	0%	1.6%	10.5%	19.2%

Number of times you have had beer, wine or hard liquor to drink during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.3%	83.6%	68.4%	57.7%
1-9	1.7%	14.7%	26.3%	38.5%
10-39	0%	1.6%	3.5%	1.9%
40+	0%	0%	1.8%	1.9%
Number of times you have had five or more alcoholic drinks in a row				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.3%	91.7%	80.7%	75.0%
1-5	1.7%	6.7%	15.8%	24.9%
6-9	0%	0%	0%	0%
10+	0%	1.7%	3.5%	0%

Drug Use

Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	93.4%	71.9%	53.8%
1-9	0%	4.8%	12.3%	19.2%
10-39	0%	1.6%	10.6%	7.7%
40+	0%	0%	5.3%	19.2%
Number of times you have used marijuana (weed, pot) or hashish (hash, hash oil) during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	96.7%	87.7%	78.4%
1-9	0%	3.2%	3.5%	7.8%
10-39	0%	0%	8.8%	2.0%
40+	0%	0%	0%	11.8%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription in your lifetime				
	6 th grade	8 th grade	10 th grade	12 th grade
0	98.3%	95.1%	96.5%	90.4%
1-9	1.7%	3.3%	3.5%	3.8%
10-39	0%	0%	0%	3.8%
40+	0%	1.6%	0%	1.9%
Number of times you have used prescription opiate pain relievers (such as Vicodin®, Oxycontin®, or Tylox®) without a doctor's prescription during the past 30 days				
	6 th grade	8 th grade	10 th grade	12 th grade
0	100%	98.4%	98.2%	92.3%
1-2	0%	0%	1.8%	7.7%
10-19	0%	1.6%	0%	0%

Depression

Feelings of depression or sadness MOST days, even if you felt okay sometimes, in the past year				
	6 th grade	8 th grade	10 th grade	12 th grade
Yes	26.7%	39.3%	68.5%	51.0%

IMMUNIZATION

The steady increase in life expectancy during the 20th century was due largely to reductions in infant and child mortality. One of the single biggest contributors to this improvement was the reduction in childhood deaths due to infectious diseases. As noted by the CDC, “Disease control resulted from improvements in sanitation and hygiene, the discovery of antibiotics, and the implementation of universal childhood vaccination programs.”

Immunization recommendations in the United States currently target 17 vaccine-preventable diseases across the lifespan. Ongoing promotion of immunization is foundational and crucial to public health and primary care efforts because people in the United States and across the globe continue to acquire and spread diseases that are vaccine preventable. Unfortunately, the Internet Age has provided a platform for discredited “scientific information” and for anecdotal information that is untrue, frightening and meant to discourage immunization. It is an on-going public health challenge to counter this false information with the credible, research-based evidence which confirms the safety and efficacy of vaccination. Good information can empower adults to make sound choices to protect their own health and the health of their families through vaccination.

Reputable scientific peer-reviewed studies and population health data tell us that vaccines are among the most cost-effective clinical preventive services and are a core component of preventive health care. Childhood immunization programs provide a very high return on investment. For example, for each birth cohort vaccinated with the routine immunization schedule (this includes DTap, Hib, Polio, MMR, Hep B, and Varicella vaccines), society:

- Saves 33,000 lives
- Prevents 14 million cases of disease
- Reduces direct health care costs by \$9.9 billion
- Saves \$33.4 billion in indirect costs

Despite progress, approximately 42,000 adults and 300 children in the United States die each year from vaccine-preventable diseases. Communities with pockets of unvaccinated and under-vaccinated populations are at increased risk for outbreaks of these diseases. Increasing international travel carries with it the potential to bring nearly-eradicated pathogens, back to the United States from places where they are still endemic. The emergence of a new pathogen or even a novel strain of a vaccine-preventable disease can result in a significant increase in serious illnesses and death.

Vaccination recommendations and schedules are easily found in web-based and print publications of the CDC’s Advisory Committee on Immunization Practices (ACIP) and the professional organizations it works with, including the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Physicians (ACP). The ACIP schedules cover vaccine recommendations at all stages of life, from the many

combination shots given during childhood and adolescence, to important adult vaccinations like the Tdap (tetanus-diphtheria-pertussis), and vaccinations for seniors such as the shingles and pneumococcal shots. Two vaccines highlighted in this report because they are particularly topical, target Hepatitis A and HPV.

Hepatitis A is of increased interest because of an outbreak which began in Southeast Michigan in 2016 and continues at present. It has currently infected over 800 individuals and led to more than 25 deaths. Hepatitis A is a vaccine-preventable, communicable disease of the liver caused by the hepatitis A virus (HAV). It is usually transmitted person-to-person through the fecal-oral route or consumption of contaminated food or water. Hepatitis A is a self-limited disease that does not result in chronic infection. Most adults with hepatitis A have symptoms, including fatigue, low appetite, stomach pain, nausea, and jaundice, that typically resolve within two months of infection; most children less than 6 years of age do not have symptoms or have an unrecognized infection and yet are able to spread illness to others. Antibodies produced in response to hepatitis A infection last for life and protect against reinfection. Routine childhood vaccination against hepatitis A is recommended by the ACIP and for adults in high risk groups, as well as for any adult desiring protection. Vaccination is highly effective at preventing disease and is the best tool to stop spread of the virus within Michigan communities.

Human Papillomavirus (HPV) vaccine was first approved in the United States in 2006 and protects against cancers caused by HPV infection. HPV is a very common virus; nearly 80 million people – about one in four Americans – are currently infected. About 14 million people, including teens, become infected with HPV each year in the U.S. Many people with HPV never develop symptoms or health problems. Most HPV infections (9 out of 10) go away by themselves within two years. But sometimes HPV infections will last longer, and can cause certain cancers and other diseases. HPV infection can cause cancers of the cervix, vagina, and vulva in women; cancers of the penis in men; and cancers of the anus and back of the throat, including the base of the tongue and tonsils (oropharynx), in both women and men. Every year in the United States, HPV causes more than 30,000 cancers in men and women. HPV vaccination can prevent most of these cancers (about 28,000) from occurring. It is a powerful cancer prevention tool and all children should be vaccinated, beginning at 11 to 12 years of age.

Immunization data found in this report and on the 15 county report cards that follow was generated from the Michigan Care Improvement Registry (MCIR), Michigan's real-time registry and database for recording vaccinations and assessing immunization status for individuals and populations. MCIR was created in 1998 to collect reliable immunization information on children and make it accessible to authorized users including public health departments, physician clinics, schools and child-care providers. A 2006 change to the Michigan Public Health Code enabled MCIR to transition from a childhood immunization registry to a lifespan registry including immunization records for people of all ages. MCIR benefits health care organizations, schools, licensed childcare programs, pharmacies and Michigan residents by consolidating immunization information from multiple providers into a comprehensive immunization record. This consolidation promotes timely vaccination and prevents over-vaccination, allowing providers to view up-to-date patient immunization history in one system.

As we look at local data in the bulleted analyses on the next pages, and on the county tables that follow, it is important to remember that whether a county ranks near the best or worst in vaccination rates for particular diseases or age groups, there is always room for improvement. Health care providers, public health officials, schools, child care providers and other entities should continually strive to promote immunization and dispel misinformation, in order to better protect individuals and communities from vaccine-preventable diseases.

Local Focus (Data from the 15 one-page county report cards that follow, snapshots of immunization coverage among the indicated age groups, on Dec. 31, 2017)

19-35 Months

- Michigan ranked 29th among the 50 states in 2016 for childhood immunization coverage using the “4313314” completion rate for the cohort aged 19-35 months (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV.)
- While it’s easy and somewhat useful to compare U.P. counties based on their immunization rates by rank order, 1-84, among all Michigan counties, it is also important to remember that the differences in rates between the “best” and “worst” may be relatively small and that for many measures, few if any Michigan counties have met Healthy People 2020 goals. The most important benchmark should be whether the vaccination rate meets or exceeds what is needed to achieve a robust herd immunity, which can be 80 to 90 percent or higher, depending on the disease, so the importance of continuous improvement efforts cannot be overemphasized.
- Ontonagon has consistently been at or near the highest in ranking in terms of infant-toddler (19-35 months) vaccination completion rates for many years. Although the county is a federal Health Professional Shortage Area (HPSA) for primary care, it has just a few dozen births per year and enjoys certain structural advantages in immunization outreach – most residents live in the Village of Ontonagon, where a branch of the local health department, a hospital and a Federally Qualified Health Clinic are located. Ontonagon ranked best among the 84 counties for the “43133142” measure at the end of 2017, which included the seven vaccines listed above, plus two doses of HepA, at 69.2 percent. Note that Ontonagon actually exceeded two Healthy People 2020 goals at the end of 2017 – the rate for birth dose HepB coverage at 86.5 percent (HP2020 = 85%) and 4313314 coverage at 84.6 percent (HP2020 = 80%.)
- Not surprisingly, Ontonagon County also ranked first among all Michigan counties for 4313314 coverage among WIC-enrolled toddlers at 93.9 percent, and among Medicaid-enrolled toddlers at 88.0 percent. Immunization coverage is a quality indicator in these two programs that serve children from low-income households, so WIC visits to the local health departments or tribal health departments, and routine checkups at physician offices or clinics, are opportunities to assess immunization status and administer needed doses.

- At the end of 2017, 6 of 15 U.P. counties (Alger, Chippewa, Iron, Keweenaw, Mackinac, and Menominee) ranked in the bottom quartile (between 64th and 84th among Michigan counties) for 43133142 coverage in the 19-35 month cohort, while Baraga, Marquette and Ontonagon counties ranked in the top quartile (between 1st and 21st.) Menominee County's low rate may in part be due to delays in reporting to the Michigan registry from Wisconsin providers in Marinette. In counties with relatively few annual births per year, a few more or less children fully vaccinated can account for a fairly substantial difference in the completion rate and in the county ranking, and sometimes the difference between a child counting as fully vaccinated or not hinges on one missed dose, or a parental decision to forego one vaccination.

13-17 Years

- As with infant-toddler vaccination, U.P. counties have among the highest and lowest completion rates in Michigan for the "132321" series (1 Dtap, 3 Polio, 1 MMR, 1 Hib, 3 HepB, 2 Varicella, 1 MenACWY.) At the end of 2017, Alger, Dickinson, Gogebic, Houghton, Iron, Keweenaw and Menominee counties were among the lowest ranked areas for teen vaccination, while Delta and Luce counties were in the top quarter of counties for the completion rate. The lowest rate among U.P. counties was in Houghton County (82nd statewide) at 71.2 percent, while the highest was in Delta County (12th statewide) at 85.1 percent.
- Among 13-17 year olds, the counties with the highest completion rates for the HPV series were Luce County for girls at 58.1 percent, compared with the overall Michigan rate of 41.6 and the 2016 U.S. average of 49.5 percent; and Marquette County for boys at 48.2 percent, compared with the Michigan rate of 36.4 and the 2016 U.S. average of 37.5 percent. All Michigan health care providers should continue to promote HPV vaccination as highly effective cancer prevention.

18 Years and Older

- A little less than half of U.P. adults have received a Tdap booster, which helps reduce pertussis infection among adults who were never vaccinated or have waning immunity from their childhood vaccination. Reducing pertussis infection among adults is critically important in reducing its spread to infants who are not yet fully vaccinated and are most vulnerable to serious or life-threatening illness. Nine U.P. counties had adult Tdap coverage rates between 43 and 49.9 percent at the end of 2017. Menominee County, at 24.1 percent, ranked 84th among Michigan counties, while Baraga County, at 34.1 percent, ranked 80th. Four counties had rates over 50 percent: Schoolcraft at 54.4 percent, ranked 26th; Dickinson at 53.6 percent, ranked 28th; Keweenaw at 51.9 percent, ranked 32nd; and Ontonagon, at 50.8 percent, ranked 35th.
- Currently, two pneumococcal vaccines are available for individuals at risk of pneumococcal disease, including children, seniors, immunocompromised individuals and those with certain

chronic conditions: the 23-valent pneumococcal polysaccharide vaccine (PPV23) and the 13-valent pneumococcal protein-conjugate vaccine (PCV13).

The table below shows wide variance in completion rates for at least one dose PCV13 and at least one dose PPSV23 for persons age 65 and older among residents of the 15 Upper Peninsula counties at the end of 2017, with a four-fold difference in rates from lowest (Menominee County at 8.7 percent) to highest (Delta County at 36.5 percent.)

1+ PCV13 & 1+ PPSV23 (65+ Years)

Area	Rate	County Rank
United States (2016)	18.6%	--
Michigan (2017)	23.4%	--
Alger County (2017)	19.1%	59
Baraga County	11.3%	81
Chippewa County	18.5%	62
Delta County	36.5%	13
Dickinson County	26.7%	42
Gogebic County	18.4%	63
Houghton County	25.0%	47
Iron County	18.1%	64
Keweenaw County	16.5%	71
Luce County	34.7%	17
Mackinac County	22.6%	53
Marquette County	31.3%	26
Menominee County	8.7%	82
Ontonagon County	19.1%	59
Schoolcraft County	31.1%	27

2017 Regional Adult Health Survey Data – Flu Shots

From results of the 2017 Health Survey of Upper Peninsula Adults, an estimated 51.9 percent of U.P. adults, all ages, reported getting a seasonal influenza vaccination in the prior year. Flu shot rates were higher among seniors, as expected. Among those persons age 65 and older, an estimated 76.9 percent got a flu shot, compared with 39.2 percent for age 18-39 and 48.3 percent for age 40-64. There were not significant differences for flu shot rates by gender, income or education level.

The 15 U.P. Quarterly Immunization Report Cards begin in alphabetical order on the next page with Alger County.

Alger County Quarterly Immunization Report Card, Dec. 31, 2017

Alger				Data as of: December 31, 2017	
Population					
	2016 Census	MCIR	Diff.	% Diff.	
Total	9,219	10,212	-993	-10	
Adults (20yrs+)	7,670	8,286	-616	-8	
Children (0-19yrs)	1,549	1,926	-377	-24	
Immunization Sites					
		Count		%	
Active MCIR Immunization Sites		8			
Reported in the last 6 months		8		100	
Active Vaccines for Children (VFC) Sites		3			
Reported in the last 6 months		3		100	
Reg. Reporting Flu Sentinels (% of Total Sites)		0		0	

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84	
43133142 Coverage: (19-35mos)	65
1323213 Coverage: (13-17 years)	58
Waivers: (kindergarten, 7th grade & other)	67
Flu Coverage : (6 mos through 8 years, complete)	54

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Alger (MCIR)	% Diff.*	LMAS (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
Birth Dose Hep B coverage	71.7	-5.3	80.3	79.4	71.1	81	85%
4313314 coverage†	66.7	-8.0	73.1	74.8	70.7	79	80%
43133142 coverage†	48.5	-3.2	51.6	56.2	-	65	-
2+ Hep A	50.5	-2.4	53.2	57.9	60.6	65	85%
4+ DTaP	71.7	-5.3	76.1	78.1	83.4	78	90%
4+ PCV	73.7	-6.8	83.0	84.2	81.8	82	90%
Rota. Complete** (8-24 months)	74.5	-3.0	57.2	71.3	-	22	-
WIC coverage (4313314)	72.1	-7.9	79.5	76.4	67.7	76	-
Medicaid coverage (4313314)	71.1	-13.7	79.2	74.9	-	73	-
13 through 17 years							
					2016 NIS Teen		
132321 coverage‡	72.9	0.3	80.3	76.3	-	81	-
1323213 coverage‡	38.0	0.0	41.1	38.0	-	58	-
1+ Tdap	78.5	0.0	83.9	80.0	88.0	75	80%**
1+ MenACWY	77.1	-0.3	83.7	80.0	82.2	78	80%**
HPV Complete (Females)	40.1	-0.9	45.1	41.6	49.5	66	80%**
HPV Complete (Males)	36.5	0.9	39.0	36.4	37.5	56	-
MenACWY Complete** (17 yrs)	35.7	-0.7	49.5	46.7	-	76	-
Adults (Census Denominators)							
					2016 NHIS		
1+ Tdap (19-64yrs)	45.1	0.0	48.1	79.7	24.7	54	-
1+ PPSV23 (65+ yrs)	29.8	1.2	37.8	39.5	42.2^	76	-
1+ PCV13 (65+ yrs)	46.3	2.4	50.9	43.8	32.6^	47	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	19.1	1.4	25.5	23.4	18.6^	59	-
1+ Zoster (60+ yrs)	22.0	0.1	26.4	25.9	30.6	63	30%
2017-18 Mid Season Flu							
Flu Complete** (6mos-8yrs)	19.6	-6.1	20.3	23.9	-	54	-
1+ Flu (6mos through 17yrs)	17.6	-6.3	20.2	23.1	59.3	61	70%
1+ Flu (18yrs+)	29.2	-0.2	29.2	24.9	41.7	32	70%
School/CC Immunization Reports							
					Alger	Alger	Rank
School Completion (Feb '17)	93.6	4.9	95.8	94.0	-	-	46
Percent Waived (K+7+O)	4.4	0.8	2.6	3.2	Kindgtn : 4.4	7 grd : 1.3	67
Child Care Completion (Oct '17)	90.9	0.2	92.0	87.1	-	-	22
Percent Waived	0.0	-2.8	0.6	2.5	-	-	1

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, 2 HepA

** Complete - no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Baraga County Quarterly Immunization Report Card, Dec. 31, 2017

Baraga				Data as of: December 31, 2017	
Population					
	2016 Census	MCIR	Diff.	% Diff.	
Total	8,503	6,726	1,777	20	
Adults (20yrs+)	6,710	5,047	1,663	24	
Children (0-19yrs)	1,793	1,679	114	6	
Immunization Sites					
		Count	%		
Active MCIR Immunization Sites					
Reported in the last 6 months		6	100		
Active Vaccines for Children (VFC) Sites					
Reported in the last 6 months		3	100		
Reg. Reporting Flu Sentinels (% of Total Sites)				0 0	

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84	
43133142 Coverage: (19-35mos)	12
1323213 Coverage: (13-17 years)	29
Waivers: (kindergarten, 7th grade & other)	28
Flu Coverage : (6 mos through 8 years, complete)	58

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Baraga (MCIR)	% Diff.*	Western UP (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
	%		%	%	%	No.	
Birth Dose Hep B coverage	91.2	0.1	73.7	79.4	71.1	1	85%
4313314 coverage†	79.1	-0.9	69.2	74.8	70.7	17	80%
43133142 coverage†	63.7	-5.2	53.9	56.2	-	12	-
2+ Hep A	65.9	-5.2	56.1	57.9	60.6	11	85%
4+ DTaP	82.4	0.2	74.4	78.1	83.4	15	90%
4+ PCV	93.4	2.3	82.8	84.2	81.8	1	90%
Rota. Complete** (8-24 months)	67.8	-2.3	67.8	71.3	-	58	-
WIC coverage (4313314)	79.7	-3.1	77.8	76.4	67.7	42	-
Medicaid coverage (4313314)	79.2	-0.1	72.8	74.9	-	32	-
13 through 17 years							
					2016 NIS Teen		
132321 coverage‡	83.5	0.3	74.1	76.3	-	24	-
1323213 coverage‡	45.1	0.2	35.5	38.0	-	29	-
1+ Tdap	86.8	0.1	80.1	80.0	88.0	20	80%**
1+ MenACWY	86.3	0.5	77.8	80.0	82.2	30	80%**
HPV Complete (Females)	51.8	-1.4	40.0	41.6	49.5	16	80%**
HPV Complete (Males)	41.5	1.5	33.6	36.4	37.5	34	-
MenACWY Complete** (17 yrs)	53.3	3.8	42.3	46.7	-	23	-
Adults (Census Denominators)							
					2016 NHIS		
1+ Tdap (19-64yrs)	34.1	0.4	47.0	79.7	24.7	80	-
1+ PPSV23 (65+ yrs)	21.9	0.6	35.3	39.5	42.2^	83	-
1+ PCV13 (65+ yrs)	36.9	0.9	43.6	43.8	32.6^	63	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	11.3	0.6	20.4	23.4	18.6^	81	-
1+ Zoster (60+ yrs)	15.5	0.3	26.6	25.9	30.6	81	30%
2017-18 Mid Season Flu							
	Baraga		Western UP	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete** (6mos-8yrs)	18.5	-5.0	23.9	23.9	-	58	-
1+ Flu (6mos through 17yrs)	17.5	-4.1	22.3	23.1	59.3	62	70%
1+ Flu (18yrs+)	18.5	0.1	24.6	24.9	41.7	80	70%
School/CC Immunization Reports							
	Baraga		Western UP	MI Avg	Baraga	Baraga	Rank
School Completion (Feb '17)	95.5	5.2	87.5	94.0	-	-	16
Percent Waived (K+7+0)	2.7	-1.0	9.2	3.2	Kindgtn : 2.9	7 grd : 3.4	28
Child Care Completion (Oct '17)	84.5	3.8	85.0	87.1	-	-	72
Percent Waived	3.4	-1.9	2.7	2.5	-	-	66

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports
 † 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)
 †† Complete = no additional doses of this vaccine are needed.
 ‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)
 ** The adolescent Healthy People 2020 age group is 13 through 15 years
 ^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.
 Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Chippewa County Quarterly Immunization Report Card, Dec. 31, 2017

Chippewa					Data as of: December 31, 2017	
Population						
	2016 Census	MCIR	Diff.	% Diff.		
Total	37,724	31,334	6,390	16	Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Adults (20yrs+)	29,582	23,253	6,329	21	Your County Immunization Rank n = 84 counties	
Children (0-19yrs)	8,142	8,081	61	0	43133142 Coverage: 83 (19-35mos)	
Immunization Sites						
				Count	%	
Active MCIR Immunization Sites					33	
Reported in the last 6 months					29	87
Active Vaccines for Children (VFC) Sites					10	
Reported in the last 6 months					10	100
Reg. Reporting Flu Sentinels (% of Total Sites)					0	0

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84 counties	
43133142 Coverage: (19-35mos)	83
1323213 Coverage: (13-17 years)	44
Waivers: (kindergarten, 7th grade & others)	33
Flu Coverage : (6 months through 8 years, complete)	73

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Chippewa (MCIR)	% Diff.*	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months						
Birth Dose Hep B coverage	77.1	1.1	79.4	71.1	65	85%
4313314 coverage†	69.2	-0.7	74.8	70.7	73	80%
43133142 coverage†	37.9	-0.5	56.2	-	83	-
2+ Hep A	39.1	-0.9	57.9	60.6	83	85%
4+ DTaP	74.9	-1.9	78.1	83.4	66	90%
4+ PCV	82.8	0.5	84.2	81.8	63	90%
Rota. Complete †† (8-24 months)	38.6	2.0	71.3	-	83	-
WIC coverage (4313314)	76.4	-1.5	76.4	67.7	58	-
Medicaid coverage (4313314)	75.2	-0.1	74.9	-	52	-
13 through 17 years						
				2016 NIS Teen		
132321 coverage‡	81.5	0.2	76.3	-	43	-
1323213 coverage‡	41.4	-0.5	38.0	-	44	-
1+ Tdap	85.5	0.3	80.0	88.0	41	80%**
1+ MenACWY	84.6	0.3	80.0	82.2	46	80%**
HPV Complete (Females)	45.6	-0.9	41.6	49.5	43	80%**
HPV Complete (Males)	38.0	-0.2	36.4	37.5	49	-
MenACWY Complete †† (17 yrs)	40.3	0.5	46.7	-	70	-
Adults (Census Denominators)						
				2016 NHIS		
Data as of: November 11, 2017						
1+ Tdap (19-64yrs)	44.0	0.5	79.7	24.7	62	-
1+ PPSV23 (65+ yrs)	35.7	1.4	39.5	42.2^	58	-
1+ PCV13 (65+ yrs)	38.8	1.3	43.8	32.6^	60	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	18.5	1.3	23.4	18.6^	62	-
1+ Zoster (60+ yrs)	36.3	0.3	25.9	30.6	10	30%
2017-18 Mid Season Flu						
		Chippewa	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete †† (6mos-8yrs)	14.4	-2.4	23.9	-	73	-
1+ Flu (6mos through 17yrs)	17.3	-1.5	23.1	59.3	66	70%
1+ Flu (18yrs+)	23.1	0.1	24.9	41.7	62	70%
School/CC Immunization Reports						
		Chippewa	MI Avg	Chippewa	Chippewa	Rank
School Completion (Feb '17)	93.3	-2.2	94.0	-	-	52
Percent Waived (K+7+0)	2.9	0.3	3.2	Kindgtn : 2.5	7 grd : 2.2	33
Child Care Completion (Oct '17)	89.3	2.7	87.1	-	-	33
Percent Waived	2.9	1.1	2.5	-	-	58

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

†† Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+



Dickinson County Quarterly Immunization Report Card, Dec. 31, 2017

Dickinson				Data as of: December 31, 2017	
Population					
	2016 Census	MCIR	Diff.	% Diff.	
Total	25,535	28,198	-2,663	-10	
Adults (20yrs+)	19,959	21,820	-1,861	-9	
Children (0-19yrs)	5,576	6,378	-802	-14	
Immunization Sites					
		Count		%	
Active MCIR Immunization Sites					
Reported in the last 6 months		24		92	
Active Vaccines for Children (VFC) Sites					
Reported in the last 6 months		5		100	
Reg. Reporting Flu Sentinels (% of Total Sites)					
		0		0	

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84	
43133142 Coverage: (19-35mos)	31
1323213 Coverage: (13-17 years)	54
Waivers: (kindergarten, 7th grade & other)	71
Flu Coverage : (6 mos through 8 years, complete)	20

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Dickinson (MCIR)	% Diff.*	Dick.-Iron (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
	%	%	%	%	%	No.	
Birth Dose Hep B coverage	81.6	-1.3	80.5	79.4	71.1	39	85%
4313314 coverage†	79.6	0.7	76.4	74.8	70.7	13	80%
43133142 coverage†	58.4	1.1	55.7	56.2	-	31	-
2+ Hep A	59.5	1.1	57.1	57.9	60.6	34	85%
4+ DTaP	81.8	0.3	78.7	78.1	83.4	20	90%
4+ PCV	84.6	0.8	83.2	84.2	81.8	48	90%
Rota. Complete** (8-24 months)	73.7	-0.4	72.1	71.3	-	29	-
WIC coverage (4313314)	86.0	4.5	81.5	76.4	67.7	4	-
Medicaid coverage (4313314)	87.1	2.5	81.9	74.9	-	2	-
13 through 17 years							
					<u>2016 NIS Teen</u>		
132321 coverage‡	77.1	-0.1	77.2	76.3	-	68	-
1323213 coverage‡	39.2	-0.4	38.9	38.0	-	54	-
1+ Tdap	81.7	0.1	81.4	80.0	88.0	66	80%**
1+ MenACWY	81.5	0.1	81.2	80.0	82.2	65	80%**
HPV Complete (Females)	43.7	-0.3	43.0	41.6	49.5	56	80%**
HPV Complete (Males)	37.6	-0.6	37.4	36.4	37.5	52	-
MenACWY Complete** (17 yrs)	46.4	-0.6	42.0	46.7	-	56	-
Adults (Census Denominators)							
					<u>2016 NHIS</u>		
1+ Tdap (19-64yrs)	53.6	0.5	50.6	79.7	24.7	28	-
1+ PPSV23 (65+ yrs)	39.4	1.2	37.3	39.5	42.2^	47	-
1+ PCV13 (65+ yrs)	53.1	1.4	45.5	43.8	32.6^	29	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	26.7	1.4	23.5	23.4	18.6^	42	-
1+ Zoster (60+ yrs)	26.1	0.1	23.5	25.9	30.6	44	30%
2017-18 Mid Season Flu							
	Dickinson		Dick.-Iron	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete** (6mos-8yrs)	25.3	-4.9	24.5	23.9	-	20	-
1+ Flu (6mos through 17yrs)	25.3	-4.1	23.9	23.1	59.3	18	70%
1+ Flu (18yrs+)	27.1	-3.3	27.4	24.9	41.7	43	70%
School/CC Immunization Reports							
	Dickinson		Dick.-Iron	MI Avg	Dickinson	Dickinson	Rank
School Completion (Feb '17)	90.9	-3.1	91.9	94.0	-	-	75
Percent Waived (K+7+0)	5.0	0.8	4.2	3.2	Kindgtn : 4.4	7 grd : 4.1	71
Child Care Completion (Oct '17)	91.3	0.0	90.7	87.1	-	-	19
Percent Waived	3.0	1.2	2.7	2.5	-	-	59

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

** Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Houghton County Quarterly Immunization Report Card, Dec. 31, 2017

Houghton				Data as of: December 31, 2017	
Population					
	2016 Census	MCIR	Diff.	% Diff.	
Total	36,555	35,620	935	2	
Adults (20yrs+)	26,763	26,498	265	0	
Children (0-19yrs)	9,792	9,122	670	6	
Immunization Sites					
		Count	%		
Active MCIR Immunization Sites					
Reported in the last 6 months		23	92		
Active Vaccines for Children (VFC) Sites					
Reported in the last 6 months		9	100		
Reg. Reporting Flu Sentinels (% of Total Sites)					
		1	20		

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84	
43133142 Coverage: (19-35mos)	56
1323213 Coverage: (13-17 years)	76
Waivers: (kindergarten, 7th grade & other)	83
Flu Coverage : (6 mos through 8 years, complete)	14

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Houghton (MCIR)	% Diff.*	Western UP (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
	%		%	%	%	No.	
Birth Dose Hep B coverage	72.0	-0.6	73.7	79.4	71.1	80	85%
4313314 coverage†	65.9	-0.9	69.2	74.8	70.7	80	80%
43133142 coverage†	52.0	-0.4	53.9	56.2	-	56	-
2+ Hep A	54.7	0.3	56.1	57.9	60.6	51	85%
4+ DTaP	72.6	-1.1	74.4	78.1	83.4	76	90%
4+ PCV	82.3	0.7	82.8	84.2	81.8	69	90%
Rota, Complete** (8-24 months)	66.3	-2.0	67.8	71.3	-	62	-
WIC coverage (4313314)	72.4	0.7	77.8	76.4	67.7	74	-
Medicaid coverage (4313314)	66.7	-1.3	72.8	74.9	-	81	-
13 through 17 years							
					2016 NIS Teen		
132321 coverage‡	71.2	-0.2	74.1	76.3	-	82	-
1323213 coverage‡	30.6	-0.1	35.5	38.0	-	76	-
1+ Tdap	78.5	-0.2	80.1	80.0	88.0	75	80%**
1+ MenACWY	75.0	-0.4	77.8	80.0	82.2	82	80%**
HPV Complete (Females)	34.0	-0.6	40.0	41.6	49.5	77	80%**
HPV Complete (Males)	29.4	0.8	33.6	36.4	37.5	72	-
MenACWY Complete** (17 yrs)	39.7	-2.1	42.3	46.7	-	73	-
Adults (Census Denominators)							
					2016 NHIS		
1+ Tdap (19-64yrs)	49.9	0.8	47.0	79.7	24.7	36	-
1+ PPSV23 (65+ yrs)	40.5	0.9	35.3	39.5	42.2^	44	-
1+ PCV13 (65+ yrs)	52.0	1.7	43.6	43.8	32.6^	31	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	25.0	1.0	20.4	23.4	18.6^	47	-
1+ Zoster (60+ yrs)	32.1	0.5	26.6	25.9	30.6	17	30%
2017-18 Mid Season Flu							
	Houghton		Western UP	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete** (6mos-8yrs)	28.4	-2.5	23.9	23.9	-	14	-
1+ Flu (6mos through 17yrs)	25.3	-3.6	22.3	23.1	59.3	18	70%
1+ Flu (18yrs+)	25.2	-1.1	24.6	24.9	41.7	50	70%
School/CC Immunization Reports							
	Houghton		Western UP	MI Avg	Houghton	Houghton	Rank
School Completion (Feb '17)	83.3	-1.1	87.5	94.0	-	-	83
Percent Waived (K+7+O)	13.5	1.0	9.2	3.2	Kindgtn : 8.9	7 grd : 17.3	83
Child Care Completion (Oct '17)	86.0	-3.4	85.0	87.1	-	-	61
Percent Waived	3.3	1.6	2.7	2.5	-	-	65

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

‡ Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Iron County Quarterly Immunization Report Card, Dec. 31, 2017

Iron					Data as of: December 31, 2017	
Population					Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
	2016 Census	MCIR	Diff.	% Diff.	Your County Immunization Rank n = 84	
Total	11,195	10,727	468	4	43133142 Coverage: 66 (19-35mos)	
Adults (20yrs+)	9,180	8,471	709	7	1323213 Coverage: 57 (13-17 years)	
Children (0-19yrs)	2,015	2,256	-241	-11	Waivers: 37 (kindergarten, 7th grade & other)	
Immunization Sites					Flu Coverage : 36 (6 mos through 8 years, complete)	
					Count	
					%	
Active MCIR Immunization Sites					14	
Reported in the last 6 months					11 78	
Active Vaccines for Children (VFC) Sites					1	
Reported in the last 6 months					1 100	
Reg. Reporting Flu Sentinels (% of Total Sites)					0 0	

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Iron (MCIR)	% Diff.*	Dick.-Iron (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
	%	%	%	%	%	No.	
Birth Dose Hep B coverage	77.6	-1.9	80.5	79.4	71.1	62	85%
4313314 coverage†	67.2	-4.1	76.4	74.8	70.7	78	80%
43133142 coverage‡	48.0	0.5	55.7	56.2	-	66	-
2+ Hep A	50.4	1.2	57.1	57.9	60.6	66	85%
4+ DTaP	69.6	-3.4	78.7	78.1	83.4	80	90%
4+ PCV	79.2	-1.9	83.2	84.2	81.8	79	90%
Rota. Complete** (8-24 months)	66.9	1.0	72.1	71.3	-	61	-
WIC coverage (4313314)	71.4	-6.1	81.5	76.4	67.7	77	-
Medicaid coverage (4313314)	71.4	-5.9	81.9	74.9	-	71	-
13 through 17 years							
					2016 NIS Teen		
132321 coverage‡	77.4	-0.1	77.2	76.3	-	67	-
1323213 coverage‡	38.2	0.1	38.9	38.0	-	57	-
1+ Tdap	80.4	0.0	81.4	80.0	88.0	69	80%**
1+ MenACWY	80.2	-0.4	81.2	80.0	82.2	69	80%**
HPV Complete (Females)	40.9	-0.4	43.0	41.6	49.5	61	80%**
HPV Complete (Males)	36.7	0.5	37.4	36.4	37.5	55	-
MenACWY Complete** (17 yrs)	27.4	-1.6	42.0	46.7	-	82	-
Adults (Census Denominators)							
					2016 NHIS		
1+ Tdap (19-64yrs)	43.2	0.8	50.6	79.7	24.7	64	-
1+ PPSV23 (65+ yrs)	34.0	0.8	37.3	39.5	42.2^	63	-
1+ PCV13 (65+ yrs)	32.9	1.5	45.5	43.8	32.6^	71	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	18.1	1.0	23.5	23.4	18.6^	64	-
1+ Zoster (60+ yrs)	19.0	0.3	23.5	25.9	30.6	76	30%
2017-18 Mid Season Flu							
	Iron		Dick.-Iron	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete** (6mos-8yrs)	22.3	-5.1	24.5	23.9	-	36	-
1+ Flu (6mos through 17yrs)	20.0	-4.2	23.9	23.1	59.3	55	70%
1+ Flu (18yrs+)	27.9	2.6	27.4	24.9	41.7	38	70%
School/CC Immunization Reports							
	Iron		Dick.-Iron	MI Avg	Iron	Iron	Rank
School Completion (Feb '17)	93.4	0.7	91.9	94.0	-	-	50
Percent Waived (K+7+O)	3.0	0.6	4.2	3.2	Kindgtn : 6.4	7 grd : 2.0	37
Child Care Completion (Oct '17)	88.9	-6.2	90.7	87.1	-	-	38
Percent Waived	1.6	-0.4	2.7	2.5	-	-	32

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

** Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Keweenaw County Quarterly Immunization Report Card, Dec. 31, 2017

Keweenaw				Data as of: December 31, 2017	
Population				Michigan is ranked 29th for 4313314 coverage (2016 NIS data) Your County Immunization Rank n = 84	
	2016 Census	MCIR	Diff.		% Diff.
Total	2,199	1,959	240		10
Adults (20yrs+)	1,824	1,609	215		11
Children (0-19yrs)	375	350	25	6	
Immunization Sites				43133142 Coverage: 76 (19-35mos) 1323213 Coverage: 64 (13-17 years) Waivers: . (kindergarten, 7th grade & other) Flu Coverage : 60 (6 mos through 8 years, complete)	
Count %					
Active MCIR Immunization Sites					
Reported in the last 6 months					
Active Vaccines for Children (VFC) Sites					
Reported in the last 6 months					
Reg. Reporting Flu Sentinels (% of Total Sites) 0 0					

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Keweenaw (MCIR)	% Diff.*	Western UP (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
	%		%	%	%	No.	
Birth Dose Hep B coverage	58.6	0.9	73.7	79.4	71.1	84	85%
4313314 coverage†	62.1	-3.3	69.2	74.8	70.7	82	80%
43133142 coverage†	44.8	2.5	53.9	56.2	-	76	-
2+ Hep A	48.3	6.0	56.1	57.9	60.6	71	85%
4+ DTaP	65.5	0.1	74.4	78.1	83.4	82	90%
4+ PCV	72.4	3.2	82.8	84.2	81.8	83	90%
Rota. Complete** (8-24 months)	65.5	-2.4	67.8	71.3	-	66	-
WIC coverage (4313314)	66.7	-8.3	77.8	76.4	67.7	84	-
Medicaid coverage (4313314)	50.0	-4.5	72.8	74.9	-	84	-
13 through 17 years							
					2016 NIS Teen		
132321 coverage‡	75.3	0.8	74.1	76.3	-	71	-
1323213 coverage‡	36.1	0.4	35.5	38.0	-	64	-
1+ Tdap	80.4	-0.2	80.1	80.0	88.0	69	80%**
1+ MenACWY	77.3	-0.3	77.8	80.0	82.2	77	80%**
HPV Complete (Females)	44.4	-0.3	40.0	41.6	49.5	51	80%**
HPV Complete (Males)	28.8	1.3	33.6	36.4	37.5	75	-
MenACWY Complete** (17 yrs)	55.0	20.0	42.3	46.7	-	15	-
Adults (Census Denominators)							
					2016 NHIS		
1+ Tdap (19-64yrs)	51.9	0.8	47.0	79.7	24.7	32	-
1+ PPSV23 (65+ yrs)	30.6	1.1	35.3	39.5	42.2^	71	-
1+ PCV13 (65+ yrs)	36.9	1.7	43.6	43.8	32.6^	63	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	16.5	0.8	20.4	23.4	18.6^	71	-
1+ Zoster (60+ yrs)	27.9	0.5	26.6	25.9	30.6	40	30%
2017-18 Mid Season Flu							
		Keweenaw	Western UP	MI Avg	US Flu Avg	Rank	HP2020
Flu Complete** (6mos-8yrs)	18.2	-11.8	23.9	23.9	-	60	-
1+ Flu (6mos through 17yrs)	21.4	-5.4	22.3	23.1	59.3	47	70%
1+ Flu (18yrs+)	30.3	-1.4	24.6	24.9	41.7	25	70%
School/CC Immunization Reports							
		Keweenaw	Western UP	MI Avg	Keweenaw	Keweenaw	Rank
School Completion (Feb '17)	.	.	87.5	94.0	-	-	-
Percent Waived (K+7+0)	.	.	9.2	3.2	Kindgtn ; .	7 grd ; .	.
Child Care Completion (Oct '17)	.	.	85.0	87.1	-	-	.
Percent Waived	.	.	2.7	2.5	-	-	.

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

** Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+



Mackinac County Quarterly Immunization Report Card, Dec. 31, 2017

Mackinac				Data as of: December 31, 2017	
Population					
	2016 Census	MCIR	Diff.	% Diff.	
Total	10,820	10,266	554	5	
Adults (20yrs+)	8,893	8,262	631	7	
Children (0-19yrs)	1,927	2,004	-77	-3	
Immunization Sites					
		Count	%		
Active MCIR Immunization Sites				10	
Reported in the last 6 months				9 (90)	
Active Vaccines for Children (VFC) Sites				5	
Reported in the last 6 months				5 (100)	
Reg. Reporting Flu Sentinels (% of Total Sites)				0 (0)	

Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
Your County Immunization Rank n = 84	
43133142 Coverage: (19-35mos)	72
1323213 Coverage: (13-17 years)	71
Waivers: (kindergarten, 7th grade & other)	28
Flu Coverage : (6 mos through 8 years, complete)	69

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Mackinac (MCIR)	% Diff.*	LMAS (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
Birth Dose Hep B coverage	85.5	2.5	80.3	79.4	71.1	11	85%
4313314 coverage†	70.0	0.2	73.1	74.8	70.7	71	80%
43133142 coverage†	47.3	1.1	51.6	56.2	-	72	-
2+ Hep A	48.2	1.0	53.2	57.9	60.6	73	85%
4+ DTaP	74.5	0.0	76.1	78.1	83.4	69	90%
4+ PCV	82.7	1.6	83.0	84.2	81.8	64	90%
Rota. Complete** (8-24 months)	61.2	2.6	57.2	71.3	-	75	-
WIC coverage (4313314)	78.6	-1.0	79.5	76.4	67.7	49	-
Medicaid coverage (4313314)	73.5	-0.4	79.2	74.9	-	63	-
13 through 17 years							
2016 NIS Teen							
132321 coverage‡	80.7	-0.1	80.3	76.3	-	55	-
1323213 coverage‡	34.6	-0.2	41.1	38.0	-	71	-
1+ Tdap	83.2	-0.8	83.9	80.0	88.0	59	80%**
1+ MenACWY	84.2	-0.5	83.7	80.0	82.2	50	80%**
HPV Complete (Females)	40.5	-0.6	45.1	41.6	49.5	65	80%**
HPV Complete (Males)	30.7	-0.1	39.0	36.4	37.5	70	-
MenACWY Complete** (17 yrs)	55.0	1.8	49.5	46.7	-	15	-
Adults (Census Denominators)							
2016 NHIS							
1+ Tdap (19-64yrs)	46.8	0.5	48.1	79.7	24.7	47	-
1+ PPSV23 (65+ yrs)	38.3	0.6	37.8	39.5	42.2^	51	-
1+ PCV13 (65+ yrs)	42.7	1.4	50.9	43.8	32.6^	52	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	22.6	0.9	25.5	23.4	18.6^	53	-
1+ Zoster (60+ yrs)	29.1	0.4	26.4	25.9	30.6	31	30%
2017-18 Mid Season Flu							
Mackinac							
Flu Complete** (6mos-8yrs)	15.8	-8.0	20.3	23.9	-	69	-
1+ Flu (6mos through 17yrs)	15.7	-6.4	20.2	23.1	59.3	71	70%
1+ Flu (18yrs+)	27.8	1.8	29.2	24.9	41.7	39	70%
School/CC Immunization Reports							
Mackinac							
School Completion (Feb '17)	95.2	0.6	95.8	94.0	-	-	20
Percent Waived (K+7+0)	2.7	-1.5	2.6	3.2	Kindgtn : 3.7	7 grd : 4.3	28
Child Care Completion (Oct '17)	92.9	-1.2	92.0	87.1	-	-	8
Percent Waived	1.2	1.2	0.6	2.5	-	-	16

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, 12 HepA

** Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Marquette County Quarterly Immunization Report Card, Dec. 31, 2017

Marquette					Data as of: December 31, 2017	
Population					Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
	2016 Census	MCIR	Diff.	% Diff.	Your County Immunization Rank n = 84 counties	
Total	66,435	64,394	2,041	3	43133142 Coverage: 11 (19-35mos)	
Adults (20yrs+)	51,980	49,840	2,140	4	1323213 Coverage: 8 (13-17 years)	
Children (0-19yrs)	14,455	14,554	-99	0	Waivers: 45 (kindergarten, 7th grade & others)	
Immunization Sites					Flu Coverage : 3 (6 months through 8 years, complete)	
					Count	%
Active MCIR Immunization Sites					45	
Reported in the last 6 months					41	91
Active Vaccines for Children (VFC) Sites					15	
Reported in the last 6 months					15	100
Reg. Reporting Flu Sentinels (% of Total Sites)					1	50

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Marquette (MCIR)	% Diff.*	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months						
Birth Dose Hep B coverage	79.8	-0.2	79.4	71.1	49	85%
4313314 coverage†	76.9	0.0	74.8	70.7	35	80%
43133142 coverage†	64.5	1.9	56.2	-	11	-
2+ Hep A	66.8	2.1	57.9	60.6	10	85%
4+ DTaP	80.3	0.0	78.1	83.4	30	90%
4+ PCV	85.7	-0.6	84.2	81.8	38	90%
Rota. Complete †† (8-24 months)	76.9	1.0	71.3	-	12	-
WIC coverage (4313314)	81.8	1.5	76.4	67.7	22	-
Medicaid coverage (4313314)	81.5	2.1	74.9	-	18	-
13 through 17 years						
2016 NIS Teen						
132321 coverage‡	81.8	-0.1	76.3	-	40	-
1323213 coverage‡	49.0	0.4	38.0	-	8	-
1+ Tdap	85.7	-0.2	80.0	88.0	36	80%**
1+ MenACWY	85.4	-0.1	80.0	82.2	38	80%**
HPV Complete (Females)	53.2	0.3	41.6	49.5	9	80%**
HPV Complete (Males)	48.2	0.8	36.4	37.5	7	-
MenACWY Complete †† (17 yrs)	54.9	-0.4	46.7	-	17	-
Adults (Census Denominators)						
Data as of: November 11, 2017						
2016 NHIS						
1+ Tdap (19-64yrs)	47.6	0.9	79.7	24.7	42	-
1+ PPSV23 (65+ yrs)	43.1	1.8	39.5	42.2^	41	-
1+ PCV13 (65+ yrs)	62.5	2.1	43.8	32.6^	12	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	31.3	2.0	23.4	18.6^	26	-
1+ Zoster (60+ yrs)	31.5	0.5	25.9	30.6	21	30%
2017-18 Mid Season Flu						
Marquette						
MI Avg						
US Flu Avg						
Rank						
HP2020						
Flu Complete †† (6mos-8yrs)	35.8	-5.9	23.9	-	3	-
1+ Flu (6mos through 17yrs)	35.4	-5.1	23.1	59.3	2	70%
1+ Flu (18yrs+)	30.7	-2.0	24.9	41.7	21	70%
School/CC Immunization Reports						
Marquette						
MI Avg						
Marquette						
Marquette						
Rank						
School Completion (Feb '17)	93.5	0.0	94.0	-	-	47
Percent Waived (K+7+O)	3.3	-0.1	3.2	Kindgtn : 3.5	7 grd : 3.0	45
Child Care Completion (Oct '17)	86.7	-1.8	87.1	-	-	52
Percent Waived	2.2	0.5	2.5	-	-	47

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

†† Complete = no additional doses of this vaccine are needed.

‡ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage.

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



Schoolcraft County Quarterly Immunization Report Card, Dec. 31, 2017

Schoolcraft					Data as of: December 31, 2017	
Population					Michigan is ranked 29th for 4313314 coverage (2016 NIS data)	
	2016 Census	MCIR	Diff.	% Diff.	Your County Immunization Rank n = 84	
Total	8,001	7,707	294	3	43133142 Coverage: 51 (19-35mos)	
Adults (20yrs+)	6,473	6,030	443	6	1323213 Coverage: 16 (13-17 years)	
Children (0-19yrs)	1,528	1,677	-149	-9	Waivers: 19 (kindergarten, 7th grade & other)	
Immunization Sites					Flu Coverage : 23 (6 mos through 8 years, complete)	
Active MCIR Immunization Sites						
Reported in the last 6 months						
Active Vaccines for Children (VFC) Sites						
Reported in the last 6 months						
Reg. Reporting Flu Sentinels (% of Total Sites)						

Immunization Coverage Levels, Rankings and Goals by Select Vaccines and Age Groups

Measure	Schoolcraft (MCIR)	% Diff.*	LMAS (MCIR)	MI Avg (MCIR)	US Average 2016 NIS	Your County Rank (n=84)	HP 2020 Goal
19 through 35 months							
Birth Dose Hep B coverage	80.9	0.0	80.3	79.4	71.1	43	85%
4313314 coverage†	77.7	0.2	73.1	74.8	70.7	29	80%
43133142 coverage†	53.2	-0.7	51.6	56.2	-	51	-
2+ Hep A	54.3	-0.8	53.2	57.9	60.6	54	85%
4+ DTaP	77.7	0.2	76.1	78.1	83.4	47	90%
4+ PCV	87.2	1.8	83.0	84.2	81.8	17	90%
Rota, Complete** (8-24 months)	32.7	1.6	57.2	71.3	-	84	-
WIC coverage (4313314)	81.3	-1.5	79.5	76.4	67.7	25	-
Medicaid coverage (4313314)	85.7	-0.3	79.2	74.9	-	3	-
13 through 17 years							
2016 NIS Teen							
132321 coverage‡	85.7	-1.0	80.3	76.3	-	9	-
1323213 coverage‡	47.2	0.4	41.1	38.0	-	16	-
1+ Tdap	89.3	-0.5	83.9	80.0	88.0	2	80%**
1+ MenACWY	88.6	-1.0	83.7	80.0	82.2	5	80%**
HPV Complete (Females)	48.6	0.7	45.1	41.6	49.5	28	80%**
HPV Complete (Males)	47.6	0.1	39.0	36.4	37.5	8	-
MenACWY Complete** (17 yrs)	57.0	0.7	49.5	46.7	-	7	-
Adults (Census Denominators)							
2016 NHIS							
1+ Tdap (19-64yrs)	54.4	0.6	48.1	79.7	24.7	26	-
1+ PPSV23 (65+ yrs)	40.5	1.8	37.8	39.5	42.2^	44	-
1+ PCV13 (65+ yrs)	59.0	3.6	50.9	43.8	32.6^	18	-
1+ PCV13 & 1+ PPSV23 (65+ yrs)	31.1	2.6	25.5	23.4	18.6^	27	-
1+ Zoster (60+ yrs)	26.1	0.4	26.4	25.9	30.6	44	30%
2017-18 Mid Season Flu							
Schoolcraft							
Flu Complete** (6mos-8yrs)	24.3	-5.3	20.3	23.9	-	23	-
1+ Flu (6mos through 17yrs)	27.2	-2.6	20.2	23.1	59.3	12	70%
1+ Flu (18yrs+)	33.7	0.6	29.2	24.9	41.7	8	70%
School/CC Immunization Reports							
Schoolcraft							
School Completion (Feb '17)	96.5	-1.0	95.8	94.0	-	-	5
Percent Waived (K+7+0)	2.4	1.4	2.6	3.2	Kindgtn : 5.6	7 grd : 17.4	19
Child Care Completion (Oct '17)	90.1	-8.6	92.0	87.1	-	-	28
Percent Waived	1.1	1.1	0.6	2.5	-	-	12

* % difference in the county since the last report card; Flu data shows difference between seasons; School and CC difference between annual reports

† 4313314(2): 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, 4 PCV, (2 HepA)

‡ Complete = no additional doses of this vaccine are needed.

§ 132321(3): 1 Tdap, 3 Polio, 2 MMR, 3 HepB, 2 Var, 1 MenACWY, (2 or 3 HPV doses-Males & Females)

** The adolescent Healthy People 2020 age group is 13 through 15 years

^Data from the 2017 Morbidity and Mortality Weekly Report on Adult Pneumococcal Coverage

Reference the FAQs for additional definitions including information on 1+, 2+ and 3+.



INFECTIOUS DISEASE

Infectious diseases are caused by microscopic germs such as bacteria and viruses. When these infections can be transmitted from person to person, they are called communicable or contagious diseases. Examples of communicable disease are influenza, chickenpox, chlamydia and hepatitis. Infectious diseases that are not transmitted person to person include Lyme disease (from deer ticks) and West Nile Virus (from mosquitos). The reduction in death rates from infectious diseases was a great public health achievement of the last 100 years, owing to improved sanitation and hygiene, development of vaccines for deadly communicable diseases like smallpox and polio, and the advent of antibiotics and other antimicrobial agents. The method of prevention of infectious diseases depends on the type of microbe and the mode of transmission. Common strategies include hygiene (as with hand-washing to prevent influenza), social distancing (as with restricting hospital visitation or cancelling public events during flu outbreaks), avoidance of risky behaviors (such as refraining from sharing needles or having unprotected sex to lessen the risk of hepatitis and HIV transmission), proper food handling (to reduce the spread of foodborne diseases such as salmonella) and, of course, vaccination.

As noted by the federal Centers for Disease Control and Prevention (CDC), the increase in life expectancy over the past century has been due, in large part, to increases in infant and child survival. Much of that increase can be credited to the decrease in mortality due to infectious diseases and the development of vaccines, one of the greatest public health triumphs in history. However, infectious diseases are still a leading cause of illness and death across the globe. This is due to a variety of factors, including inadequate vaccine coverage in some populations, poverty and poor sanitation, and the endless ability of microbes to adapt and survive when faced with environmental and technological changes.

In the United States, there are now vaccines against 17 different infections offered across the lifespan. In spite of the phenomenal safety and efficacy track record of vaccination as a prevention tool, many communities are under-vaccinated. Much of this is due to parental concerns about vaccination which have developed in response to the emergence of poor and even fraudulent so-called 'research' challenging vaccine safety. In reality, it is estimated that 33,000 deaths and 14 million vaccine-preventable illnesses could be avoided in each birth cohort if children received all age-appropriate vaccinations. In order for vaccination to be effective as a public health strategy, enough individuals must be vaccinated to promote the "herd immunity." This occurs when small numbers of those who cannot be vaccinated, due to underlying medical conditions, are nonetheless protected because nearly everyone around them is vaccinated and the organism cannot spread efficiently. Protection through herd immunity generally requires vaccination rates of 80-90 percent or more within a population.

In Michigan, a wide range of infectious diseases are tracked through a web-based computer system called the Michigan Disease Surveillance System (MDSS). This system is overseen by the Michigan Department of Health and Human Services and requires a collaborative effort of laboratories and public health departments to input data on individual cases of disease into the system. Once a laboratory, for example, enters demographics and a test result into MDSS, that information is seen by local public health nurses who evaluate the data and collect additional information from the healthcare provider and the patient. Contact investigations are undertaken, as appropriate, and final reports are submitted

to the state. Information is also shared with the CDC, which is then able to identify disease trends and outbreaks across the country. This system is critically important as a surveillance tool for known and emerging diseases. The list of diseases tracked is available at the Michigan.gov website and includes vaccine-preventable illnesses as well as foodborne, waterborne, insect-related and sexually transmitted infections.

While some infectious diseases on the reportable list are quite rare, others are seen with great frequency in Upper Peninsula counties and the state as a whole. A few of the more commonly occurring reportable illnesses include *chlamydia*, *hepatitis C* and *Lyme disease*, which will be discussed below and followed by *county tables for selected reportable diseases*.

Chlamydia

Chlamydia is the most common lab-confirmed sexually transmitted infection (STI) in the United States and locally, yet true prevalence is even higher as many infected persons are asymptomatic. Although both women and men become infected with chlamydia, women, especially young women 15 -24 years of age, experience the most significant health impact. Untreated, about 10-15 percent of women with chlamydia infection of the lower reproductive tract will go on to develop an infection in the upper reproductive tract called pelvic inflammatory disease (PID). PID may cause symptoms or may be “silent.” Involvement of the upper structures (fallopian tubes, uterus and surrounding tissues) can lead to permanent scarring and infertility. Routine annual screening of all sexually active women between 15 and 24 years of age and women of all ages with risk factors is recommended by the CDC.

Local chlamydia rates have been slowly rising in recent years as both true incidence and provider adherence to testing recommendations increase. In the 5-year period from January 2012 through December 2016, there were 3,358 cases of chlamydia reported across the 15 U.P. counties, an average of 672 per year. Hardest hit was Marquette County, with 1,098 cases in five years, to be expected with its larger college-age population. Second-highest was Chippewa County, also home to many college students, with 553 cases. Delta, Dickinson, Houghton, and Menominee counties each had more than 200 cases in five years, as the more populous counties generally reported more cases.

Prevention strategies , for sexually active individuals, include limiting partners and using condoms with every sexual encounter.

Hepatitis C

“Hepatitis” means inflammation of the liver. Toxins, certain drugs, some diseases, heavy alcohol use, and bacterial and viral infections can all cause hepatitis. Hepatitis is also the name of a family of viral infections that affect the liver; the most common types are hepatitis A, hepatitis B, and hepatitis C. Hep A, B and C, as they are colloquially called, are diseases caused by three different viruses. Although each can cause similar symptoms, they have different modes of transmission and can affect the liver differently. Hepatitis A appears only as an acute or newly occurring infection and does not become chronic. People with Hep A usually improve without treatment or supportive treatment only. Hepatitis B and hepatitis C can also begin as acute infections, but in some people, the virus remains in the body,

resulting in chronic disease and long-term liver problems. There are vaccines to prevent Hep A and B; however, there is not one for Hep C. If a person has had one type of viral hepatitis in the past, it is still possible to get the other types.

Hep C is a contagious liver disease that ranges in severity from a mild illness lasting a few weeks to a serious, lifelong illness that attacks the liver. It results from infection with the hepatitis C virus (HCV), which is spread primarily through contact with the blood of an infected person. Hepatitis C can be either “acute” or “chronic.”

Acute hepatitis C virus infection is a short-term illness that occurs within the first 6 months after someone is exposed to the hepatitis C virus. For most people, acute infection leads to chronic infection.

Chronic hepatitis C virus infection is a long-term illness that occurs when the hepatitis C virus remains in a person’s body. Hepatitis C virus infection can last a lifetime and lead to serious liver problems, including cirrhosis (scarring of the liver). It is currently a leading cause of liver cancer in the United States.

In 2014, there were an estimated 30,500 cases of acute hepatitis C virus infections reported in the United States. An estimated 2.7-3.9 million people in the United States live with chronic hepatitis C. Overall, approximately 75-85 percent of people who become infected with hepatitis C virus develop chronic infection. Hepatitis C is usually spread when blood from a person infected with the hepatitis C virus enters the body of someone who is not infected. Examples of this include sharing of drug paraphernalia, needlestick injuries in the workplace and perinatal transmission from mother to infant. Less commonly, transmission may occur through the sharing of personal care items such as razors or toothbrushes or through sexual contact with someone who has hepatitis C.

A summary of groups at increased risk includes:

- Current injection drug users (currently the most common way hepatitis C virus is spread in the United States)
- Past injection drug users, including those who injected only one time or many years ago
- Recipients of donated blood, blood products, and organs (once a common means of transmission but now rare in the United States since blood screening became available in 1992)
- People who received a blood product for clotting problems made before 1987
- Hemodialysis patients or persons who spent many years on dialysis for kidney failure
- People who received body piercing or tattoos done with non-sterile instruments
- People with known exposures to the hepatitis C virus, such as
 - Health care workers injured by needle sticks
 - Recipients of blood or organs from a donor who tested positive for the Hepatitis C virus
- HIV-infected persons
- Children born to mothers infected with the hepatitis C virus

HCV testing is recommended by the CDC for the risk groups outlined below, which include all Baby Boomers, and certain people at higher risk for blood-borne pathogen exposure. HCV screening is recommended for those who:

- Are Baby Boomers born between 1945 and 1965 (should be tested once even in the absence of other risk factors)
- Are currently injecting drugs or have ever injected drugs
- Have certain medical conditions, including persons:
 - who received clotting factor concentrates produced before 1987
 - Were ever on long-term hemodialysis
 - Have persistently abnormal alanine aminotransferase levels (ALT)
 - Have HIV infection
- Were prior recipients of transfusions or organ transplants, including persons who:
 - were notified that they received blood from a donor who later tested positive for HCV
 - received a transfusion of blood, blood components, or an organ transplant before July 1992

HCV- testing based on a **recognized exposure** is recommended for:

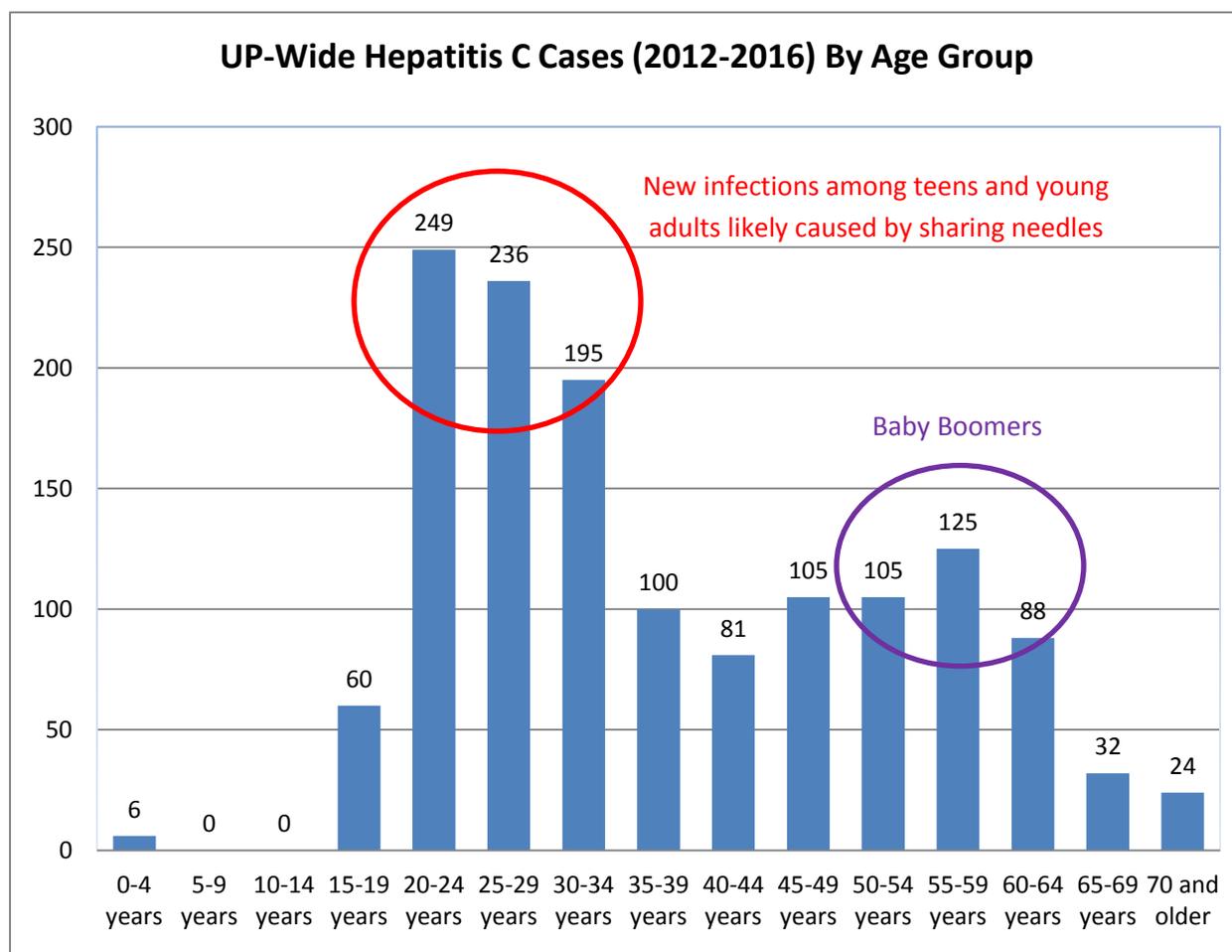
- Healthcare, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood
- Children born to HCV-positive women

Among the many infectious diseases tracked in the Michigan Disease Surveillance System (MDSS), hepatitis C is a timely one to examine further. Hep C is of particular interest because there has been a recent push to test the at-risk populations, including ‘Baby Boomers’ and intravenous (I.V.) drug users, as there are new, effective medications available to treat the disease. Nationwide, millions of Baby Boomers have been found to have chronic Hep C, most acquired decades ago from sharing needles, from blood transfusions received before 1992, or from other unrecognized exposures. But in the U.P., a majority of reported Hep C cases from 2012 through 2016 were among teens and adults under age 40 (with 680 out of a total of 1,406 cases – nearly half – from ages 20-34), most of whom have a history of I.V. drug use. This represents yet another health consequence of the burgeoning opioid epidemic.

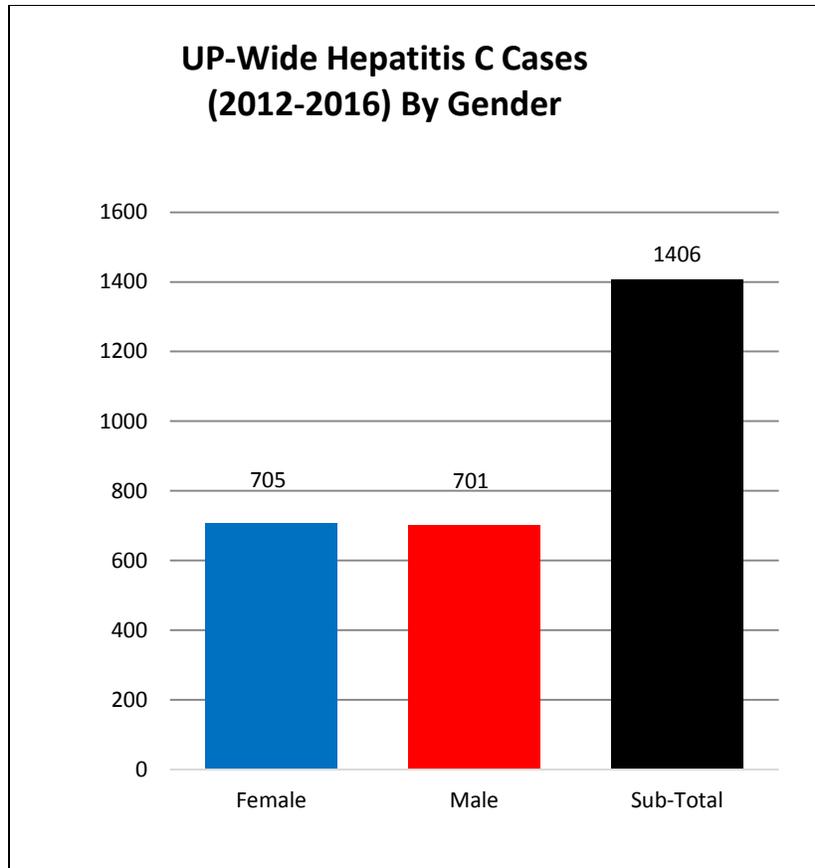
2017 Regional Adult Health Survey Data – Hep C Testing

The survey found that overall, an estimated 18 percent of Upper Peninsula adults had ever been screened for hepatitis C. Screening varied by county; 30 percent of Mackinac County residents were screened for hepatitis C while only 11 percent of residents in Ontonagon County were screened. Screening rates did not vary greatly by income, gender, or education. Fewer adults age 65 years and older reported they had been screened for hepatitis C (13 percent) compared to younger adults (20 percent).

Understanding the means of transmission and at-risk populations is helpful in interpreting local Hep C data, shown below and on the following two pages. The aggregate data from all 15 U.P. counties include new cases of acute or chronic hepatitis C reported in MDSS during the 5-year span from Jan. 1, 2012 through Dec. 31, 2016, not aggregate lifetime prevalence. Three graphs portray the distribution of cases by 5-year age groups; by gender; and by 5-year age groups divided between male and female cases. The graphs show that men and women are represented roughly equally among new cases in the U.P., and that by far the highest numbers of Hep C cases were among young adults, with a much less pronounced secondary peak among Baby Boomers. When looking at age and gender combined, women age 20-24 had the highest number of Hep C cases; while among Baby Boomers, more cases were reported among men than women.



While Hep C has been commonly thought of nationally as a chronic disease prevalent among Baby Boomers, it is important to recognize that in the U.P. from 2012 to 2016 there were 846 cases reported among people under age 40 and just 560 among those 40 and older. From 2012-2016, there were 249 cases reported among people age 20-24, 236 cases for age 25-29, and 195 cases at age 30-34. The next highest group was age 55-59, people born in the 1950s to early 1960s, many of whom acquired Hep C from blood transfusions pre-1992 before screening was implemented.

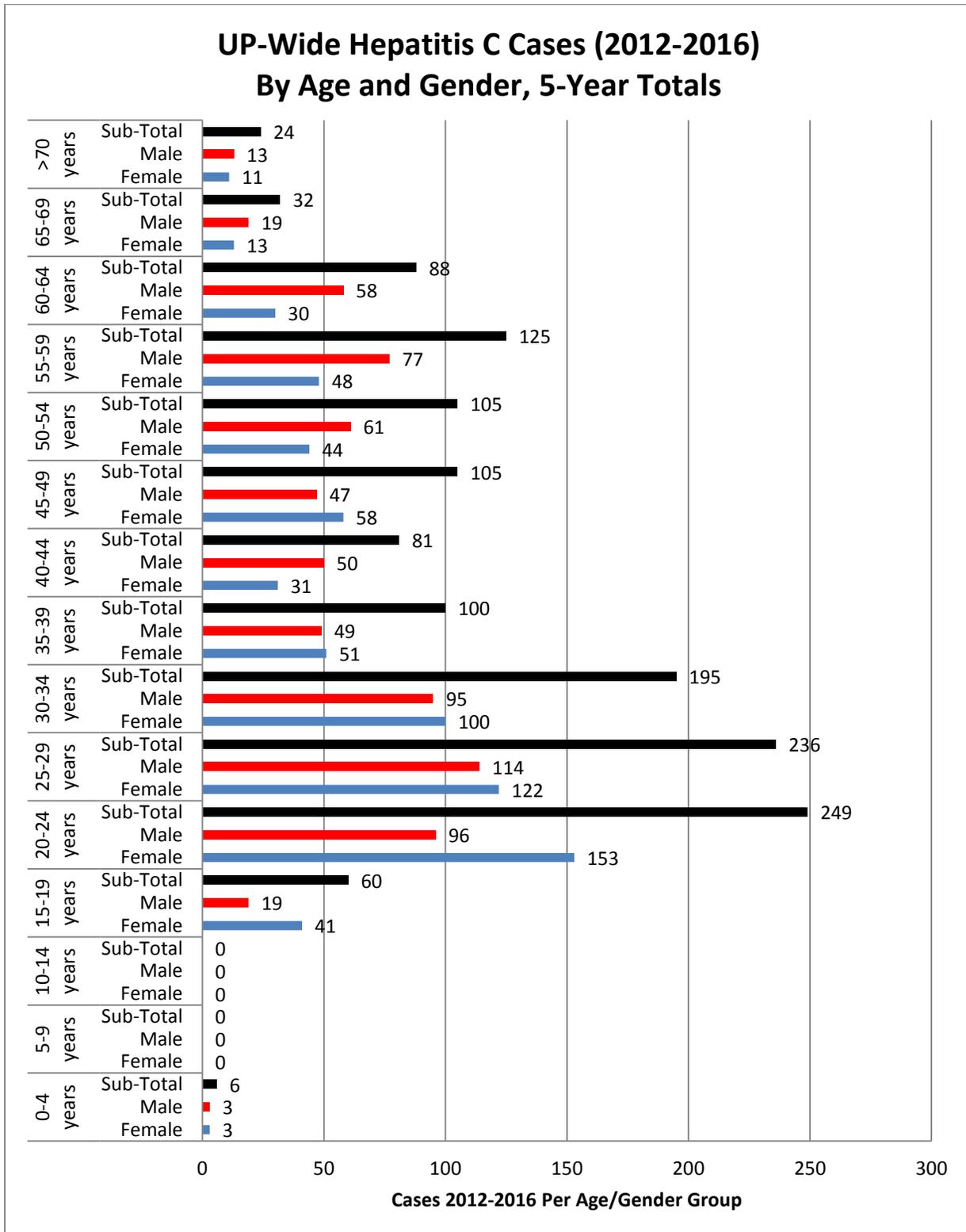


Across the U.P., Hep C cases were reported almost equally among women (705) and men (701), as shown above. But, as the age and gender breakdown on the next page shows, among teens and young adults, more cases were detected among women (blue bars), while among Baby Boomers, more cases were detected among men (red bars).

Prevention of the majority of new hepatitis C infections will require the development of long range strategies addressing root causes of the opioid epidemic (discussed on pages 183-191.) An immediate impact on transmission of Hep C can be made through the implementation of syringe service programs (SSPs), otherwise known as needle exchanges. Through SSPs, individuals with injection drug addiction are offered sterile needles, syringes and other equipment; given options for safe disposal of used needles; offered HIV and hepatitis testing; provided with education about safer practices and overdose prevention; referred to treatment programs and linked with needed medical care and social services. They have been shown to:

- Reduce drug use by succeeding in getting more people to enter into drug treatment and to stop injecting drugs.
- Reduce drug overdose deaths
- Reduce needlestick injuries among local law enforcement officers
- Reduce new HIV and hepatitis infections
- Save on healthcare costs by preventing disease

Syringe service programs are a proven, effective public health strategy to bring individuals with substance use disorder into the healthcare system and to provide them with the tools they need to make healthier choices.

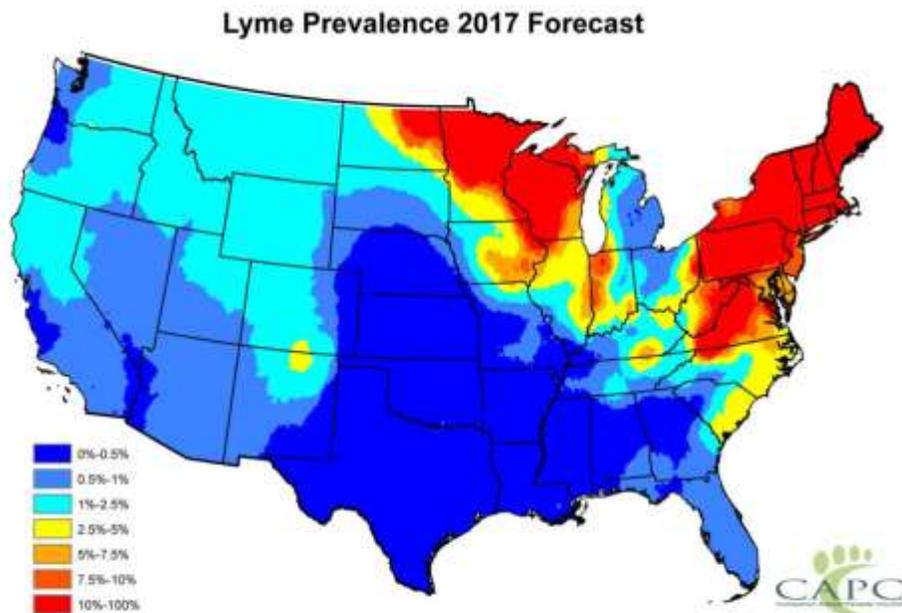


Lyme Disease

Lyme disease, transmitted by deer ticks, is gradually spreading from the Wisconsin border north and eastward across the Upper Peninsula, with 272 cases reported in MDSS from 2012-2016. By far the greatest numbers of cases were in Menominee County (89) and Dickinson County (73).

Lyme disease was first recognized in 1975 after large numbers of children were diagnosed with juvenile rheumatoid arthritis in Lyme, CT and two neighboring towns. Researchers suspected the disease was carried by ticks as many of the children lived and played near wooded areas, and the onset of symptoms was in summer during tick season. In 1982, the disease-causing bacterium, *Borrelia burgdorferi*, was identified, as was the mode of transmission, bite by the blacklegged tick (or deer tick, *Ixodes scapularis*.) First associated with the New England states, Lyme disease is also common in Wisconsin and Minnesota and, in recent years, has spread to the western and central Upper Peninsula as disease-carrying deer ticks expand their range (perhaps due to milder winters or changes in land use patterns.)

The United States map shown below, developed by the Companion Animal Parasite Council, a veterinary research institute at Clemson University, gives a good picture of the current range of Lyme disease carrying ticks, by mapping the prevalence of Lyme Disease in dogs. This Lyme Disease prevalence forecasting map, created by Christopher McMahan, an assistant professor of mathematical sciences at Clemson University, and Michael Yabsley, a parasitologist at the University of Georgia, shows the predicted Lyme disease prevalence — the percentage of dogs who are likely to test positive — in each of

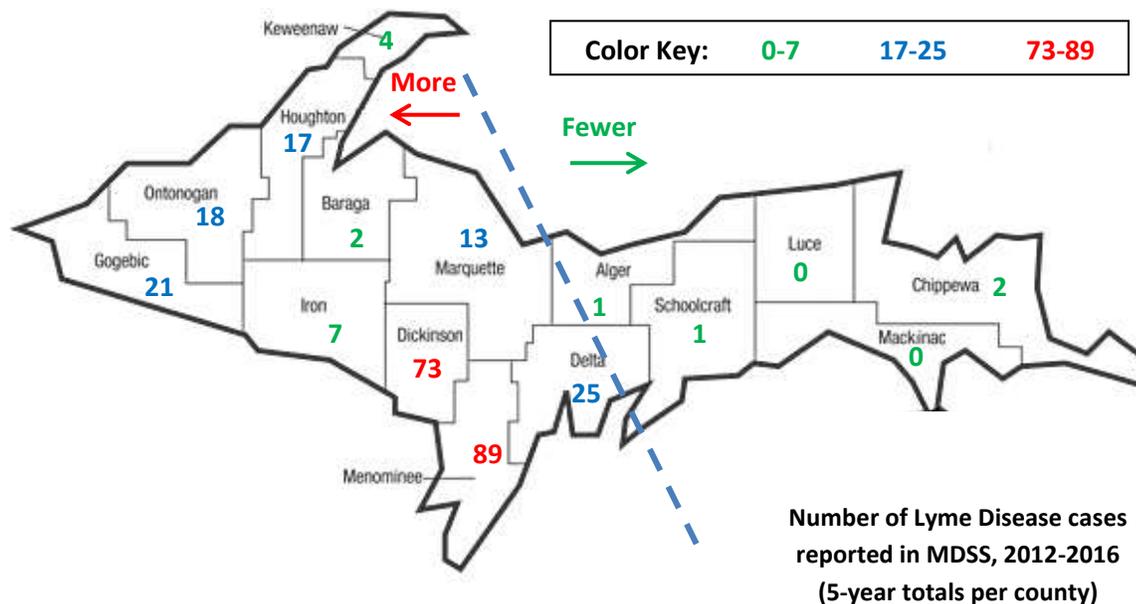


the 48 contiguous states. The map draws on monthly test data from veterinarians, providing the most timely picture of Lyme disease cases available. As the rate of Lyme disease grows rapidly across the United States, new research offers veterinarians a forecasting map that tells them which parts of the country are most at risk of

Lyme disease infections in dogs, which could also help track and predict Lyme disease in people. “Our research into modeling disease in space and time shows us how dynamic canine Lyme disease is on an annual basis. It’s our hope that these maps can be used to optimize patient care by veterinarians and public health officials or physicians,” McMahan said.

Note that much of the western and central U.P. are in the area shaded red indicating the highest risk of Lyme disease among dogs and people. County-level data from human cases across the U.P. indicate the same geographic distribution. The map and table on this page show the distribution of Lyme disease cases in the U.P. from 2012-2016. While recognizing that both variation in county population and provider awareness may affect the number of reported cases, a clear pattern emerges from the data, with Lyme disease, which has been widespread for decades in Wisconsin and Minnesota, spreading into the western and central U.P. as the range of the deer tick expands.

Lyme Disease, Human Cases 2012-2016, By County of Residence (map)



Lyme Disease, Human Cases 2012-2016, By County of Residence (table)

County	2012	2013	2014	2015	2016	Total
Alger	0	0	0	0	1	1
Baraga	0	0	0	1	1	2
Chippewa	1	0	0	0	1	2
Delta	5	11	4	1	4	25
Dickinson	6	18	15	6	28	73
Gogebic	3	5	1	6	6	21
Houghton	2	2	3	5	5	17
Iron	2	1	1	0	3	7
Keweenaw	0	0	1	1	2	4
Luce	0	0	0	0	0	0
Mackinaw	0	0	0	0	0	0
Marquette	1	4	2	0	6	13
Menominee	18	39	17	8	7	89
Ontonagon	5	6	1	2	4	18
Schoolcraft	0	0	0	0	0	0

Selected Infectious Diseases 2012-2016 – Alger County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Alger County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	4	1	1	0	1	7
Salmonellosis	1	4	1	1	0	7
All Meningitis	2	0	1	1	1	5
Chlamydia	5	7	5	10	16	43
Gonorrhea	0	0	0	0	0	0
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	0	0	0
Chickenpox	0	1	0	3	0	4
Pertussis	3	1	0	0	1	5
Lyme Disease	0	0	0	0	1	1
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	0	0	1	0	1
Hepatitis C	4	4	4	5	4	21

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

The Alger County disease counts are fairly typical for a county with a relatively small population. Chlamydia was the most common lab-confirmed sexually transmitted infection, with 43 cases in five years. There were 4-5 new cases of Hep C per year, consistent with regional rates on a per capita basis. And the single reported Lyme disease case is consistent with low values seen in U.P. counties east of Marquette.

Selected Infectious Diseases 2012-2016 – Baraga County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Baraga County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	1	0	0	0	0	1
Salmonellosis	0	0	2	0	1	3
All Meningitis	0	0	0	0	1	1
Chlamydia	11	13	13	16	16	69
Gonorrhea	0	1	0	3	1	5
Syphilis	0	0	0	0	0	0
Tuberculosis	1	0	0	0	0	1
Chickenpox	0	0	1	0	0	1
Pertussis	4	0	0	0	0	4
Lyme Disease	0	0	0	1	1	2
Hepatitis A	0	0	0	0	1	1
Hepatitis B	1	1	0	1	2	5
Hepatitis C	11	16	10	18	14	69

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

In Baraga County, Chlamydia was the most commonly reported sexually transmitted disease, as is typical in Michigan. Hepatitis C cases are often associated with Baby Boomers who acquired the infection decades earlier but were just tested and learned their status, or young adults who are newly infected through intravenous drug use (needle sharing) or having unprotected sex with I.V. drug users. Baraga County’s Hep C counts were relatively high on a per capita basis compared with other U.P. counties, likely indicative of new infections from I.V. drug use.

Selected Infectious Diseases 2012-2016 – Chippewa County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Chippewa County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	1	0	0	0	0	1
Campylobacter	4	5	3	15	5	32
Salmonellosis	4	7	3	8	7	29
All Meningitis	0	0	2	4	6	12
Chlamydia	103	136	96	105	113	553
Gonorrhea	1	4	1	1	2	9
Syphilis	0	0	1	0	0	1
Tuberculosis	1	0	1	1	0	3
Chickenpox	8	0	4	1	3	16
Pertussis	0	0	0	0	0	0
Lyme Disease	1	0	0	0	1	2
Hepatitis A	0	2	2	0	0	4
Hepatitis B	5	15	3	5	6	34
Hepatitis C	46	44	36	59	54	240

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Chippewa County had relatively high case counts for several reportable diseases compared with other U.P. counties, to be expected because the county has the second largest population in the region behind Marquette County, and because it is home to a university and a large state corrections facility (lab results from incarcerated individuals are included in MDSS in the county where the inmates are housed.) There were 553 cases of Chlamydia and 240 cases of Hep C reported in the five-year period, both second-highest in the U.P. behind Marquette County. The 34 cases of Hep B, a blood-borne pathogen that causes acute and chronic liver disease, is a high number for a vaccine-preventable disease.

Selected Infectious Diseases 2012-2016 – Delta County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Delta County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	1	1	1	0	3
Campylobacter	19	27	14	33	25	118
Salmonellosis	5	5	5	5	4	24
All Meningitis	3	0	1	0	6	10
Chlamydia	67	63	88	70	89	377
Gonorrhea	1	1	3	6	7	18
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	1	0	1
Chickenpox	2	0	7	0	1	10
Pertussis	23	1	0	4	1	29
Lyme Disease	5	11	4	1	4	25
Hepatitis A	1	0	0	0	1	2
Hepatitis B	7	6	5	2	9	29
Hepatitis C	33	39	41	39	50	202

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Disease counts for Delta County residents during the five-year period of 2012-2016 were largely similar to per capita rates for other U.P. counties, with the exception of the 118 cases of Campylobacter infection (a food-borne microbe.) Campylobacter causes an estimated 1.3 million illnesses each year in the United States. Most illnesses likely occur due to eating raw or undercooked poultry, or to eating something that came in contact with it. Some are due to contaminated water, contact with animals, or drinking raw (unpasteurized) milk. Although people with *Campylobacter* infection usually recover on their own, some need medical treatment.

The counts for Chlamydia, Hep B and Hep C were similar to those from other U.P. counties of similar population. Note the 23 cases of pertussis in 2012. Pertussis (whooping cough) is a vaccine preventable disease that can have serious consequences if the disease spreads from unvaccinated persons or those with waning immunity to infants, who are most vulnerable.

Selected Infectious Diseases 2012-2016 – Dickinson County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Dickinson County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	1	0	0	0	1
Campylobacter	2	3	3	15	9	32
Salmonellosis	6	3	2	4	3	18
All Meningitis	1	1	1	2	2	7
Chlamydia	67	49	52	52	48	268
Gonorrhea	4	4	0	0	8	16
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	0	0	0
Chickenpox	5	0	0	0	0	5
Pertussis	5	0	10	1	0	16
Lyme Disease	6	18	15	6	28	73
Hepatitis A	1	0	0	0	0	1
Hepatitis B	0	2	0	0	0	2
Hepatitis C	17	33	20	22	36	128

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Disease counts for Dickinson County in the five-year period from 2012-2016 were fairly typical of per capita rates across the U.P., and included food-borne infections (campylobacter and salmonella); sexually transmitted infections (chlamydia and gonorrhea); vaccine-preventable diseases (chickenpox and pertussis); and Hep C, as seen across the region.

Dickinson County had the second-most cases of Lyme disease of any county in the region during the period. Lyme disease appears to be spreading north and east across the U.P. from Wisconsin, with Menominee and Dickinson counties having the most cases.

Selected Infectious Diseases 2012-2016 – Gogebic County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Gogebic County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	1	1	0	2	0	4
Salmonellosis	0	1	1	0	0	2
All Meningitis	3	0	1	0	1	5
Chlamydia	36	17	34	30	36	153
Gonorrhea	3	1	2	2	1	9
Syphilis	0	0	0	1	0	1
Tuberculosis	1	1	0	0	0	2
Chickenpox	2	2	1	0	5	10
Pertussis	20	0	0	4	0	24
Lyme Disease	3	5	1	6	6	21
Hepatitis A	0	0	0	0	0	0
Hepatitis B	1	0	0	0	0	1
Hepatitis C	10	7	15	26	14	72

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Gogebic County infectious disease counts in 2012-2016 included chlamydia, which is typically the most common laboratory-confirmed sexually transmitted infection, vaccine preventable diseases like pertussis and chickenpox; Lyme disease, which is more prevalent in Western U.P. counties than in the Eastern U.P.; and Hep C. Note that many U.P. counties reported pertussis, or whooping cough, cases in 2012, as the disease spread among under-vaccinated populations and posed a threat to infants, who are most vulnerable to serious consequences.

Selected Infectious Diseases 2012-2016 – Houghton County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Houghton County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	1	0	0	0	0	1
Campylobacter	7	6	3	3	5	24
Salmonellosis	5	9	4	4	6	28
All Meningitis	1	3	0	3	3	10
Chlamydia	32	43	43	50	45	213
Gonorrhea	0	2	3	5	6	16
Syphilis	0	0	0	1	1	2
Tuberculosis	0	1	0	0	1	2
Chickenpox	32	3	2	0	1	38
Pertussis	1	0	1	8	0	10
Lyme Disease	2	2	3	5	5	17
Hepatitis A	2	1	0	0	0	3
Hepatitis B	4	1	0	1	1	7
Hepatitis C	16	9	11	16	23	75

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Houghton County disease counts for the period from 2012-2016 included the usual food-borne infections such as campylobacter and salmonella; sexually transmitted infections such as chlamydia and gonorrhea; tick-borne Lyme disease, which is more prevalent in the western U.P. than in the eastern counties; and blood-borne Hep C. Note the 32 cases of vaccine-preventable chickenpox in 2012. Houghton County typically has some of Michigan’s lowest childhood vaccination rates, leaving children at risk for infectious diseases.

Selected Infectious Diseases 2012-2016 – Iron County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Iron County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	1	1	0	3	2	7
Salmonellosis	2	1	4	0	0	7
All Meningitis	0	0	1	1	2	4
Chlamydia	16	5	14	38	39	112
Gonorrhea	1	0	0	1	3	5
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	0	0	0
Chickenpox	1	2	0	1	0	4
Pertussis	25	0	0	1	0	26
Lyme Disease	2	1	1	0	3	7
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	0	0	0	0	0
Hepatitis C	7	21	16	14	31	89

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Iron County counts for common reportable infectious diseases, including the 112 cases of chlamydia and 89 cases of Hep C, were typical of per capita rates across the region. Note the 25 cases of pertussis in 2012, a year when neighboring counties also had quite a few reports of this vaccine-preventable disease also known as whooping cough. When pertussis spreads through un-vaccinated adults or persons with waning immunity, it poses a danger to infants who are most vulnerable to serious consequences.

Selected Infectious Diseases 2012-2016 – Keweenaw County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Keweenaw County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	2	1	1	1	1	6
Salmonellosis	0	1	1	0	0	2
All Meningitis	3	0	0	1	0	4
Chlamydia	8	9	5	5	7	34
Gonorrhea	0	0	0	1	1	2
Syphilis	0	0	1	0	0	1
Tuberculosis	0	0	0	0	0	0
Chickenpox	4	0	0	0	0	4
Pertussis	0	0	0	1	0	1
Lyme Disease	0	0	1	1	2	4
Hepatitis A	1	0	0	0	0	1
Hepatitis B	1	0	1	0	0	2
Hepatitis C	3	0	2	5	1	11

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Keweenaw County, the least populous county in Michigan, had few cases of infectious diseases reported over the five-year period from 2012-2016.

Selected Infectious Diseases 2012-2016 – Luce County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Luce County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	1	2	2	0	1	6
Salmonellosis	3	0	2	1	0	6
All Meningitis	0	0	0	0	0	0
Chlamydia	2	10	7	9	8	36
Gonorrhea	0	1	0	0	0	1
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	0	0	0
Chickenpox	0	3	0	5	0	8
Pertussis	0	0	1	0	0	1
Lyme Disease	0	0	0	0	0	0
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	0	0	0	0	0
Hepatitis C	1	3	1	8	11	24

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Luce County, among the least populous counties in Michigan, had few cases of infectious diseases reported over the five-year period from 2012-2016.

Selected Infectious Diseases 2012-2016 – Mackinac County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Mackinac County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	5	2	2	5	3	17
Salmonellosis	1	0	4	3	2	10
All Meningitis	0	1	0	0	2	3
Chlamydia	16	26	17	11	23	93
Gonorrhea	2	5	0	0	2	9
Syphilis	0	0	0	1	1	2
Tuberculosis	0	0	2	0	0	2
Chickenpox	1	0	0	3	3	7
Pertussis	1	1	0	0	0	2
Lyme Disease	0	0	0	0	0	0
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	2	0	0	0	2
Hepatitis C	6	6	9	9	12	42

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Mackinaw County infectious disease counts in 2012-2016 included chlamydia, which is typically the most common laboratory-confirmed sexually transmitted infection; several cases of vaccine preventable diseases like pertussis and chickenpox; food-borne diseases like campylobacter and salmonella; and Hep C. There were no cases of tick-borne Lyme disease, which is endemic in the Western U.P. and along the Wisconsin border.

Selected Infectious Diseases 2012-2016 – Marquette County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Marquette County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	5	0	0	1	0	6
Campylobacter	12	13	11	9	17	62
Salmonellosis	4	10	16	7	8	45
All Meningitis	5	7	4	7	6	29
Chlamydia	169	218	221	212	278	1098
Gonorrhea	2	7	18	8	8	43
Syphilis	0	1	0	2	1	4
Tuberculosis	0	0	1	1	0	2
Chickenpox	9	1	0	0	2	12
Pertussis	27	12	5	3	5	52
Lyme Disease	1	4	2	0	6	13
Hepatitis A	0	0	0	1	1	2
Hepatitis B	1	0	1	4	2	8
Hepatitis C	54	36	52	67	71	280

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Marquette County, with nearly double the population of the next largest U.P. county, had the greatest number of aggregate cases in MDSS reported in most categories from 2012-2016. The 27 cases of pertussis in 2012 occurred in the same year that many other U.P. counties also had multiple cases of the disease also known as whooping cough. Rates for food-borne, blood-borne, and sexually transmitted infections (STI) were roughly proportionate to population when compared with other U.P. counties. Even the 1,098 cases of chlamydia, the most common lab-confirmed STI, were commensurate with the county population of young adults.

Selected Infectious Diseases 2012-2016 – Menominee County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Menominee County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	12	10	7	11	17	57
Salmonellosis	3	2	4	8	1	18
All Meningitis	1	3	4	3	3	14
Chlamydia	57	32	45	61	70	265
Gonorrhea	6	3	3	2	4	18
Syphilis	0	0	0	0	0	0
Tuberculosis	2	2	1	2	3	10
Chickenpox	1	1	1	2	0	5
Pertussis	16	0	1	1	0	18
Lyme Disease	18	39	17	8	7	89
Hepatitis A	1	0	0	1	0	2
Hepatitis B	0	0	1	1	2	4
Hepatitis C	9	10	14	21	29	83

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Disease counts for Menominee County in the five-year period from 2012-2016 were fairly typical of per capita rates across the U.P., and included food-borne infections (campylobacter and salmonella); sexually transmitted infections (chlamydia and gonorrhea); vaccine-preventable diseases (chickenpox and pertussis); and Hep C, as seen across the region. Note the 16 cases of pertussis in 2016, the year that neighboring Delta County also had 23 cases of the vaccine-preventable disease that spreads through under-vaccinated populations and poses a danger to infants who are most vulnerable to serious consequences from the disease also known as whooping cough.

Menominee County had the most cases of Lyme disease of any county in the region during the period, with 89. Lyme disease appears to be spreading north and east across the U.P. from Wisconsin, with Menominee and Dickinson counties having the most cases.

Selected Infectious Diseases 2012-2016 – Ontonagon County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Ontonagon County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	1	1	0	1	1	4
Salmonellosis	0	0	1	1	2	4
All Meningitis	0	0	0	2	1	3
Chlamydia	3	3	2	5	9	22
Gonorrhea	0	1	0	0	0	1
Syphilis	0	0	0	0	0	0
Tuberculosis	0	0	0	0	1	1
Chickenpox	0	0	1	0	0	1
Pertussis	1	0	0	2	0	3
Lyme Disease	5	6	1	2	4	18
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	1	0	0	0	1
Hepatitis C	2	3	0	3	9	17

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Ontonagon County, among the least populous counties in Michigan, had few cases of infectious diseases reported over the five-year period from 2012-2016. Note, however, the 18 cases of Lyme disease, a high per capita rate for this tick-borne disease which is newly endemic in the Western U.P. and likely to spread eastward over time.

Selected Infectious Diseases 2012-2016 – Schoolcraft County

The table below represents case counts for selected reportable diseases entered in MDSS, Michigan’s electronic disease registry, for the calendar years 2012 through 2016, for residents of Schoolcraft County. Case counts reflect incidence – not prevalence – data; they tell how many cases were newly diagnosed or lab-confirmed in a year, not how many people overall may be living with the disease in the county. And because reports in MDSS are generated when a person presents with symptoms and/or is tested by a health professional, the counts may reflect differences in medical practice and reporting. But, in general, these data indicate trends and relative risks of acquiring various common infectious diseases.

Diseases Counts per Year (Confirmed, Probable, Suspect)*	2012	2013	2014	2015	2016	5-year total
HIV/AIDS	0	0	0	0	0	0
Campylobacter	3	1	0	0	4	8
Salmonellosis	0	0	0	1	1	2
All Meningitis	0	1	0	0	0	1
Chlamydia	14	8	10	6	24	62
Gonorrhea	0	1	1	0	1	3
Syphilis	0	0	0	0	2	2
Tuberculosis	0	0	0	0	0	0
Chickenpox	0	1	0	0	1	2
Pertussis	0	0	0	0	0	0
Lyme Disease	0	1	0	0	0	1
Hepatitis A	0	0	0	0	0	0
Hepatitis B	0	0	0	0	0	0
Hepatitis C	6	6	11	6	10	40

**Reported case counts in the Michigan Disease Surveillance System (MDSS) from health departments, providers and laboratories, from reports generated by searching “Case Types – Individual and Aggregate,” “Case Status -- Confirmed, Probable, Suspect,” and “Investigation Status -- Completed, Completed - Follow Up.”*

Schoolcraft County had fairly low numbers of cases of reportable diseases from 2012-2016. The counts for chlamydia and Hep C were consistent with those for other counties of similar size across the region.

CHRONIC DISEASE AND MORTALITY

According to the U.S. National Center for Health Statistics, a chronic disease is one lasting 3 months or more. Chronic diseases generally can be controlled but not cured and do not simply disappear on their own. In the United States, chronic diseases account for approximately 70 percent of deaths and are the leading cause of death and disability (with heart disease and cancer combining for almost half of deaths). Interestingly, the World Health Organization notes that even in parts of the world where infectious diseases continue to be an enormous health risk, chronic diseases are still the most common cause of death.

Some of the most common chronic diseases and conditions—heart disease, stroke, cancer, diabetes, obesity and arthritis—are largely preventable. Tobacco use remains the single largest preventable cause of death in the United States. According to the Centers for Disease Control and Prevention (CDC):

- According to a July 2017 chronic disease report, nearly half of all adults in the United States—117 million people—had one or more chronic health conditions. One of four adults had two or more chronic health conditions.
- Two chronic diseases—heart disease and cancer—together accounted for nearly 48 percent of all deaths.
- Obesity is a risk factor for many chronic diseases including heart disease, stroke, diabetes and some cancers. In the national Behavioral Risk Factor Surveillance System (BRFSS) self-report survey for 2016, 68 percent of adults and 33 percent of adolescents were either obese or overweight. Adolescents who are overweight and obese are at higher risk for becoming obese adults. Obesity rates vary by geographic region of the U.S. and by race/ethnicity, with African Americans having the highest percentages of obesity and Asian Americans having the lowest. Geographically, the southeastern U.S. and northern Midwest are two of the highest risk areas.
- Arthritis is the most common cause of disability. Of the 53 million adults with a doctor diagnosis of arthritis, more than 22 million say they have trouble with their usual activities.
- Diabetes is the leading cause of kidney failure, lower-limb amputations other than those caused by injury, and new cases of blindness among adults.

Four health risk behaviors—lack of exercise or physical activity, poor nutrition, tobacco use, and drinking too much alcohol—cause much of the illness, suffering, and early death related to chronic diseases and conditions.

- In 2013, approximately 26 percent of adults reported no leisure time physical activity and only 20 percent met recommendations for aerobic and muscle strengthening activity, according to the BRFSS. This survey also found that only 27 percent of adolescents participated in daily physical activity.

- The BRFSS also looks at fruit and vegetable intake for U.S. adults and adolescents. Eating more fruits and vegetables adds nutrients to diets, reduces the risk for heart disease, stroke, some cancers, and helps manage body weight when consumed in place of more energy-dense foods. The recommended number of servings varies with age and activity level, but even for adults with low activity levels, approximately 2 cups of fruit and 2-3 cups of vegetables per day are recommended. Unfortunately, 2013 data suggests that 39 percent of adults consumed fruit less than once a day and 22 percent consumed vegetables less than once per day. Similarly, nearly 40 percent of adolescents consumed fruit and vegetables less than once a day.
- In 2015, an estimated 15.1 percent (36.5 million) U.S. adults were current cigarette smokers. Of these, 76.9 percent (32.4 million) smoked every day and 23.1 percent (9.7 million) smoked some days. Preliminary data from 2017 indicate the adult smoking rate is continuing to decline, down to 14 percent, an historic low, decreased by about two thirds from where it stood in the early 1960s before tobacco reduction became a centerpiece of chronic disease prevention campaigns. Cigarette smoking kills more than 480,000 Americans each year, with more than 41,000 of these deaths from exposure to secondhand smoke. In addition, smoking-related illness in the United States costs more than \$300 billion a year, including nearly \$170 billion in direct medical care for adults and \$156 billion in lost productivity.
- Drinking too much alcohol is responsible for 88,000 deaths each year, more than half of which are due to binge drinking. About 38 million U.S. adults report binge drinking an average of 4 times a month, and have an average of 8 drinks per binge, yet most binge drinkers are not alcohol dependent.
- According to a recent National Health and Nutrition Examination Survey (NHANES), when looking at combined data between 2009 and 2012, nearly 50 percent of U.S. adults had periodontitis, the leading cause of adult tooth loss. It occurs when gum inflammation or infection is not treated and spreads to the tissues supporting the teeth. Risk increased with age and male gender. Prevalence varied two-fold between the lowest and highest levels of socioeconomic status, whether defined by poverty or education.

Chronic diseases similarly account for the majority of Michigan and Upper Peninsula deaths, and many hundreds of deaths per year in the Upper Peninsula are of a type considered preventable, because they are attributable to root causes, like tobacco use, sedentary lifestyle, or uncontrolled hypertension that could have been mitigated by changes in behavior or simple medical interventions. Preventable deaths occur in all populations, but a recent study of national mortality data released by the CDC in January 2017 shows that rural Americans are more likely to die than their urban counterparts because of their demographics, behaviors and access to care, and many of these deaths are preventable. The CDC press release from Jan. 12, 2017 is reprinted on the next two pages because of its direct relevance to the Upper Peninsula's largely rural population.

From the federal centers for Disease Control and Prevention (CDC), 2017:

Rural Americans at higher risk of death from five leading causes

Demographic, environmental, economic, social factors might be key to difference

A new CDC study demonstrates that Americans living in rural areas are more likely to die from five leading causes than their urban counterparts. In 2014, many deaths among rural Americans were potentially preventable, including 25,000 from heart disease, 19,000 from cancer, 12,000 from unintentional injuries, 11,000 from chronic lower respiratory disease, and 4,000 from stroke. The percentages of deaths that were potentially preventable were higher in rural areas than in urban areas. The report and a companion commentary are part of a new rural health series in CDC's Morbidity and Mortality Weekly Report.

"This new study shows there is a striking gap in health between rural and urban Americans," said CDC Director Tom Frieden, M.D., M.P.H. "To close this gap, we are working to better understand and address the health threats that put rural Americans at increased risk of early death."

Some 46 million Americans — 15 percent of the U.S. population — currently live in rural areas. Several demographic, environmental, economic, and social factors might put rural residents at higher risk of death from these public health conditions. Residents of rural areas in the United States tend to be older and sicker than their urban counterparts. They have higher rates of cigarette smoking, high blood pressure, and obesity. Rural residents report less leisure-time physical activity and lower seatbelt use than their urban counterparts. They also have higher rates of poverty, less access to healthcare, and are less likely to have health insurance.

The Health Resources and Services Administration (HRSA), which houses the Federal Office of Rural Health Policy, will collaborate with CDC on the series and will help to promote the findings and recommendations to rural communities.

"We have seen increasing rural-urban disparities in life expectancy and mortality emerge in the past few years. CDC's focus on these critical rural health issues comes at an important time," said Health Resources and Services Administration (HRSA) Acting Administrator Jim Macrae.

In the study, mortality data for U.S. residents was analyzed from the National Vital Statistics System.

Counties were placed in two categories—urban or rural—based on the NCHS urban-rural classification scheme for counties. The current study found that unintentional injury deaths were approximately 50 percent higher in rural areas than in urban areas, partly due to greater risk of death from motor vehicle crashes and opioid overdoses. Also, because of the distance between healthcare facilities and trauma centers, rapid access to specialized care can be more challenging for people injured in rural areas.

The gaps in health can be addressed. For example, healthcare providers in rural areas can:

(CDC Rural Health Report, continued)

- **Screen patients for high blood pressure and make control a quality improvement goal.** High blood pressure is a leading risk factor for heart disease and stroke.
- **Increase cancer prevention and early detection.** Rural healthcare providers should participate in the state-level comprehensive control coalitions. Comprehensive cancer control programs focus on cancer prevention, education, screening, access to care, support for cancer survivors, and overall good health.
- **Encourage physical activity and healthy eating** to reduce obesity. Obesity has been linked to a variety of serious chronic illnesses, including diabetes, heart disease, cancer, and arthritis.
- **Promote smoking cessation.** Cigarette smoking is the leading cause of preventable disease and death in the United States and is the most significant risk factor for chronic lower respiratory disease.
- **Promote motor vehicle safety.** Rural healthcare providers should encourage patients to always wear a seat belt and counsel parents and child care providers to use age- and size-appropriate car seats, booster seats, and seat belts on every trip.
- **Engage in safer prescribing of opioids for pain.** Healthcare providers should follow the CDC guideline when prescribing opioids for chronic pain and educate patients on the risks and benefits of opioids and using non-pharmacologic therapies to provide greater benefit.

Not all deaths can be prevented. Some rural areas might have characteristics that put residents at higher risk of death, such as long travel distances to specialty and emergency care or exposures to specific environmental hazards. It's also possible that excessively high death rates could signal a need for improved public health programs that support healthier behaviors and neighborhoods or better access to health care services.

Local Focus

- Half of local deaths are attributed to heart disease or cancer, similar to Michigan and U.S. rates. Age-adjusted death rates and years of potential life lost below age 75 are similar as well. Age-adjusted rates of death by cardiovascular disease and trends over time are very similar to state and national data.
- Many people think local cancer rates are higher than in other parts of the country, but the data demonstrate that local age-adjusted cancer incidence (new cancer cases diagnosed per year per 100,000 people) is lower than the Michigan rate. Certainly there are more cancer deaths per

capita in the U.P. than in other parts of the country as a crude, non-age-adjusted rate because the region has a higher proportion of elderly residents. In addition, perhaps the awareness of cancer is greater than that of heart disease because more years of potential life below age 75 are lost to cancer than to heart disease: in small towns, nearly everyone knows someone who has had cancer, and fundraisers for cancer are more common than for other diseases because treatments can be lengthy and expensive

- Regional diabetes prevalence is about 11 percent, a rate expected to rise given the dramatic increase in obesity in recent years. Experts predict that one third of today's youth will develop Type 2 diabetes in their lifetimes based on current obesity rates.
- U.P. rates for various behavioral risk factors including tobacco use, obesity, physical inactivity and poor nutrition are troubling. As noted above, current and former tobacco users and people who are overweight or obese are at higher risk of chronic disease and disability.
- Another condition not always considered in discussions of disease and disability is clinical depression, but an estimated 25.6 percent of local adults have been diagnosed with chronic or episodic depression and related diagnoses, which can affect both the quality and duration of life.

Future Implications

- Obesity is projected to overtake tobacco use as the leading root cause of preventable mortality, morbidity, disability and years of potential life lost. With the obesity rate approaching 37 percent in the 2017 Regional Adult Health Survey, it is reasonable to anticipate an increasing prevalence of cardiovascular disease, diabetes and other chronic illnesses over the coming decades.
- Low-income populations tend to bear the highest burden of chronic disease due to multiple factors including a higher prevalence of health risk behaviors and less access to and utilization of preventive and chronic disease care. This means that a significant proportion of the local population is at increased risk for poor health outcomes.
- Low utilization of recommended dental care services places individuals at risk of periodontitis and tooth loss. It is important to note that periodontal disease has also been linked to cardiovascular disease and even to a higher risk for poor birth outcomes for pregnant women. Therefore, a higher burden of dental disease may have a wider impact on health outcomes.
- Because much of chronic disease is preventable with behavior change, predictions on future health outcomes are not set in stone. Addressing social determinants of health that impact our residents as well as implementing targeted and effective prevention efforts can have an enormous impact on the health of our communities in future decades.

Regional Chronic Disease Data

Selected regional survey results that relate to rates of chronic disease, health behaviors and access to preventive screenings are presented in the boxes below and on the next page:

2017 Regional Adult Health Survey Data – Chronic Disease Indicators

Below are selected rates for chronic diseases, health behaviors related to chronic disease or its prevention, and rates for utilization of screening and preventive services. The rates given below are weighted for the U.P. adult population as a whole unless a particular age group or other population group is specified. Chronic disease prevalence generally increases with age, and may also correlate with socioeconomic factors as well as health behaviors. For more information on survey methodology, indicator definitions, and complete findings, please see pages 191-279.

Disease Rates

- 9.6 percent of U.P. adults were ever diagnosed with heart disease, 5.8 percent ever had a heart attack, and 3.2 percent ever had a stroke. The reported rates for adults age 65+ were 22.0 percent for heart disease, 11.8 percent for heart attack, and 6.4 percent for stroke.
- 6.3 percent of U.P. adults were ever diagnosed with skin cancer and 8.4 percent were ever diagnosed with other cancers. The reported rates for adults age 65+ were 16.4 percent for skin cancer and 18.4 percent for other cancers.
- 11.0 percent of U.P. adults were ever diagnosed with diabetes, including 19.6 percent age 65+, 13.4 percent of men, 22.3 percent with less than high school completion, and 15.6 percent with household incomes below \$25,000.
- Lifetime asthma prevalence was an estimated 17.8 percent, with current asthma prevalence at 11.2 percent.
- 15.8 percent of adults age 65+ had ever been diagnosed with chronic pulmonary disease (COPD, CLRD, etc.)
- 32.6 percent of U.P. adults, and 45.4 percent at age 65+, had arthritis that limits their activity.
- 25.6 percent of U.P. adults had ever been diagnosed with depression, and 21.3 percent had ever been told they have an anxiety disorder. Among 18-39 year olds, the rates were 36.5 and 32.5 percent, respectively.

Health Behaviors and Risk Factors

- 36.9 percent of U.P. adults were obese (B.M.I. \geq 30), and another 34.0 percent were overweight but not obese (B.M.I. 25.0-29.9).
- 20.4 percent of U.P. adults were current smokers in 2018, compared with 14 percent nationwide. Whites, Native Americans and rural populations nationally are more likely to use tobacco versus their urban counterparts.

(continued on next page)

2017 Regional Adult Health Survey Data – Chronic Disease Indicators (continued)

More Health Behaviors and Risk Factors

- 8.9 percent of U.P. adults age 18-39, and 10.5 percent of all men, used smokeless tobacco (chew), and 6.8 percent age 18-39 used e-cigarettes
- Only 10.6 percent of U.P. adults ate 5 or more daily servings of fruits and vegetables.
- 23.9 percent of U.P. adults reported no leisure-time physical activity.
- An estimated 13.3 percent of U.P. adults don't always wear seat belts in vehicles, including 19.1 percent of men.
- 14.0 percent of U.P. adults were heavy drinkers (greater than 60 alcoholic drinks per month for men and greater than 30 for women), compared with 6.9 percent statewide, and 12.9 percent reported binge drinking in the past month (5 drinks for men, or 4 for women, in a 2-hour span).

Preventive Services

- 25.9 percent of U.P. adults did not have a routine checkup in the past 12 months.
- 31.8 percent of adults had no dental care in the past 12 months, including 55 percent of those with household incomes below \$25,000.
- 24.0 percent of adults took medication for depression or anxiety in the past 12 months, and 7.6 percent had been in counseling or therapy.
- Just 18.2 percent of U.P. adults said they had been tested for Hepatitis C status, versus 29.2 percent statewide.
- 80.3 percent of women age 40 and older had a mammogram within the last 2 years.
- 75.5 percent of women had a pap test for cervical cancer within the last 3 years.
- 66.3 percent of men 50 and older had ever had a PSA screening for prostate cancer.
- 74.6 percent of U.P. adults 50 and older had an appropriately timed colorectal cancer screening, defined as a blood stool test within 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.

Leading Causes of Death

Ask any native U.P. resident and he or she will tell you what is unique about his home town, but when it comes to chronic disease and mortality, all U.P. counties, and to a great extent, all human beings are more alike than they are different. About half of all deaths in the United States and other developed nations are from heart disease or cancer. Generally, U.P. causes of death as a proportion of all deaths, and age-adjusted death rates, are similar to expected state and national values. Below are the numbers and percentages of all deaths per county in a representative year. Note that in each county, the leading causes of death are heart disease and cancer. Smaller numbers of deaths were suppressed by the data source for confidentiality. These tables come from “Number of Deaths by Age and Underlying Cause of Death, 2015” from the Michigan Department of Health and Human Services.

In total, there were 3,374 deaths to U.P. residents in 2015. Of these deaths, 1,072 (31.8 percent) had heart disease as the cause of death, and 784 (23.2 percent) had cancer as the cause, so a combined 54 percent were from the universal two leading causes, compared with 48 percent nationwide. But this difference, owing to a higher percentage of deaths caused by heart disease in the U.P. than nationwide, is to be expected because the U.P. has an older population than the nation as a whole, and older people are likelier to die from heart disease, whereas younger people (who are under-represented as a proportion of U.P. residents) are more likely to die from unintended injuries.

The county tables begin below and continue on the next five pages. Each table shows the total number of deaths to county residents in 2015, even if the death occurred outside the county. The numbers and percentages of deaths by selected leading causes are given; however, for events fewer than 10, the specific number and percent are suppressed to protect confidentiality. The ranges of (1-5) and (6-10) given for numbers of deaths less than 10, as shown in the Alger County data below and with other smaller counties, give some indication of the relative sizes of the groups

Alger County	Number	Percent
Total	128	100%
Heart Disease	24	19%
Cancer	41	32%
C.L.R.D.	[6-10]	5-8%
Accidents	[6-10]	5-8%
Diabetes	[1-5]	1-4%
Suicide	[1-5]	1-4%
Alzheimer’s Disease	[1-5]	1-4%
Kidney Disease	-	-
Chronic Liver Disease	[1-5]	1-4%
Pneumonia/Flu	[1-5]	1-4%

Baraga County	Number	Percent
Total	93	100%
Heart Disease	40	43%
Cancer	23	25%
C.L.R.D.	[1-5]	1-5%
Accidents	[1-5]	1-5%
Diabetes	-	-
Suicide	[1-5]	1-5%
Alzheimer's Disease	[1-5]	1-5%
Kidney Disease	[1-5]	1-5%
Chronic Liver Disease	-	-
Pneumonia/Flu	[1-5]	1-5%

Chippewa County	Number	Percent
Total	340	100%
Heart Disease	108	32%
Cancer	82	24%
C.L.R.D.	31	9%
Accidents	[6-10]	2-3%
Diabetes	[6-10]	2-3%
Suicide	[1-5]	0-1%
Alzheimer's Disease	[1-5]	0-1%
Kidney Disease	12	3%
Chronic Liver Disease	[1-5]	0-1%
Pneumonia/Flu	6-10	2-3%

Delta County	Number	Percent
Total	409	100%
Heart Disease	113	28%
Cancer	110	27%
C.L.R.D.	24	6%
Accidents	19	5%
Diabetes	16	4%
Suicide	[6-10]	1-2%
Alzheimer's Disease	15	4%
Kidney Disease	12	3%
Chronic Liver Disease	[1-5]	0-1%
Pneumonia/Flu	[1-5]	0-1%

Dickinson County	Number	Percent
Total	327	100%
Heart Disease	93	28%
Cancer	67	20%
C.L.R.D.	13	4%
Accidents	15	4%
Diabetes	[6-10]	2-3%
Suicide	[1-5]	0-1%
Alzheimer's Disease	11	3%
Kidney Disease	[6-10]	2-3%
Chronic Liver Disease	[1-5]	0-1%
Pneumonia/Flu	11	3%

Gogebic County	Number	Percent
Total	195	100%
Heart Disease	77	40%
Cancer	41	21%
C.L.R.D.	[6-10]	3-5%
Accidents	[6-10]	3-5%
Diabetes	[1-5]	0-2%
Suicide	[1-5]	0-2%
Alzheimer's Disease	[6-10]	3-5%
Kidney Disease	[1-5]	0-2%
Chronic Liver Disease	[1-5]	0-2%
Pneumonia/Flu	[6-10]	3-5%

Houghton County	Number	Percent
Total	341	100%
Heart Disease	127	37%
Cancer	67	20%
C.L.R.D.	17	5%
Accidents	20	6%
Diabetes	[6-10]	2-3%
Suicide	[6-10]	2-3%
Alzheimer's Disease	13	4%
Kidney Disease	[1-5]	0-1%
Chronic Liver Disease	[1-5]	0-1%
Pneumonia/Flu	[6-10]	2-3%

Iron County	Number	Percent
Total	176	100%
Heart Disease	63	36%
Cancer	36	21%
C.L.R.D.	13	8%
Accidents	[6-10]	4-6%
Diabetes	[1-5]	0-3%
Suicide	[1-5]	0-3%
Alzheimer's Disease	[1-5]	0-3%
Kidney Disease	[6-10]	4-6%
Chronic Liver Disease	[1-5]	0-3%
Pneumonia/Flu	[1-5]	0-3%

Keweenaw County	Number	Percent
Total	22	100%
Heart Disease	[6-10]	27-45%
Cancer	[6-10]	27-45%
C.L.R.D.	[1-5]	4-23%
Accidents	-	-
Diabetes	-	-
Suicide	[1-5]	4-23%
Alzheimer's Disease	-	-
Kidney Disease	-	-
Chronic Liver Disease	-	-
Pneumonia/Flu	-	-

Luce County	Number	Percent
Total	66	100%
Heart Disease	18	27%
Cancer	14	21%
C.L.R.D.	[6-10]	9-15%
Accidents	[1-5]	2-8%
Diabetes	[1-5]	2-8%
Suicide	[1-5]	2-8%
Alzheimer's Disease	[1-5]	2-8%
Kidney Disease	[1-5]	2-8%
Chronic Liver Disease	-	-
Pneumonia/Flu	[1-5]	2-8%

Mackinac County	Number	Percent
Total	152	100%
Heart Disease	38	25%
Cancer	43	28%
C.L.R.D.	[6-10]	4-7%
Accidents	[6-10]	4-7%
Diabetes	[1-5]	0-3%
Suicide	[6-10]	4-7%
Alzheimer's Disease	[1-5]	0-3%
Kidney Disease	-	-
Chronic Liver Disease	[1-5]	0-3%
Pneumonia/Flu	[6-10]	4-7%

Marquette County	Number	Percent
Total	683	100%
Heart Disease	191	28%
Cancer	171	25%
C.L.R.D.	39	6%
Accidents	30	4%
Diabetes	26	4%
Suicide	16	2%
Alzheimer's Disease	26	4%
Kidney Disease	11	2%
Chronic Liver Disease	39	4%
Pneumonia/Flu	12	2%

Menominee County	Number	Percent
Total	267	100%
Heart Disease	102	38%
Cancer	61	23%
C.L.R.D.	14	5%
Accidents	[6-10]	2-4%
Diabetes	[6-10]	2-4%
Suicide	[1-5]	0-2%
Alzheimer's Disease	11	4%
Kidney Disease	[1-5]	0-2%
Chronic Liver Disease	14	5%
Pneumonia/Flu	[6-10]	2-4%

Ontonagon County	Number	Percent
Total	93	100%
Heart Disease	39	42%
Cancer	19	20%
C.L.R.D.	[1-5]	1-5%
Accidents	[1-5]	1-5%
Diabetes	[1-5]	1-5%
Suicide	-	-
Alzheimer's Disease	[1-5]	1-5%
Kidney Disease	[1-5]	1-5%
Chronic Liver Disease	[1-5]	1-5%
Pneumonia/Flu	[1-5]	1-5%

Schoolcraft County	Number	Percent
Total	81	100%
Heart Disease	32	39%
Cancer	20	25%
C.L.R.D.	[1-5]	1-6%
Accidents	[1-5]	1-6%
Diabetes	[1-5]	1-6%
Suicide	[1-5]	1-6%
Alzheimer's Disease	[6-10]	7-12%
Kidney Disease	-	-
Chronic Liver Disease	-	-
Pneumonia/Flu	[1-5]	1-6%

Crude Mortality Rates

Crude mortality rates are calculated by the number of deaths per year divided by the total population and multiplied by 100,000, so that small jurisdictions (like U.P. counties) can be compared with each other and with the state and nation on a per capita basis. While age-adjusted rates (rates that adjust the crude death rates to compensate for the age profile of an area) generally are similar between the U.P. and state as a whole, crude death rates show that many U.P. counties have more deaths per 100,000 per year than Michigan as a whole because they have a higher percentage of elderly. Paradoxically, a population with more seniors and fewer young people (as in Japan) can have greater life expectancy estimates (people living longer) and still have rising crude mortality rates because proportionately more people are elderly. This will be the case with the United States in coming decades as Baby Boomers enter their 70s and 80s and begin to die in large numbers, and is the case in the U.P.

The table below, from MDHHS mortality reports, shows the higher crude rates for counties with aging populations. Note, also, that the Michigan rate has increased over time, as our nation's demographic profile is aging and Upper Midwest states are losing young people to Sun Belt states. Also note that in smaller counties, single-year death rates may fluctuate significantly from year to year based on differences of a few events.

Crude Mortality Rates Per 100,000 Persons Per Year By County of Residence
(MDHHS data rounded to nearest whole number)

County	1980	1990	2000	2010	2014	2015	2016
Michigan	810	843	874	892	943	953	972
Alger	1,129	1,293	1,202	1,035	1,454	1,359	1,226
Baraga	1,289	1,393	1,384	1,210	1,125	1,123	1,282
Chippewa	1,089	808	806	832	1,009	889	893
Delta	926	927	1,090	1,165	1,099	1,140	1,293
Dickinson	1,070	1,092	1,081	1,063	1,111	1,298	1,288
Gogebic	1,372	1,410	1,487	1,421	1,295	1,276	1,299
Houghton	1,154	1,120	1,102	956	970	995	968
Iron	1,324	1,500	1,555	1,483	1,595	1,569	1,804
Keweenaw	2,198	2,416	791	840	813	1,057	1,228
Luce	1,121	1,141	1,142	999	1,119	1,025	1,431
Mackinac	1,180	1,166	1,319	1,307	1,229	1,422	1,294
Marquette	616	705	980	867	877	1,028	1,037
Menominee	1,036	931	1,204	1,089	1,145	1,174	1,160
Ontonagon	1,191	1,092	1,281	1,290	1,766	1,598	2,047
Schoolcraft	1,040	1,213	1,257	1,144	1,470	1,067	1,412

Several themes emerge from the data:

- The three counties with significant university populations and relatively fewer elderly as a proportion of the whole population – Chippewa, Houghton and Marquette – exhibit crude death rates similar to state and national rates.

- Keweenaw County, with the smallest population, has the greatest fluctuation in annual rates as would be expected with few events per year.
- Iron and Ontonagon counties have crude death rates at about double the state rate. But considering that populations in these counties are among the most elderly in the state, with about 30 percent of their populations older than 65 compared with 15 percent statewide, it makes sense that their mortality rates would also be about twice as high.
- Other counties with proportions of seniors in the mid-20 percent range have correspondingly middle-range death rates, higher than Michigan’s but lower than Ontonagon’s. The exception is Keweenaw County, with a high proportion of seniors but a relatively low death rate. One hypothesis is that in Michigan’s least populous county, many older residents have chosen to retire to the Keweenaw, and their health is relatively good because of their socioeconomic status. However, with few options for long-term care, it’s also possible that the frailest residents must relocate before they die and their deaths are counted in another county or state.

In the table below are crude mortality rates for selected leading causes of death. The rates should generally be higher in populations with relatively more seniors, as these are crude, not age-adjusted, death rates. The data show that counties with a greater proportion of seniors have higher rates of death for most leading causes. In the table, rates that are at least 150 percent of the Michigan rate (1.5 times) are shaded light blue; rates of 200 percent or greater compared with Michigan (double) are darker blue. This is done to illustrate the pattern of counties with higher crude death rates (when reading across the rows), and the causes of death that have high rates in U.P. counties (reading down the columns).

Crude Mortality Rates Per 100,000 for Selected Leading Causes of Death, 2016 (MDHHS)

County	All Deaths	Alzheimer’s Disease	Cancer	CLRD	Diabetes-Related	Heart Disease	Stroke	Unintended Injuries
Michigan	972	43	211	56	86	255	49	54
Alger	1,226	76	293	*	87	315	*	87
Baraga	1,282	*	259	*	141	341	94	106
Chippewa	893	21	191	88	116	223	45	40
Delta	1,293	72	265	88	111	326	80	47
Dickinson	1,288	27	294	71	118	302	86	67
Gogebic	1,299	*	354	98	138	315	79	72
Houghton	968	47	221	55	134	219	66	41
Iron	1,804	80	277	125	152	536	143	134
Keweenaw	1,228	*	273	*	*	*	*	*
Luce	1,431	*	425	94	173	299	94	*
Mackinac	1,294	*	296	83	83	268	56	56
Marquette	1,037	66	196	48	108	248	48	66
Menominee	1,160	64	258	99	120	378	26	43
Ontonagon	2,047	152	440	186	237	508	*	*
Schoolcraft	1,412	*	388	88	*	400	113	75

Observations from the mortality rates table on the preceding page include:

- Most U.P. counties have higher crude death rates than Michigan for most leading causes of death, which can be explained primarily by the larger proportion of seniors across the U.P. compared with the state and nation.
- Other demographic characteristics prevalent among U.P. residents that may contribute to higher mortality rates include higher rates for smoking, and considerable populations of Native Americans, who have higher mortality rates according to national studies. Also, while residents of America's rural areas have lower rates of death by gun violence, they have equal or higher rates of suicide and unintentional injuries according to CDC studies.
- Chippewa, Houghton and Marquette counties, with universities and demographic profiles (age distributions) more like the state and nation, have crude mortality rates similar to Michigan's rate for all deaths, and for leading causes.
- Ontonagon and Iron counties, each with among the state's highest proportions of seniors, have the highest mortality rates in the U.P., double the Michigan rate, and each has rates more than double the Michigan rate for four of seven causes listed in the table. Luce and Schoolcraft counties, which also have high proportions of seniors, have overall mortality rates nearly 1.5 times the Michigan rate.
- Reading down the columns of selected leading causes of death, Alzheimer's disease, Chronic Lower Respiratory Disease, Diabetes, and Stroke all have rates significantly higher than Michigan's rate in most counties. Age obviously is an important risk factor for these fatal conditions, but health behaviors around tobacco use, diet, exercise, and medication use to control blood pressure are also important contributing factors to rates of disease and death.

Crude Mortality Rates vs. Age-Adjusted Rates in Needs Assessment

The crude mortality rates analyzed on the last three pages paint a picture of the chronic disease burden in U.P. counties. As emphasized above, older populations experience higher crude rates of chronic disease and death because diseases progress over the course of a lifetime and most deaths occur in old age. On the other hand, age-adjusted mortality rates are useful in comparing health outcomes between populations after controlling for age. Although seniors are over-represented in the U.P. compared with the statewide population, age-adjusted rates weight Michigan and county-level data to conform to the same age distribution that the nation had in the 2000 U.S. Census. This allows the relative health of populations to be compared without the bias of an older or younger population distribution. In the table on the next page there are age-adjusted data for men and women for all deaths, heart disease deaths and cancer deaths.

Age Adjusted Mortality Rates

The table below gives age-adjusted rates per 100,000 for all deaths, heart disease deaths, and cancer deaths; for all persons, men, and women. Note that men have higher death rates (because on average they die younger, so a larger percentage of their total numbers die each year) than do women. In smaller counties, rates for men and women for heart disease and cancer were not calculated because there was too much uncertainty with a smaller number of deaths analyzed across a population distribution based on American Community Survey estimates.

Age-Adjusted Mortality Rates Per 100,000, 2016 (MDHHS)

County	All Causes Total	All Causes Men	All Causes Women	Heart Disease Total	Heart Disease Men	Heart Disease Women	Cancer Total	Cancer Men	Cancer Women
Michigan	788.4	926.0	673.0	200.9	249.8	160.9	167.2	197.4	145.3
Alger	732.6	772.7	681.4	171.9	*	*	175.5	*	*
Baraga	934.0	1,027.2	804.7	243.6	*	*	181.0	*	*
Chippewa	739.4	827.4	661.7	175.0	240.5	114.8	157.8	158.2	158.7
Delta	768.0	940.4	634.2	190.4	222.0	164.2	159.7	181.1	145.7
Dickinson	769.1	855.0	685.1	172.7	196.7	152.8	180.1	233.7	137.3
Gogebic	797.3	913.5	702.2	157.3	193.3	125.3	201.1	215.2	198.2
Houghton	775.6	916.4	650.1	171.5	215.5	139.7	175.8	180.5	167.5
Iron	879.6	1,032.6	756.5	225.1	278.9	181.9	125.5	*	*
Keweenaw	615.0	*	*	*	*	*	*	*	*
Luce	964.9	1,156.9	774.1	*	*	*	284.2	*	*
Mackinac	794.1	829.8	732.4	145.6	*	*	156.0	*	*
Marquette	772.6	942.5	623.8	178.6	238.1	126.6	142.4	161.2	126.8
Menominee	644.6	723.3	565.1	210.2	282.5	140.9	137.1	150.0	123.5
Ontonagon	973.2	1,316.3	658.2	213.6	*	*	225.0	*	*
Schoolcraft	757.3	833.7	730.5	216.5	*	*	203.8	*	*

Observations from the age-adjusted data:

- All in all, U.P. age-adjusted mortality rates are remarkably similar to Michigan rates. After weighting for age distribution, the rates for the one-year incidence of all deaths, and deaths by the two leading cases, are in almost all cases within 10 percent of Michigan's rates.
- Keweenaw County's age-adjusted mortality rate for all deaths in 2016, at 615 per 100,000, was 22 percent lower than Michigan's. This is consistent with the fact that Keweenaw County's crude death rate was not nearly as low as the crude rates of other counties with a similar proportion of seniors, suggesting that seniors in Keweenaw County may be healthier either because of environmental factors, because they are either wealthier, because healthier seniors self-selected to move there to retire or because the frailest residents must relocate before they die and their deaths are counted in another county or state.

- Baraga, Iron, Luce and Ontonagon counties have age-adjusted mortality rates greater than 10 percent higher than Michigan’s rate. Remembering that age is already weighted for, other possible factors that may have contributed to higher death rates could include some combination of population characteristics and social determinants of health, including such factors as alcohol, tobacco and drug use; obesity; inadequate access to care; poverty; and larger Native American populations; all factors associated with poorer health outcomes.
- Although there is a fairly commonly held perception (judging by comments at public focus groups and inquiries to health departments) that local cancer rates are higher than in other places, the data table on the previous page shows that in most counties, age-adjusted mortality rates from cancer were within 25 percent of Michigan and national rates with the exception of Luce County’s rate. Below are age-adjusted cancer mortality rates for Michigan and the U.P. for the four leading cancer sites – breast, colorectal, lung, and prostate – over a five-year period.

Age-Adjusted Cancer Mortality, 4 Leading Sites, 2010-14

Deaths, Age-Adjusted Rate (2010-2014)	Breast	Colorectal	Lung	Prostate
Michigan	22.3±0.5	15.1±0.3	62.9±16.9	19.5±0.4
Alger	*	*	38.7±13.5	*
Baraga	*	*	55.3±17.9	*
Chippewa	22.5±8.5	10.6±4.2	58.8±9.4	*
Delta	25.9±8.7	13.2±4.4	42.8±7.2	24.0±6.6
Dickinson	18.8±7.7	13.6±5.2	45.6±8.8	23.1±7.7
Gogebic	*	14.5±6.0	50.8±11.5	*
Houghton	20.0±8.7	16.6±4.9	45.9±8.8	*
Iron	*	*	54.2±13.2	*
Keweenaw	*	*	*	-
Luce	*	*	54.5±19.9	-
Mackinac	*	*	51.7±13.8	*
Marquette	15.6±4.9	9.2±2.9	53.2±6.8	15.7±4.7
Menominee	25.2±9.0	20.3±5.8	51.7±9.6	*
Ontonagon	*	*	63.9±18.9	*
Schoolcraft	*	*	62.9±16.9	*

Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2009-2013

Cancer Incidence Rates

Cancer incidence rates per 100,000 people represent the number of new diagnoses per year divided by the total number of people and multiplied by 100,000, so areas large and small can be meaningfully compared. Again, despite a common perception that U.P. communities have more cancer, the age-adjusted five-year averages of annual incidence of new cancer cases per 100,000 are lower in the U.P. than statewide.

Cancer Incidence Per 100,000, 2009-2014

Total (2009-2013)	Average Number	Age-Adjusted Rate
Michigan	54,035	470.9±1.7
Alger	61	407.8±45.3
Baraga	50	419.2±50.7
Chippewa	187	410.3±25.1
Delta	214	402.4±24.0
Dickinson	132	348.8±26.5
Gogebic	92	356.6±32.5
Houghton	159	383.7±26.0
Iron	71	331.9±37.3
Keweenaw	13	374.2±104.4
Luce	39	423.5±57.3
Mackinac	79	435.9±43.5
Marquette	356	442.4±20.0
Menominee	113	320.0±26.5
Ontonagon	53	416.5±53.1
Schoolcraft	56	439.5±53.0

Source: Michigan Department of Health and Human Services, Health Statistics and Reports, 2009-2013

Spotlight on Diabetes, a Growing Problem

Diabetes is a serious chronic disease that affects how the body turns food into energy. When food is digested, it is broken down into sugar (also called glucose) and released into the bloodstream. In healthy people, an organ called the pancreas makes a hormone called insulin, which acts like a key to let blood sugar into the body's cells for use as energy. But with diabetes, the body either doesn't make enough insulin or can't use the insulin it makes as well as it should. When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in the bloodstream, which over time can cause serious health problems, such as heart disease, vision loss, and kidney disease. Below are diabetes facts from the CDC:

Types of Diabetes

There are three main types of diabetes: type 1, type 2, and gestational diabetes (diabetes while pregnant).

Type 1 diabetes is caused by an autoimmune reaction that stops the body from making insulin. About 5 percent of the people who have diabetes have type 1. Symptoms of type 1 diabetes often develop quickly. It's usually diagnosed in children, teens, and young adults. People with type 1 diabetes need to take insulin every day to survive. Currently, no one knows how to prevent type 1 diabetes.

With **Type 2 diabetes**, the body doesn't use insulin well and is unable to keep blood sugar at normal levels. Most people with diabetes—9 in 10—have type 2 diabetes. It develops over many years and is usually diagnosed in adults (though increasingly in children, teens, and young adults because of rising childhood obesity, poor diet and lack of daily physical activity.) Type 2 diabetes can be prevented or delayed with healthy lifestyle changes, such as losing weight, healthy eating, and getting regular physical activity.

Gestational diabetes develops in pregnant women who have never had diabetes. Gestational diabetes raises the risk for health complications for the baby. Gestational diabetes usually goes away after the baby is born but increases the mother's risk for type 2 diabetes later in life. And the baby is more likely to become obese as a child or teen, and more likely to develop type 2 diabetes later in life, too.

Prediabetes

In the U.S., 84.1 million adults—more than 1 in 3—have prediabetes, and 90 percent of them don't know they have it. Prediabetes is a serious health condition where blood sugar levels are higher than normal, but not high enough yet to be diagnosed as diabetes. Prediabetes increases the risk for type 2 diabetes, heart disease, and stroke.

Diabetes by the Numbers

- **30.3 million** US adults (9.4 percent) have diabetes, and 1 in 4 of them don't know it.
- Diabetes is the **seventh leading cause of death** in the US.
- Diabetes is the **No. 1** cause of kidney failure, lower-limb amputations, and adult-onset blindness.
- **In the last 20 years**, the number of adults diagnosed with diabetes has more than **tripled** as the American population has aged and become more overweight or obese.

Diabetes in the U.P.

From the 2017 Regional Adult Health Survey, a weighted estimate of 11.0 percent of U.P. adults (95% Confidence Interval 9.3-12.7 percent) had ever been told by a health professional that they had diabetes, similar to the 2016 Michigan estimate of 11.2 percent (95% C.I. 10.5-11.8).

There were significant differences in U.P. diabetes rates by population characteristics. A greater proportion of older adults had diabetes, as expected because type 2 diabetes is a progressive disease that develops over time. Among 18-39 year olds, 1.7 percent had diabetes; at ages 40-64, 13.2 had diabetes; and at age 65-plus, 19.6 percent had diabetes.

The U.P. data showed significant gender disparity: 13.4 percent of men had diabetes; compared with 8.7 percent of women.

The greatest disparities in U.P. diabetes rates were seen with social determinants of health – educational attainment and household income. Just 5.3 percent of U.P. college graduates had diabetes, compared with 10.3 percent among those with some college, 11.3 percent among high school graduates, and 22.3 percent among those who didn’t complete high school.

By household income, just 6.5 percent of adults with incomes of \$50,000 or higher had diabetes, compared with 13.7 percent among adults with incomes of \$25,000 to \$49,999, and 15.6 percent among those with incomes less than \$25,000.

	Ever Told Diabetes *	
	%	95% C.I.
Upper Peninsula	11.0	(9.3, 12.7)
Age		
18-39	1.7	(0.03, 3.4)
40-65	13.2	(10.2, 16.2)
65+	19.6	(16.9, 22.4)
Gender		
Male	13.4	(10.4, 16.5)
Female	8.7	(7.2, 10.3)
Educational Attainment		
Less than 12th grade	22.3	(11.3, 33.3)
High School Graduate	11.3	(9.0, 13.5)
1-3 years of college	10.3	(7.5, 13.0)
4 year degree or higher	5.3	(3.9, 6.6)
Household Income		
Less than \$25,000	15.6	(12.3, 18.9)
\$25,000 to \$49,999	13.7	(9.5, 17.9)
\$50,000 or higher	6.5	(4.7, 8.4)

* Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had diabetes. Adults told they have prediabetes, borderline diabetes, and women who had diabetes only during pregnancy were classified as not having been diagnosed.

As high as the current disease burden of diabetes is, with 1-in-9 U.P. adults diagnosed with diabetes and thousands more who don’t yet know they have it, even more troubling is the CDC prediction that one-third to one-half of today’s children will develop diabetes in their lifetimes, based on current childhood obesity rates. That would bring dramatic changes in chronic disease management, with tens of millions more Americans at risk of heart disease and other diabetes-related complications.

As ominous as that forecast is, based on current trends, it doesn’t have to turn out that way. The tendency toward developing type 2 diabetes is a heritable trait; but being obese or overweight, having a poor diet, and not getting enough exercise make it more likely that a person develops the disease. Studies show that people in a borderline or pre-diabetic state can delay or prevent diabetes by losing a weight if they are overweight, making dietary changes, and increasing physical activity. As with most chronic diseases, heredity plays a role in elevating risk, but individuals can take steps to live healthier lives and lessen their risks of premature death and disability.

MENTAL HEALTH

Since the time of the ancient Greek physician Hippocrates, called the father of modern medicine, the mind-body connection and the importance of mental health to overall wellbeing has been recognized. Mental health refers to emotional, psychological, and social well-being. It impacts our cognition, mood and behavior. Our mental health status also informs our relationships, our ability to deal with challenges and whether we are capable of making healthy choices. An important point, as noted by the CDC is that “Although the terms are often used interchangeably, poor mental health and mental illness are not the same things. A person can experience poor mental health and not be diagnosed with a mental illness. Likewise, a person diagnosed with a mental illness can experience periods of physical, mental, and social well-being.”

Mental health issues afflict many among us and greatly impact families and communities. It can be more difficult to accurately quantify mental health than physical health (while recognizing that the two are inextricably linked and that to separate them is somewhat a false dichotomy) for a variety of reasons, among them:

- While physicians should discuss mental health as part of regular preventive care, there is no tradition of regular mental health screening quite analogous to the annual physical check-up.
- While standard mental health screening and diagnosis instruments are available to psychiatrists and counselors, mental health conditions often are diagnosed based on the presence of multiple symptoms or behaviors either observed by the practitioner or described by the patient. This is in contrast to many chronic or acute physical health conditions which can be reduced to a binary positive or negative result on an x-ray, blood test or urinalysis.
- Stigma contributing to a reluctance to talk about mental health issues or seek treatment makes true prevalence estimates difficult.

Given those qualifiers as context, this chapter is composed of three sections: an overview of national data; summary data from a CDC report on rising suicide rates released in June 2018; and a look at local data from the 2017 Regional Adult Health Survey.

National Mental Health Data

The national mental health statistics on the next two pages come from National Alliance on Mental Illness and can be found on-line, from a 2016 report that cites multiple studies published in 2014-15, , at <https://www.nami.org/Learn-More/Mental-Health-By-the-Numbers>.

Prevalence of Mental Illness

- Approximately 1 in 5 adults in the U.S.—43.8 million, or 18.5%—experiences mental illness in a given year, and approximately 1 in 25 adults in the U.S.—9.8 million, or 4.0%—experiences a serious mental illness in a given year that substantially interferes with or limits one or more major life activities.
- Approximately 1 in 5 youth aged 13–18 (21.4%) experiences a severe mental disorder at some point during their life. For children aged 8–15, the estimate is 13%.
- 1.1% of adults in the U.S. live with schizophrenia.
- 2.6% of adults in the U.S. live with bipolar disorder.
- 6.9% of adults in the U.S.—16 million—had at least one major depressive episode in the past year.
- 18.1% of adults in the U.S. had ever experienced an anxiety disorder such as post-traumatic stress disorder, obsessive-compulsive disorder and specific phobias.
- Among the 20.2 million adults in the U.S. who experienced a substance use disorder in 2014, 50.5%—10.2 million adults—had a co-occurring mental illness.

Additional National Mental Health Data

- An estimated 26% of homeless adults staying in shelters live with serious mental illness. An estimated 46% live with severe mental illness and/or substance use disorders, a higher rate when substance use disorders are included.
- Approximately 20% of state prisoners and 21% of local jail prisoners have “a recent history” of a mental health condition.
- 70% of youth in juvenile justice systems have at least one mental health condition and at least 20% live with a serious mental illness.
- Only 41% of adults in the U.S. with a mental health condition received mental health services in the past year. Among adults with a serious mental illness, 62.9% received mental health services in the past year.
- Just over half (50.6%) of children with a mental health condition aged 8-15 received mental health services in the previous year.
- African Americans and Hispanic Americans each use mental health services at about one-half the rate of Caucasian Americans, and Asian Americans at about one-third the rate.

- Half of all chronic mental illness begins by age 14; three-quarters by age 24. Despite effective treatment, there are long delays—sometimes decades—between the first appearance of symptoms and when people get help.

Consequences of Lack of Treatment

- Serious mental illness costs America \$193.2 billion in lost earnings per year.
- Mood disorders, including major depression, dysthymic disorder and bipolar disorder, are the third most common cause of hospitalization in the U.S. for both youth and adults aged 18–44.
- Individuals living with serious mental illness face an increased risk of having chronic medical conditions. Adults in the U.S. living with serious mental illness die on average 25 years earlier than others, largely due to treatable medical conditions.
- Over one-third (37%) of students with a mental health condition age 14–21 and older who are served by special education drop out—the highest dropout rate of any disability group.
- Suicide is the 10th leading cause of death in the U.S., the 3rd leading cause of death for people aged 10–14 and the 2nd leading cause of death for people aged 15–24.
- More than 90% of children who die by suicide have a diagnosed mental health condition.
- Each day an estimated 18-22 veterans die by suicide.

Local Focus

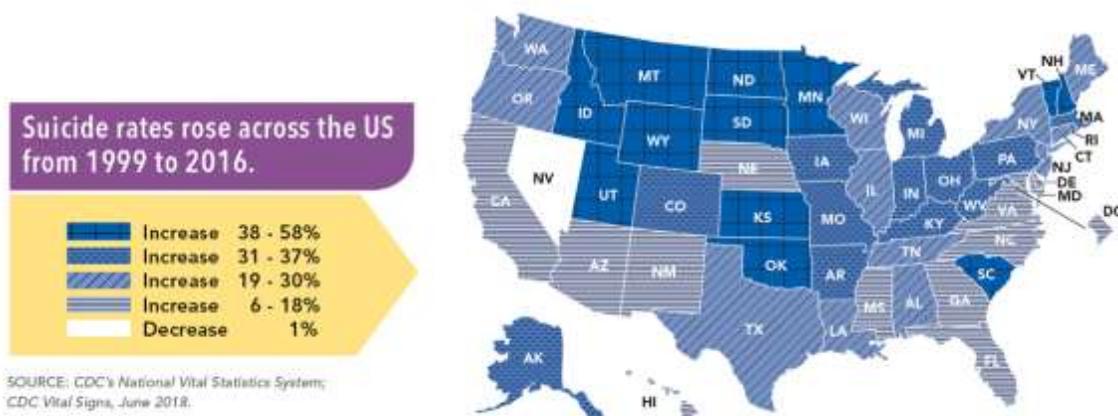
- Nationally, and locally, about one-fifth of people experience mental illness, most commonly depression or anxiety; suicide rates are rising among youth and adults; and barriers to accessing services include professional shortages, cost, and stigma.
- From the Regional Adult Health Survey, about 1-in-4 adults in the Upper Peninsula reported they had been told by a health care provider they had a depressive disorder, and 1-in-5 reported they had an anxiety disorder (lifetime prevalence.)
- Nearly one quarter of adults in the Upper Peninsula were on medication to help with mood, emotions, or mental health and 8 percent received counseling from a mental health professional in the previous year.
- Among 10 U.P. counties where 12th graders took the Communities That Care Youth Risk and Protective Factors Survey in 2016-18, in two counties greater than 45 percent of students reported symptoms of depression, and in another 6 counties between 31 and 45 percent reported symptoms of depression.
- Every U.P. county but Marquette is a federally designated HPSA (Health Professional Shortage Area) for mental health care based on the number of psychiatrists per capita. Across the U.P. there are just 39 inpatient beds and 8 full-time psychiatrists serving the population of 311,000, roughly one psychiatrist per 39,000 people. There is no full-time in county child psychiatrist.

Suicide Rising Across the United States

The information in this section, including data and graphics, are excerpted from a CDC Vital Signs report released June 2018 and available on-line at <https://www.cdc.gov/vitalsigns/suicide/index.html>.

Suicide is a leading cause of death in the United States. Suicide rates increased in nearly every state from 1999 through 2016. Mental health conditions are often seen as the cause of suicide, but suicide is rarely caused by any single factor. In fact, many people who die by suicide are not known to have a diagnosed mental health condition at the time of death. Other problems often contribute to suicide, such as those related to relationships, substance use, physical health, and job, money, legal, or housing stress. Making sure government, public health, healthcare, employers, education, the media and community organizations are working together is important for preventing suicide. Public health departments can bring together these partners to focus on comprehensive state and community efforts with the greatest likelihood of preventing suicide.

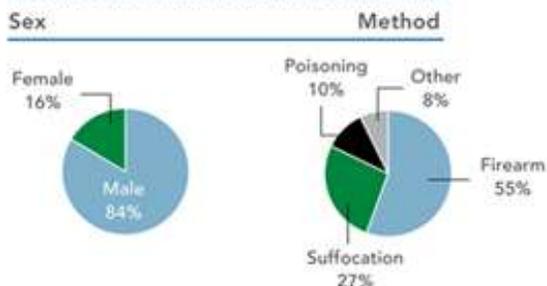
The map below shows percentage changes in suicide rates among the 50 states and D.C.



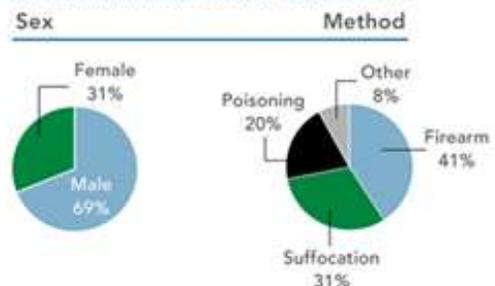
The suicide rate in Michigan rose 32.9 percent from 1999 to 2016.

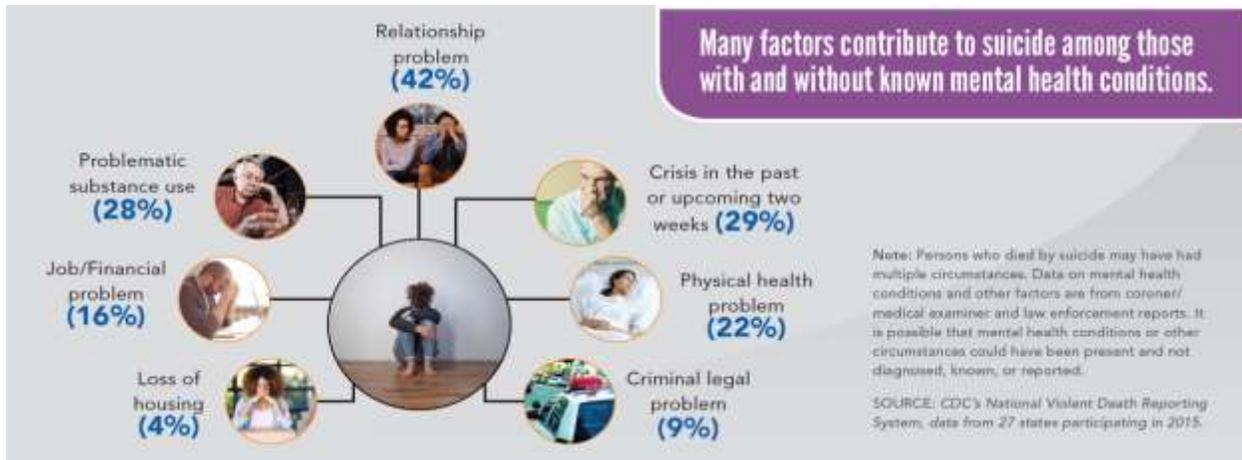
Differences exist among those with and without mental health conditions.
 People without known mental health conditions were more likely to be male and to die by firearm.

No known mental health conditions



Known mental health conditions





Local and Regional Suicide Data

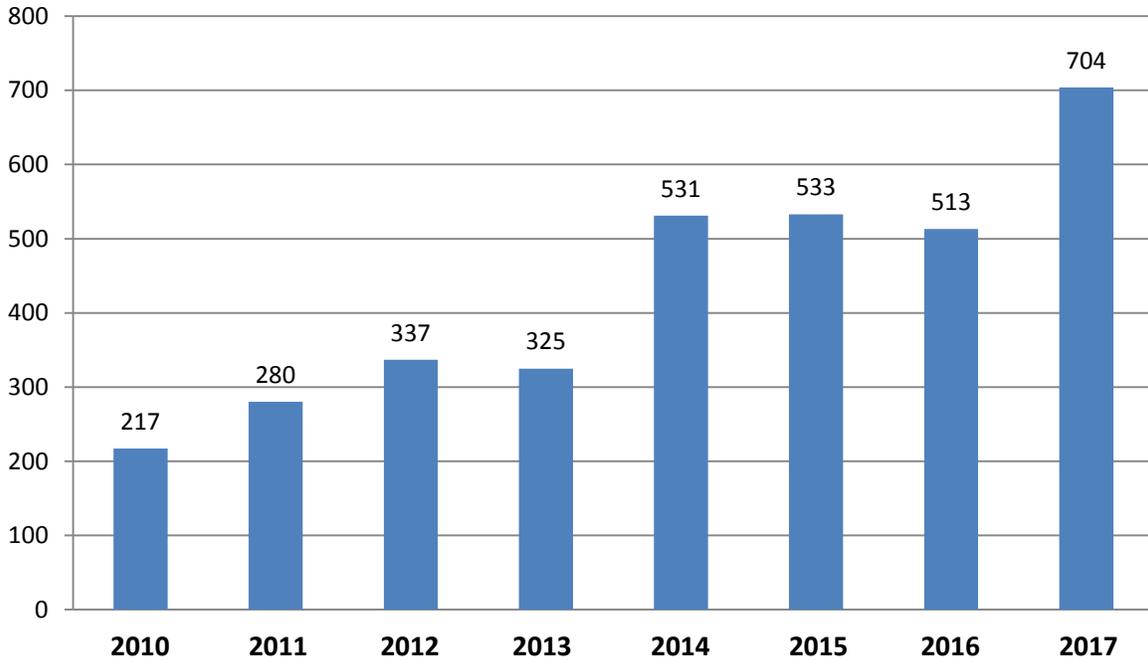
Reports from suicide prevention coalitions, law enforcement officers, hospital workers, and mental health advocates, suggest that suicide rates are rising in the U.P. overall and among young people in particular. This perceived change is difficult to quantify because MDHHS-published reports on the 39 leading causes of death by county of residence do not give absolute counts on events fewer than 10 per year. Per the 2016 data, Marquette County (the U.P.'s most populous county) had 11 suicides, 3 counties had a reported range of 6-10, nine counties had a reported range of 1-5, and two counties had no suicides recorded. Because the data is reported only in these ranges, it is difficult to identify trends over time. For example, an increase in suicides in Ontonagon from 1 per year to 5 per year over the last five years would be a significant trend, but we would not be able to see that trend with deaths reported only as a range of 1-5 per year. All that can be said at present is that the number of suicides U.P. wide in 2016 falls between 38 and 86, taking the lowest and highest possible counts for the ranges given.

Another way to gauge the dimensions of suicide as a public health issue is to look at trend data from suicide crisis hotlines. Dial Help is the U.P.'s crisis line, taking direct calls from people in crisis, referrals from calls to U.P. 211, and forwarded calls from the national suicide line. All callers conveying suicidal ideation are evaluated in real time based on established criteria, and are classified as no-, low-, medium-, or high-risk. All calls assigned some level of risk trigger a wellness check by law enforcement, entry into a follow-up program, connection to a third party, a safety plan, or some combination of these.

On the next page are two bar graphs that illustrate trends in suicide-related calls to Dial Help. The first graph illustrates total suicide-related calls per year, for the eight years from the beginning of 2010 to the end of 2017. The data show a clear trend of increasing call volume. The reasons for that increase have not been established and could represent a true increase in suicidal ideation, an increased awareness of the hotline service, a combination of these two or some other unidentified, contributing factor.

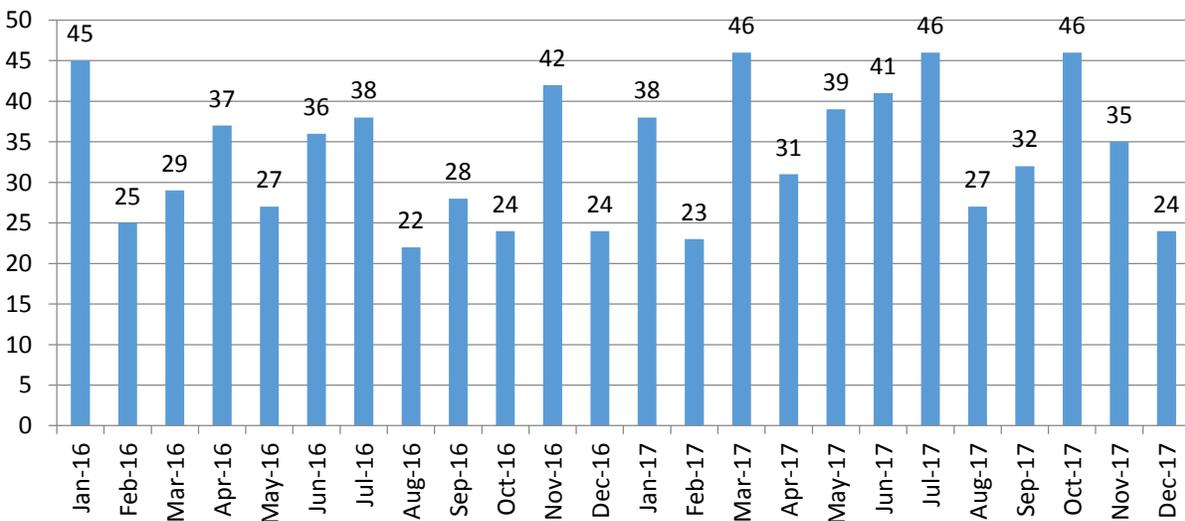
The second graph takes a closer look at a sub-set of the total-calls data, with 2016-2017 monthly data on the numbers of calls that were flagged as at-risk according to Dial Help's criteria. The monthly data show that call volumes fluctuate; and belie the popular notion that suicidal thoughts correlate with either the holiday season or winter in general.

All Suicide-related Calls to Dial Help from All U.P. Counties, 2010-2017



Suicide-related calls per year tripled over eight years.

Monthly Calls Designated At-risk of Suicide to Dial Help Crisis Line, U.P. Residents, 2016-17



From 2016 to 2017, low-, moderate- or high-risk callers increased from 377 to 428.

Local Survey Data

A section on mental health status and access to care was added to the 2017 Regional Adult Health Survey (see pages 259-264.) Weighted survey estimates for lifetime prevalence of depression and anxiety were similar to published national data. From the survey:

2017 Regional Adult Health Survey Data –Mental Health

- About 1-in-4 adults in the Upper Peninsula reported they had been told by a health care provider they had a depressive disorder, and 1-in-5 reported they had an anxiety disorder. Both depression and anxiety rates were higher in younger adults and women. Rates decreased as education and income increased.

Among adults 18-39 years old, 37 percent reported a depressive disorder and 33 percent reported an anxiety disorder; among adults 65 years and older 18 percent reported a depressive disorder and 11 percent reported an anxiety disorder. About 40 percent of adults in either the lowest education or lowest income level reported a depressive disorder but only 20 percent of adults in the highest education or highest income level reported a depressive disorder.

- Nearly one quarter of adults in the Upper Peninsula were on medication to help with mood, emotions, or mental health and 8 percent received counseling from a mental health professional in the previous year. Rates for medication and counseling are higher in younger adults, women, and those in the lower income brackets. Medication use decreases as education level increases, but the same trend is not seen with counseling.

Thirty percent of women received medication for mood in the previous year compared to 18 percent of men. While 13 percent of adults age 18-39 years old received counseling, only 3 percent of adults age 65 and older received counseling in the past year. Only 1 percent of adults contacted a crisis line in the last year.

- Seven percent of adults in the Upper Peninsula delayed or did not receive mental health care due to cost; 5 percent delayed or did not receive care due to a lack of available mental health professionals. Younger adults and men had higher rates of reported delays in treatment due to cost and availability. These data do not mean that only 5-7 percent of those needing care delayed because of barriers; they mean that among all adults, 5-7 percent encountered those barriers.
- Nine percent of men and 5 percent of women delayed or did not receive treatment because of cost. These barriers to mental health care were not different in adults by education or income level. Transportation was rarely reported as a cause of delayed or missed mental health care.

Regional Access to Psychiatric Care

The data and conclusions referenced on this page are used with permission from Jenna Bernson, BS, a medical student at Michigan State University, who co-authored a not-yet-published paper with Temmy Brotherson, BS; Peter Hederrich, BA; and Andrea Wendling, M.D., titled *Examining Access to Psychiatric Care in Michigan's Upper Peninsula*. This study aims to identify barriers of accessing psychiatry services for the 15 rural counties that make up Michigan's Upper Peninsula. The authors noted as background that:

Rural communities in the U.S. have acute shortages of mental health services. Nearly three-fourths of rural counties with populations of 2,500-20,000 lack a psychiatrist, and 95% lack a child psychiatrist. Barriers to accessing psychiatric care include accessibility, availability and acceptability.

The researchers conducted the study in two phases:

Phase 1: Information was obtained regarding psychiatrists and inpatient psychiatric units utilizing Medicaid data and Community Mental Health departments. The data was mapped; 'high-risk' areas were identified.

Phase 2: Primary care physicians (PCPs) were anonymously surveyed in the high-risk regions as to their comfort in providing mental health services and perceived patient barriers to obtaining care.

Findings confirmed that the U.P. has a shortage of psychiatric services:

The study identified all 15 counties as high-risk. **39 inpatient beds and 8 full-time in-county psychiatrists serve the population of 311,000, which warrants 155 beds and 31 psychiatrists.** According to national studies, 50% of psychiatrists will retire in the next 10 years, and looming shortages will be felt most acutely in rural areas. Adult beds are currently in 2 locations, Marquette and Kinross. This is a 2+ hour drive to some locations in the UP if the nearest location has an opening, which is fairly uncommon. Marquette has the capacity to provide 32 beds, but is operating at 21 due to their inability to staff.

In addition, there are no full-time in-county child psychiatric providers. There are no child psychiatric beds in the UP. These patients have to drive to Grand Rapids, which can be up to 9 hours in some locations of the UP.

Primary Care Providers (PCPs) are attempting to fill this gap. They are comfortable with treating depression and anxiety, but are less comfortable with services for bipolar disorder and substance abuse. Nearly 100% of PCPs communicated that their patients encounter barriers in accessing mental health resources with long waitlists being the most cited barrier. 70% of PCPs do not have psychiatric providers to which they can readily refer.

The authors made the following recommendations to improve access to psychiatric services:

1. Access: Increase numbers of psychiatric care providers and better distribute care throughout the U.P. via increased recruitment or telemedicine use.
2. Focus: Focus care from psychiatrists on diagnoses that PCPs are less comfortable providing (bipolar disorder and substance abuse).
3. Training: Develop advanced training for PCPs who need to provide mental health services, focusing on bipolar disorder and substance abuse.
4. Pairing: Consider pairing PCPs with consultative psychiatric services, allowing phone or video consults for challenging cases.

SUBSTANCE ABUSE

As defined by the American Society for Addiction Medicine:

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

Genetic factors account for about half of the likelihood that an individual will develop addiction. Environmental factors interact with the person's biology and affect the extent to which genetic factors exert their influence. Resiliencies the individual acquires (through parenting or later life experiences) can affect the extent to which genetic predispositions lead to the behavioral and other manifestations of addiction. Culture also plays a role in how addiction becomes actualized in persons with biological vulnerabilities to the development of addiction.

Note the term "disease" used above. Addiction was not always seen as such by the medical community or society at large. It was looked upon as the result of a free choice on the part of the addicted individual or the result of a weakness in self-discipline or character. As such, addiction carried a significant stigma which persists to the present day. Alcoholism was first recognized by the American Medical Association (AMA) as a disease in 1956, Addiction itself was defined as a disease in 1987.

The most common symptoms of addiction are severe loss of control, continued use despite serious consequences, preoccupation with using, failed attempts to quit, tolerance and withdrawal. It is important to note that addiction may cause disability or premature death, especially when left untreated or treated inadequately. It may also cause significant harm to families, relationships, schools, workplaces and communities. Addiction can be effectively prevented, treated and managed by healthcare professionals in combination with family or peer support.

Individuals may become addicted to many things including tobacco, alcohol, gambling, food, sex and of course, legal and illegal drugs...to name a few. For the purposes of this CHNA, we have focused on tobacco, alcohol and drugs. Tobacco and alcohol are discussed below. Drug addiction is highlighted later in this chapter.

Tobacco

Tobacco is highly addictive and one of the most widely abused substances in the world. The Centers for Disease Control and Prevention (CDC) estimates that tobacco causes 6 million deaths per year, worldwide, including 480,000 in the U.S. This makes tobacco the leading cause of preventable death.

Nicotine is the main addictive chemical in tobacco. It causes a rush of adrenaline when absorbed into the bloodstream or inhaled via cigarette smoke. Nicotine also triggers an increase in dopamine. This is sometimes referred to as the brain's "happy" chemical. Dopamine stimulates the area of the brain associated with pleasure and reward. Like any other drug, use of tobacco over time can cause a physical and psychological addiction. This is also true for smokeless forms of tobacco, such as snuff and chewing tobacco.

In 2011, about 70 percent of all adult smokers said they wanted to stop smoking. Tobacco addiction can be managed with proper treatment. Addiction to tobacco is similar to other drug addictions in that it's never really cured but rather managed over a lifetime. Tobacco users tend to have high relapse rates. It's estimated that about 75 percent of people who quit smoking relapse within the first six months. A longer treatment period or change in approach may prevent a future relapse. Research has also shown that altering lifestyle habits, such as avoiding situations where there will be other tobacco users or implementing a positive behavior (like exercising) when cravings start can help improve chances for recovery.

A tobacco addiction can have fatal consequences without treatment. Tobacco use can cause:

- cancers of the lungs, throat, and mouth
- heart disease
- stroke
- chronic lung diseases such as emphysema and bronchitis

Any one of these conditions can be fatal. Quitting smoking or tobacco use can significantly reduce the risk of death due to these diseases. Even after the disease has been diagnosed, stopping tobacco use can improve treatment efforts.

Despite the highly addictive nature of nicotine and the marketing efforts of tobacco companies, tobacco prevention and reduction has made very impressive strides when viewed over many decades. Since 1963, the U.S. adult tobacco use rate has declined by nearly two thirds. According to data from the CDC Behavioral Risk factor Surveillance System (BRFSS), in 2016, 15.5 percent of U.S. adults currently smoked cigarettes, an estimated 37.8 million people. More than 16 million Americans live with a smoking-related disease. Current smoking declined from 20.9 percent in 2005 to 15.5 percent in 2016. Smoking rates varied by demographic group and socioeconomic status (social determinants). In the 2016 CDC data on current smoker rates, note that higher risk for smoking is associated with men, Native Americans, low income, low educational attainment, and living in the Midwest, among various population characteristics.

By Gender

Men were more likely to be current cigarette smokers than women.

- Nearly 18 of every 100 adult men (17.5%)
- Nearly 14 of every 100 adult women (13.5%)

By Age

Current cigarette smoking was higher among persons aged 18–24 years, 25–44 years, and 45–64 years than among those aged 65 years and older.

- About 13 of every 100 adults aged 18–24 years (13.1%)
- Nearly 18 of every 100 adults aged 25–44 years (17.6%)
- 18 of every 100 adults aged 45–64 years (18.0%)
- Nearly 9 of every 100 adults aged 65 years and older (8.8%)

By Race/Ethnicity

Current cigarette smoking was highest among non-Hispanic American Indians/Alaska Natives and people of multiple races and lowest among Asians.

- Nearly 32 of every 100 non-Hispanic American Indians/Alaska Natives (31.8%)
- About 25 of every 100 non-Hispanic multiple race individuals (25.2%)
- Nearly 17 of every 100 non-Hispanic Blacks (16.5%)
- Nearly 17 of every 100 non-Hispanic Whites (16.6%)
- Nearly 11 of every 100 Hispanics (10.7%)
- 9 of every 100 non-Hispanic Asians* (9.0%)

By Education

Current cigarette smoking was highest among persons with a graduate education degree certificate (GED) and lowest among those with a graduate degree.

- About 24 of every 100 adults with 12 or fewer years of education (no diploma) (24.1%)
- Nearly 41 of every 100 adults with a GED certificate (40.6%)
- Nearly 20 of every 100 adults with a high school diploma (19.7%)
- Nearly 19 of every 100 adults with some college (no degree) (18.9%)
- Nearly 17 of every 100 adults with an associate's degree (16.8%)
- Nearly 8 of every 100 adults with an undergraduate degree (7.7%)
- Nearly 5 of every 100 adults with a graduate degree (4.5%)

By Poverty Status

Current cigarette smoking was higher among persons living below the poverty* level than those living at or above this level.

- About 25 of every 100 adults who live below the poverty level (25.3%)

- About 14 of every 100 adults who live at or above the poverty level (14.3%)

By U.S. Census Region

Current cigarette smoking was highest in the Midwest and lowest in the West.

- Nearly 19 of every 100 adults who live in the Midwest (18.5%)
- Nearly 17 of every 100 adults who live in the South (16.9%)
- About 13 of every 100 adults who live in the Northeast (13.3%)
- About 12 of every 100 adults who live in the West (12.3%)

Alcohol

According to the CDC, drinking too much can harm your health. Excessive alcohol use led to approximately 88,000 deaths and 2.5 million years of potential life lost each year in the United States from 2006 – 2010, shortening the lives of those who died by an average of 30 years. Further, excessive drinking was responsible for 1 in 10 deaths among working-age adults aged 20-64 years. The economic costs of excessive alcohol consumption in 2010 were estimated at \$249 billion, or \$2.05 a drink.

While many people drink alcohol in moderation without discernable harm or health impact, excessive drinking as defined by the CDC includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

- Binge drinking, the most common form of excessive drinking, is defined as consuming
 - For women, 4 or more drinks during a single occasion.
 - For men, 5 or more drinks during a single occasion.
- Heavy drinking is defined as consuming
 - For women, 8 or more drinks per week (greater than 30 per month)
 - For men, 15 or more drinks per week (greater than 60 per month).

Most people who drink excessively are not alcoholics or alcohol dependent. The *Dietary Guidelines for Americans* defines moderate drinking as up to 1 drink per day for women and up to 2 drinks per day for men. In addition, the *Dietary Guidelines* do not recommend that individuals who do not drink alcohol start drinking for any reason.

However, there are some people who should not drink any alcohol, including those who are:

- Younger than age 21.
- Pregnant or may be pregnant.

- Driving, planning to drive, or participating in other activities requiring skill, coordination, and alertness.
- Taking certain prescription or over-the-counter medications that can interact with alcohol.
- Suffering from certain medical conditions.
- Recovering from alcoholism or are unable to control the amount they drink.

Short-Term Health Risks

Excessive alcohol use has immediate effects that increase the risk of many harmful health conditions. These are most often the result of binge drinking and include the following:

- Injuries, such as motor vehicle crashes, falls, drownings, and burns.
- Violence, including homicide, suicide, sexual assault, and intimate partner violence.
- Alcohol poisoning, a medical emergency that results from high blood alcohol levels.
- Risky sexual behaviors, including unprotected sex or sex with multiple partners. These behaviors can result in unintended pregnancy or sexually transmitted diseases, including HIV.
- Miscarriage and stillbirth or fetal alcohol spectrum disorders (FASDs) among pregnant women.

Long-Term Health Risks

Over time, excessive alcohol use can lead to the development of chronic diseases and other serious problems including:

- High blood pressure, heart disease, stroke, liver disease, and digestive problems.
- Cancer of the breast, mouth, throat, esophagus, liver, and colon.
- Learning and memory problems, including dementia and poor school performance.
- Mental health problems, including depression and anxiety.
- Social problems, including lost productivity, family problems, and unemployment.
- Alcohol dependence, or alcoholism.

Local Focus

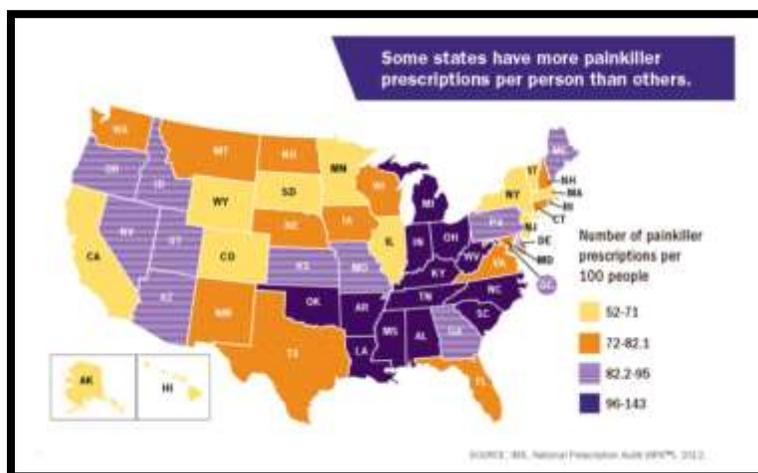
- According to local survey data, 17.8 percent of U.P. adults are current smokers, including 31.9 percent of people with household incomes less than \$25,000. Smoking is the leading cause of preventable death in the U.S., linked to heart disease, stroke, lung cancer, and other chronic diseases.
- An estimated 10.5 percent of U.P. men use smokeless tobacco (chew), and 6.8 percent of adults age 18-39 use e-cigarettes (vaping). Tobacco prevention and reduction efforts should focus on all ages, but with emphasis on youth, as nearly all lifelong smokers become addicted by age 21.
- In the U.P., cigarette smoking during pregnancy far exceeds state levels; 12 counties reported at least 1-in-4 women smoked during pregnancy and seven counties reported at least 30 percent of women smoked during pregnancy. Prenatal exposure to cigarette smoke increases the risk of preterm birth, low birthweight, and SIDS.
- 14 percent of U.P. adults are heavy drinkers and 12.9 percent are binge drinkers. Both types of excessive alcohol consumption can lead to short- and long-term adverse health outcomes.
- 6.5 percent of U.P. adults reported driving in the past month after they had had too much to drink, nearly twice the Michigan rate.
- The U.P. is feeling the effects of the nationwide opioid epidemic, with increased use, overdoses, and the highest neonatal abstinence syndrome rates in Michigan. Comprehensive and coordinated efforts to manage the crisis are needed, including a Continuum of Care approach from promotion and prevention to treatment and recovery, plus addressing root social causes.
- Barriers to receiving substance abuse treatment include: limited residential settings, cost and lack of insurance coverage, only one board-certified addiction medicine provider in the U.P., few physicians trained and comfortable in prescribing medication-assisted treatment (e.g. suboxone, vivitrol), and a paucity of substance abuse counseling in many rural communities.

The Opioid Epidemic

Opioids are a class of drugs which include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin[®]), hydrocodone (Vicodin[®]), codeine and morphine, among others. Morphine was the first narcotic synthesized and it arrived on the scene in the early 1800's. In 1853, the hypodermic syringe was invented, and in 1874 heroin was first synthesized. The first medical report of an infant born addicted to an opioid was in 1875. Over the intervening years, heroin was the primary opioid of addiction and was fairly marginalized in the population. Unfortunately, for about 20 years now, opioid use has been rising steadily and has now reached epidemic proportions.

In the 1990's, pain specialists and advocacy groups began to argue that the U.S. was facing another kind of epidemic — untreated pain. In fact, the American Pain Society recommended that medical providers begin incorporating pain as a “fifth vital sign,” adding it to pulse, respiratory rate, temperature and blood pressure; indicators that should be assessed at every medical encounter. As a consequence, providers began to prescribe more opioids for pain management. Pharmaceutical companies jumped on board, developing a number of new prescription opioids including Vicodin, Oxycontin and Percocet. Marketing strategies downplayed the addictive potential of the newer drugs and targeted primary care providers with aggressive marketing campaigns. As the Institute of Medicine has pointed out, the epidemic may have been fueled, in part, by an aging population with musculoskeletal pain, an increased patient expectation of pain management, increasing obesity, increased survivorship after injury and cancer and increasingly complex surgical procedures. Whatever the reason, in the 1990's, the opioid epidemic was launched.

The increased use and availability of prescription opioids within the population has clearly skyrocketed and has been responsible, at least in part, for a commensurate rise in the use of heroin, a cheaper alternative for the opioid addicted, within the U.S. In fact, at present, the U.S., with only 5 percent of the world's population, consumes more than 80 percent of the global opioid supply. Although there is some regional variation in the amount of opioids prescribed, their over-prescription is nearly universal. Note in the graphic below that Michigan is one of the top opioid prescribers in the country.

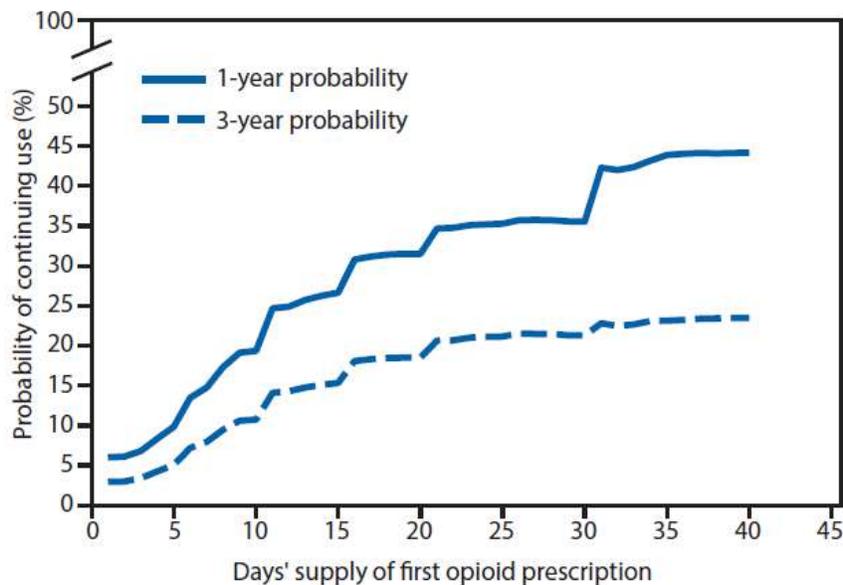


As prescribing increases, so does the risk of addiction. According to the National Institute on Drug Abuse:

- Roughly 21 to 29 percent of patients prescribed opioids for chronic pain misuse them.
- Between 8 and 12 percent develop an opioid use disorder.
- An estimated 4 to 6 percent who misuse prescription opioids transition to heroin.
- About 80 percent of people who use heroin first misused prescription opioids.
- Opioid overdoses increased 30 percent from July 2016 through September 2017 in 52 areas in 45 states.
- The Midwestern region saw opioid overdoses increase 70 percent from July 2016 through September 2017.
- Opioid overdoses in large cities increased by 54 percent in 16 states.

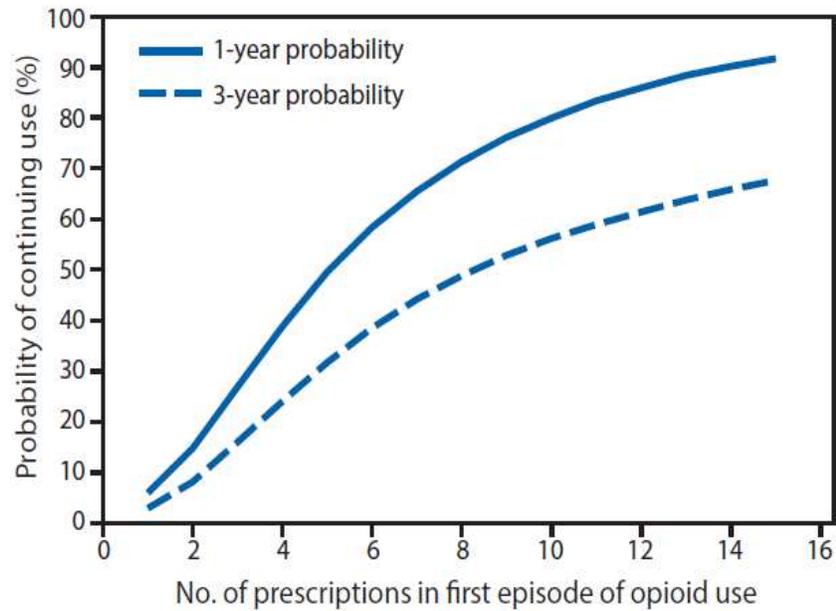
As the graph below illustrates, the risk of addiction rises dramatically with the number of days supplied to a first time user. For example, the probability of an individual continuing to use opioids one year from the time of the first dose, increases from about 10 percent with a 5-day supply to about 25 percent with a 15-day supply. This correlation can be seen with the number of prescriptions provided after the first use, as seen in the second graph. (MMWR, 2017)

FIGURE 1. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015



* Days' supply of the first prescription is expressed in days (1–40) in 1-day increments. If a patient had multiple prescriptions on the first day, the prescription with the longest days' supply was considered the first prescription.

FIGURE 2. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of prescriptions* in the first episode of opioid use — United States, 2006–2015

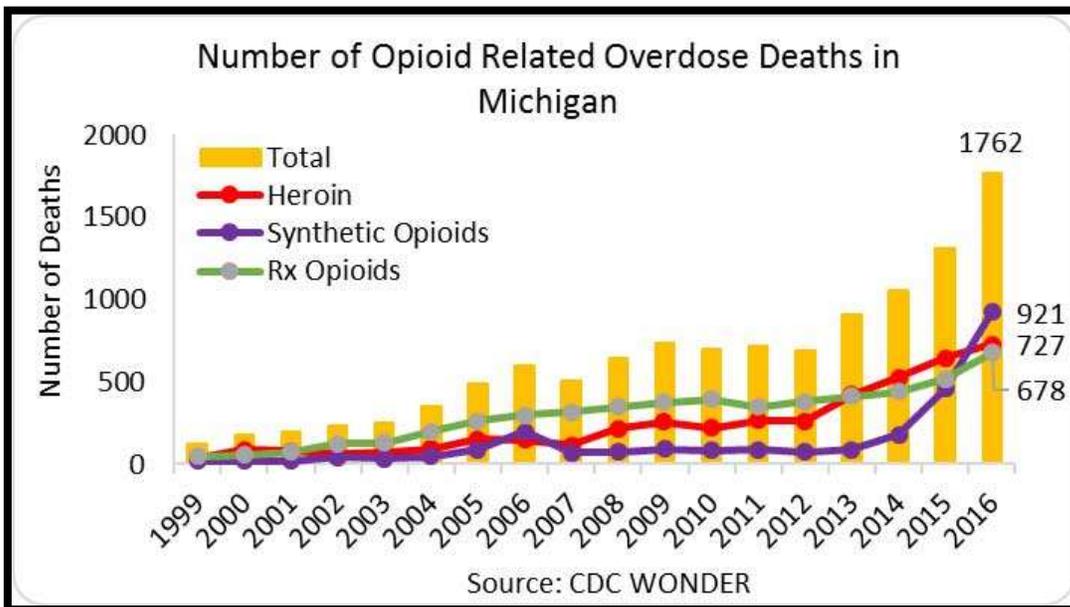
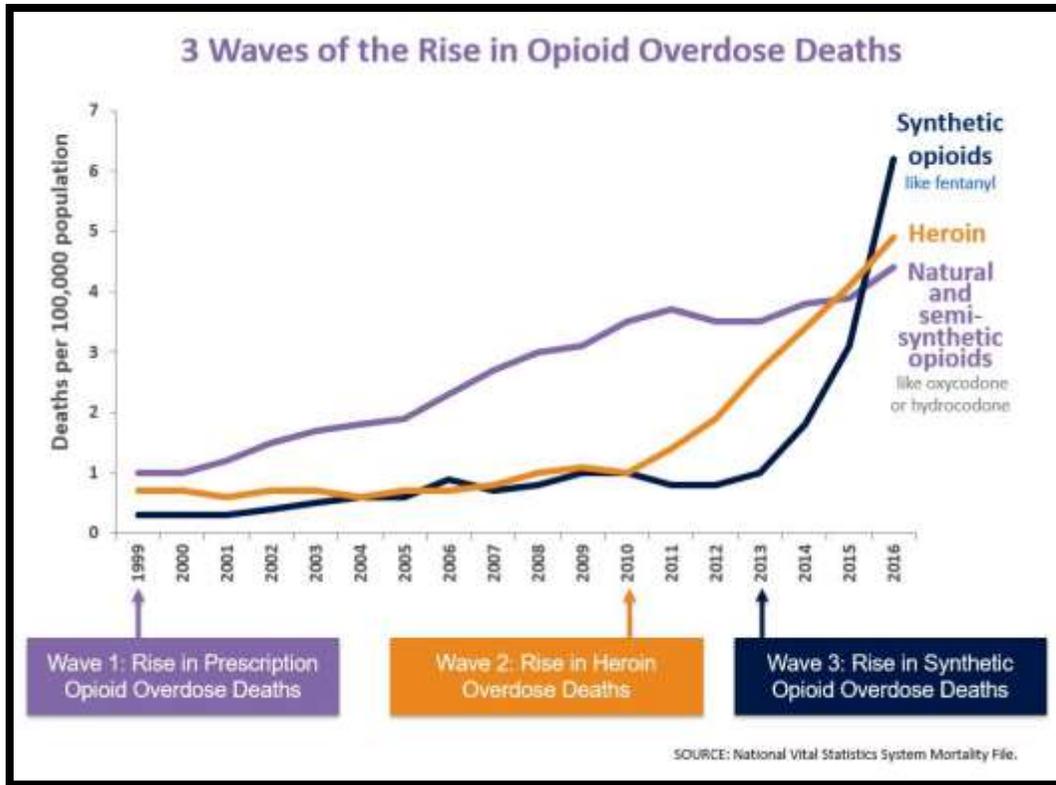


* Number of prescriptions is expressed as 1–15, in increments of one prescription.

As opioid use and addiction has increased, so have opioid overdose deaths. The numbers are staggering. Per the CDC:

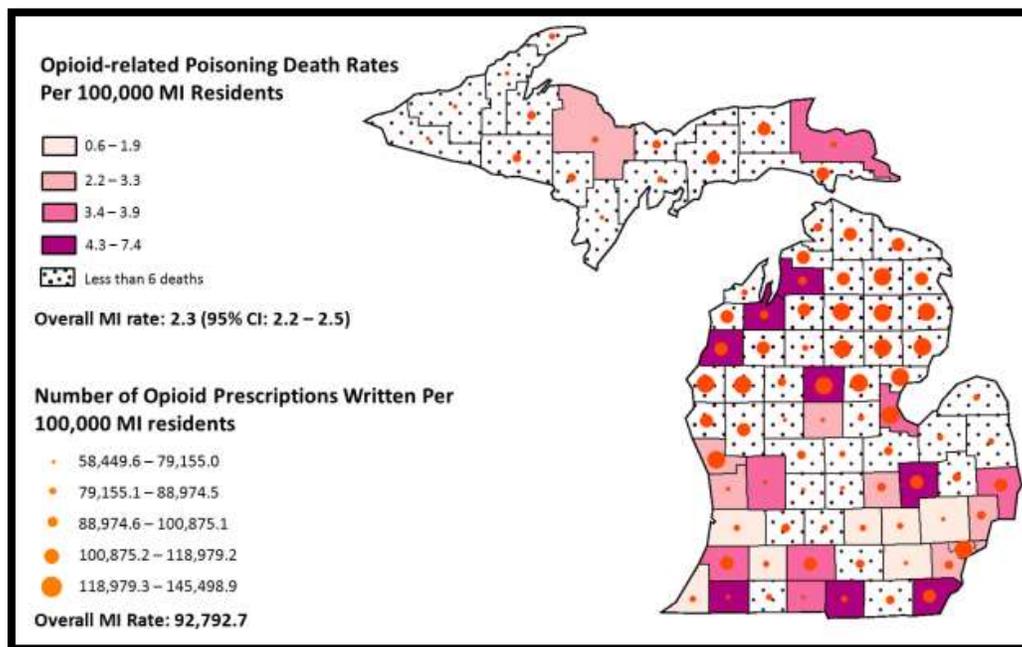
- Between 1999 and 2016, more than 630,000 Americans died from a drug overdose
- About 66 percent of the more than 63,500 drug overdose deaths in the U.S. in 2016 were due to opioids. This was more than 5 times higher than the number in 1999.
- On average 115 Americans die every day from a drug overdose

As can be seen in the graphs on the next page, increases in prescription opioid overdose deaths were followed by increases in deaths due to the cheaper alternative, heroin. Now newer synthetic and more powerful opioids on the market such as fentanyl and the elephant tranquilizer carfentanil, have arrived on the scene and are in part responsible for the rapid increase in overdoses seen nationally and in Michigan.



In Michigan, accurate opioid overdose death-rate data is not easily available. Historically, death certificate data has not consistently been specific as to agent of overdose. This can be a coding issue but may also reflect limited post-mortem drug screening. And, of course, deaths where opioids are a contributing factor but not the immediate cause of death (e.g. automobile fatality in which the driver

was intoxicated on opioids) will not be recorded in overdose death data. Efforts are being made to improve testing and coding, as well as timeliness of reporting, in order to enhance surveillance and advance understanding of the problem. The map below demonstrates available data for 2009-2012 in Michigan. With its low population, most counties of the U.P. have less than 6 deaths and so exact counts are not reported (due to confidentiality issues and the large impact on rate when dealing with a small number of events). Both Marquette County and Chippewa County exceeded 6 deaths and have rates reported.



Source: Office of Recovery Oriented Systems of Care, Bureau of Community Based Services, Behavioral Health and Developmental Disabilities Administration, Michigan Department of Community Health (now Michigan Department of Health and Human Services)

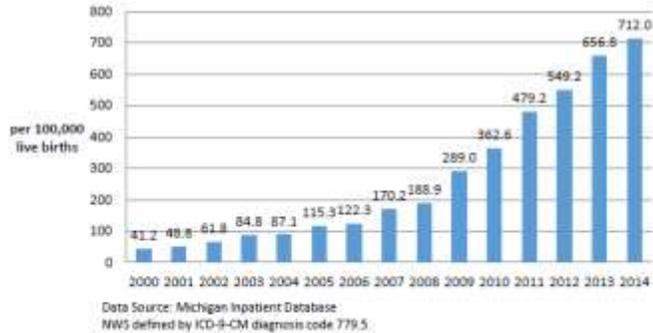
Overdose deaths are clearly not the only negative consequence of the expanding opioid epidemic. Its effect can be seen in rising hepatitis C infections in young adults due to injection drug use, increased risk of an HIV outbreak in this same population, rapidly increasing numbers of men and women incarcerated for drug-related offenses, rising family stress and dysfunction as seen in reported child abuse and neglect as well as accumulated Adverse Childhood Experiences (ACEs), neonatal abstinence syndrome (discussed below) and poverty/unemployment.

Neonatal Abstinence Syndrome

The U.P. now has the highest rate of infants born with Neonatal Abstinence Syndrome (NAS) infants in the state of Michigan with approximately 1.4-2 percent of local births affected (see graphs on next page). The primary substances responsible for this disorder are opioids. Infants with NAS can have a range of symptoms from mild to severe which may include sweating, jitteriness, irritability, poor feeding, diarrhea and seizures. Symptoms may take weeks to months to resolve and hospital stays are prolonged.

Results - Michigan

Rate of Neonatal Abstinence Syndrome by Year among Michigan Infants, 2000-2014

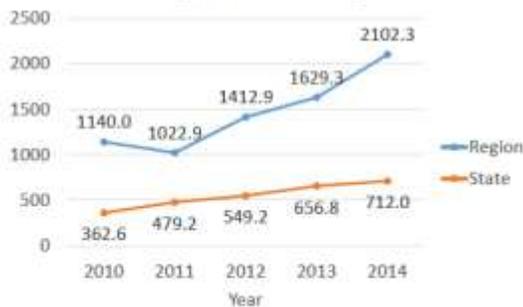


From 2010 to 2014, the NAS rate nearly doubled statewide

The rate in 2014 was six times the rate 10 years earlier (2005)

Results- Region 8

Neonatal Abstinence Syndrome Rate per 100,000 Births Michigan - Perinatal Region 8



Perinatal Region 8

	Births	N with Treated NAS (779.5)	Rate per 100,000
2010	2,807	32	1140.0
2011	2,835	29	1022.9
2012	2,831	40	1412.9
2013	2,762	45	1629.3
2014	2,854	60	2102.3

Source: Michigan Resident Inpatient Files, created using data from the Michigan Inpatient Database obtained with permission from the Michigan Health & Hospital Association Service Corporation.

Although NAS is fairly well understood at this point, we actually know little about the long-term impact of opioid exposure for children. This is partly because the explosion of narcotic use is a relatively new phenomenon and good, controlled studies are few. Since co-abuse of multiple substances is common, it is also difficult to sort out the effects of opioids alone. Confounding the research further is the impact

the environment--poverty, poor maternal nutrition, poor prenatal care and stress can have on outcomes for these infants.

What we do know at this time is that opioid use has been linked to poor birth outcomes like preterm labor, placental problems and growth retardation. There do not appear to be opioid-specific congenital anomalies as seen, for example, with fetal alcohol exposure. Withdrawal is significant as noted above. As for long-term sequelae, as stated, much is unknown at this time and research on outcomes is in the very early stages. A limited literature review suggests the following:

- Growth: No apparent effect
- Behavior: Hyperactivity and decreased attention noted in toddlers; memory and perception problems have been noted in older school-aged children
- Cognition: No consensus, developmental scores tend to be lower but differences tend to disappear when confounders taken into account
- Language development: Inadequate data
- Achievement: Inadequate data

A relatively small study done in 2015 looking at 72 opioid-poly exposed and 58 non-exposed children did demonstrate significant differences in IQ between opioid and control infants with boys having lower cognitive abilities throughout while girls appeared more “normal” early on but tended to show some cognitive problems later--after the age of 3 years. What is worrisome is that no catch-up occurred even for children placed in adoptive, more stable home environments at an early age i.e. these children still had lower mental abilities and more signs of attention-deficit than controls.

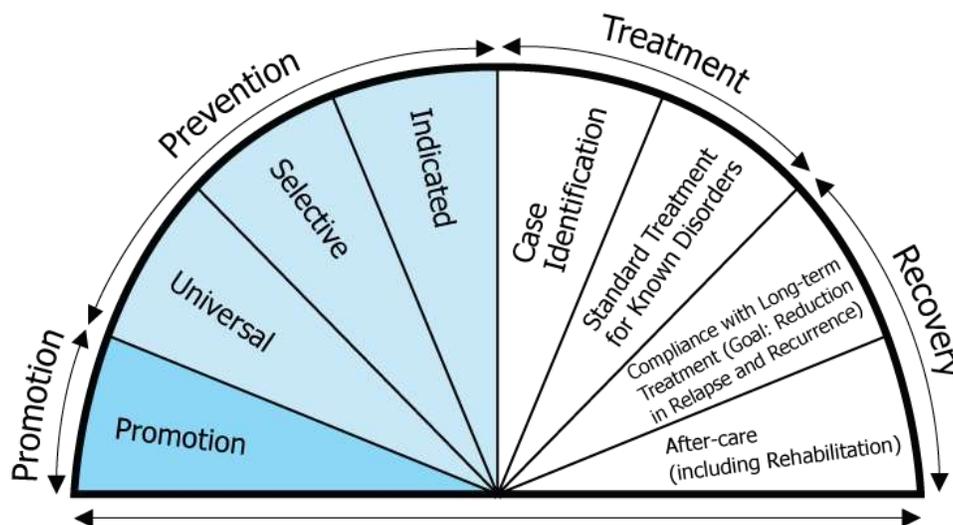
Neonatal Abstinence Takeaways:

- ✓ This is clearly a public health issue. There is no “cure” for prenatal drug exposure...therefore prevention is key.
- ✓ Narcotic replacement therapy for pregnant women is recommended by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. However, it is not without consequences...these infants also experience withdrawal.
- ✓ Criminalizing drug addiction in pregnant women is not a useful strategy in trying to achieve better outcomes.
- ✓ Evidence is still unfolding as to long-term outcomes for these children.
- ✓ Unlike other children with disabilities due to genetics/problem pregnancies or deliveries, these children are often delivered into high risk homes to parents with significant challenges.

- ✓ Support services are critically important in trying to achieve the best possible outcomes for these infants

The Way Forward

The challenges to combatting the opioid epidemic are enormous and become even more pronounced in rural areas such as the U.P. which already face provider shortages in physical and behavioral healthcare. The Behavioral Health Continuum of Care model, with its emphasis on promotion, prevention, treatment and recovery, outlines an approach that can be used in addressing the opioid issue. The model as described by the Substance Abuse and Mental Health Services Administration (SAMHSA) notes the importance of creating environments that support behavioral health, that is to say, the importance of addressing social determinants of health.



Promotion: These strategies are designed to create environments and conditions that support behavioral health and the ability of individuals to withstand challenges. Promotion strategies also reinforce the entire continuum of behavioral health services.

Prevention: Delivered prior to the onset of a disorder, these interventions are intended to prevent or reduce the risk of developing a behavioral health problem, such as underage alcohol use, prescription drug misuse and abuse, and illicit drug use.

Treatment: These services are for people diagnosed with a substance use and per National Institute on Drug Abuse (NIDA) treatment may include: behavioral counseling, medication, medical devices and applications used to treat withdrawal symptoms or deliver skills training, evaluation and treatment for co-occurring mental health issues such as depression and anxiety and long-term follow-up to prevent relapse

Recovery: These services support individuals' abilities to live productive lives in the community and can often help with abstinence.

The U.S. Department of Health and Human Services is focusing on the following five strategies to address this epidemic:

- Improving access to treatment and recovery services
- Promoting use of overdose-reversing drugs
- Strengthening our understanding of the epidemic through better public health surveillance
- Providing support for cutting-edge research on pain and addiction
- Advancing better practices for pain management

In Michigan and other states, legislation is being put in place which limits the supply of opioids given to individuals with acute pain, requires informed consent be obtained from patients when prescribing and mandates that providers utilize the Michigan Automated Prescription System (MAPS). This is being paired with educational outreach from MDHHS and CDC to providers, on appropriate prescribing practices for acute and chronic pain management.

As stated by Dr. Thomas Frieden of the CDC, "We know of no other medication routinely used for a nonfatal condition that kills patients so frequently."

The approaches outlined by HHS are all critically important but a comprehensive approach also needs to look at root causes of this increasing addiction, beyond over-prescription of opioids. Are changes in economic opportunity, family structure and social support networks contributing to the occurrence or maintenance of drug addiction? If so, how do we, as communities, focus prevention efforts? And regardless of cause, how can we best provide needed support to individuals suffering from addiction, their families and their communities in order to decrease long term negative consequences? This is the future work of all U.P. communities and the nation.

2017 Regional Adult Health Survey Data – Substance Abuse

Tobacco

- Half of Upper Peninsula adults have never smoked, slightly lower than the Michigan rate. Less than 20 percent of adults in the Upper Peninsula currently smoke. Younger adults are more likely to have never smoked compared to older adults. While the rates of those who have ever smoked is similar between adults 40-64 years old and adults 65 years and older, adults in the oldest age group are more likely to be former smokers (47 percent) than the middle age group (32 percent). Smoking is more common among those with lower education and lower income. Women are more likely to have never smoked (53 percent) than men (46 percent).
- Nearly 60 percent of smokers in the Upper Peninsula tried to quit smoking in the past year, similar to Michigan rates. However, only 33 percent of adult smokers in Baraga County tried to quit in the previous year. Smoking cessation increased with education; only 40 percent of those with less than a high school degree attempted to quit but 61 percent of those with a college degree attempted to stop smoking. Cessation attempts increased slightly with income and decreased slightly with age.
- Adults in the Upper Peninsula are more likely to report using smokeless tobacco compared to the Michigan rates but use of e-cigarettes is similar. While 5 percent of adults across the Upper Peninsula reported using smokeless tobacco, rates varied by county. Less than 2 percent of adults in Dickinson County but 11 percent of adults in Baraga County reported using smokeless tobacco. Smokeless tobacco and e-cigarette use decreased with age, income, and education. Nearly all of the smokeless tobacco use is in men; less than 0.5 percent of women reported using chew. E-cigarette use varied by gender; 2 percent of women and 5 percent of men reported vaping.

Alcohol

- Heavy drinking is higher but binge drinking is lower among adults in the Upper Peninsula compared to Michigan rates. An estimated 14 percent of U.P. adults reported to be heavy drinkers, based on a definition of greater than 60 drinks in 30 days for men or greater than 30 drinks per women, compared with a Michigan rate of 6.9 percent. Adults reported binge drinking – defined as 5 drinks for men, or 4 drinks for women, in a two-hour period – at a similar rate (13 percent).
- Adults aged 40-64 years have a higher rate of heavy drinking (18 percent) compared to younger and older age groups (11 percent). Younger adults had higher rates of binge drinking; 17 percent of adults 18-39 years old reported binge drinking while only 6 percent of adults 65 years and older reported the same behavior. There were no clear differences in heavy drinking between men and women or by education or income level. Men had higher rates of binge drinking (16 percent) than women (10 percent) but there were no differences by income or education level.

2017 Regional Adult Health Survey Data – Substance Abuse (continued)

Other Drugs

- According to the survey, drug use in the Upper Peninsula is similar to Michigan rates. About 3 percent of adults reported using over-the-counter drugs to get high; a similar rate was reported for prescription drugs. A higher rate (6 percent) was reported for injecting or snorting drugs to get high. Young adults and men had higher rates of drug use than other groups; these patterns held true for all three types of drug use. Eight percent of men and 3 percent of women reported they injected or snorted drugs to get high. Very few adults 65 years and older reported any drug use but 6 percent of adults 18-39 years old reported using over-the-counter drugs to get high.
- About 8 percent of adults in the Upper Peninsula used marijuana in the past 30 days and 5 percent used marijuana at least 10 times in the past 30 days. Marijuana use rates are higher in younger adults, men, adults with lower education level, and lower household income. Five percent of adults with a reported income of \$50,000 or greater reported use of marijuana in the past month while 15 percent of adults with an income of less than \$25,000 reported using in the past month.
- Among Upper Peninsula adults, 4 percent reported they had a marijuana card, similar to the Michigan rate. Younger adults, adults with a lower income, and adults with a less than a high school education had higher rates of a marijuana prescription. While only 1 percent of adults 65 years and older had a marijuana prescription, 5 percent of adults age 18-39 reported they had a prescription.

REGIONAL ADULT HEALTH SURVEY

Introduction

On behalf of 30 local, regional and state partners, the Western Upper Peninsula Health Department (WUPHD) conducted a behavioral risk factor survey of Upper Peninsula adults in August to September 2017. Survey results, which follow this introduction, provide county-level and regional data on physical and mental health status; access to primary care, dental care, mental health counseling and substance abuse treatment services; use of screening and preventive health care services; prevalence of chronic diseases and disabilities; and certain behaviors linked to health status, morbidity, and mortality, including diet, exercise, and use of alcohol, tobacco and other drugs.

The survey was inspired by and modeled on the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS), a system of telephone surveys (Behavioral Risk Factor Surveys, BRFS) conducted by state health departments with assistance from the CDC. Each year states conduct monthly telephone surveillance using a standardized questionnaire to determine the distribution of risk behaviors and health practices among non-institutionalized adults. The data collected are weighted for probability of selection and the distribution of a state's adult population by age, gender, race, and other demographic characteristics.

The smallest geographic area for which Michigan BRFSS data are provided is at the level of the health department jurisdiction. Due to the small number of interviews conducted in each local health district each year, BRFSS data must be aggregated over a three-year interval in order to produce meaningful estimates for prevalence rates. In the Upper Peninsula, only two of the 15 counties (Chippewa and Marquette counties) have health departments that serve a single county. The remaining 13 counties are served by district health departments that cover between two and five counties each. This survey was undertaken in large part to provide statistically significant estimates of the prevalence of chronic diseases, disabilities, health behaviors, and health access at the county level for a single year by surveying thousands of U.P. residents.

Multiple considerations went into the decision to conduct this survey by mail rather than by telephone in its first iteration as the WUPHD 2012 Community Health Needs Assessment. First, a significant and increasing proportion of the U.S. households have only cellular phones, a situation that significantly reduces the sampling frame coverage if only landlines are called, as had been the case traditionally. This coverage weakness is what prompted a 2005 pilot study in six states that compared prevalence estimates by survey mode as part of the BRFSS (Link et al., 2006.) Estimates based on data from 3,010 mail surveys were compared with estimates based on data from 18,780 telephone surveys. The estimates using the two different methods were largely equivalent. Differences that were reported, such as differences in the estimated prevalence of binge-drinking, were consistent with previous research showing that self-administered surveys generally produce higher estimates than interviewer-administered surveys for questions about sensitive behaviors. Furthermore, in 2011 CDC added cellular telephone households and changed the weighting methodology from post-stratification to iterative

proportional fitting (“raking”) (MMWR 2012.) Differences in the methodology should be kept in mind as local estimates are compared to results from the Michigan BRFS.

Local Survey Methodology

Sample

The sample for the 2017 Health Survey of Upper Peninsula Adults was purchased from Marketing Systems Group. The sample was address-based and drawn from a database matched monthly to the United States Postal Service’s Delivery Sequence File. Prior to drawing the sample, 14 sampling frames were defined: Alger County, Baraga County, Chippewa County, Delta County, Dickinson County, Gogebic County, Houghton and Keweenaw counties combined, Iron County, Luce County, Mackinac County, Marquette County, Menominee County, Ontonagon County, and Schoolcraft County. From each of these frames, 1,700 addresses classified as residential and occupied (including apartments) were randomly selected with equal probability of being chosen. Seasonal and educational addresses including college dormitories were eligible for selection. Households that received the survey were instructed to have the adult with the next birthday complete the survey, rather than the most willing among multiple adults. This instruction was intended to yield an approximately random sample of adults within each household and avoid the potential bias of having respondents self-select.

Response Rate

The following table summarizes the response rate for each sampling frame and the 14 frames combined. The response rate is calculated as the number of completed surveys divided by the estimated number of surveys successfully delivered. The estimate of 1,500 deliverable surveys per population frame (about 88 percent deliverable) was chosen based on rates of delivered versus return-to-sender surveys in 2012. The table below gives the number of surveys completed on-line or returned by mail that were largely complete and had the necessary demographic data so they could be included in the analysis.

Sampling Frame	Surveys Mailed	Estimated Number of Surveys Delivered	Completed Surveys	Estimated Response Rate
Alger County	1,700	1,500	336	22.4%
Baraga County	1,700	1,500	391	26.1%
Chippewa County	1,700	1,500	282	18.8%
Delta County	1,700	1,500	324	21.6%
Dickinson County	1,700	1,500	310	20.7%
Gogebic County	1,700	1,500	353	23.5%
Houghton and Keweenaw Counties	1,700	1,500	359	23.9%
Iron County	1,700	1,500	341	22.7%
Luce County	1,700	1,500	337	22.5%
Mackinac County	1,700	1,500	298	19.9%
Marquette County	1,700	1,500	325	21.7%
Menominee County	1,700	1,500	272	18.1%
Ontonagon County	1,700	1,500	524	34.9%
Schoolcraft County	1,700	1,500	368	24.5%
Upper Peninsula (14 frames combined)	23,800	21,000	4,820	23.0%

Survey Design

Packets containing a cover letter, survey and postage-paid, pre-addressed return envelope were prepared and mailed to the entire sample of 23,800 addresses in early August 2017. Each packet included instructions for accessing an online version of the same survey. Overall, 320 surveys were completed on-line (6.6 percent of the total returned surveys.) The remaining surveys were returned by mail. Households that returned completed surveys by September 30, 2017 qualified for a prize drawing consisting of twenty-eight \$50 grocery gift cards, two per population frame.

The majority of the questions used in the survey were taken directly from the mailed version of the BRFSS piloted in several states as a follow up communication to households that were unresponsive to repeated phone survey attempts (CDC, 2011, 2012). A few original questions were added based on input from partners, primarily in the areas of behavioral health and substance abuse. Additionally, a section was added for respondents to give their opinions on the relative importance of 16 community issues. Data from the Community Health Issues and Priorities section are presented in a separate chapter that follows, beginning on page 285.

A pilot study of 29 adult volunteers was conducted in 2012, prior to the official launch of the 2012 Western U.P. Health Needs Assessment Survey. After the pilot, minor changes were made to clarify instructions. The majority of the questions, wording, and format remained the same between 2012 and 2018, although a small number of questions were replaced with new questions. The new questions were not piloted.

Analysis

Data analysis was conducted by Kelly Kamm, PhD from the Department of Kinesiology and Integrative Physiology, Michigan Technological University in Houghton. All analysis was completed in SAS, version 9.4. Survey data were assessed for completeness and consistency. Conflicting responses were adjudicated with Ray Sharp, Western U.P. Health Department. Survey data were weighted to account for probability of selection within the household (design weight) and for overrepresentation of certain demographic characteristics among survey respondents (post-stratification weight). In order to prevent a specific respondent from contributing excessively to the overall estimate, the design weight was limited to a maximum of five adults per household. To correct for differences between the survey respondents and the population of the Upper Peninsula, post-stratification weighting was used for age, gender, education, and income. These characteristics are a subset of the weighting characteristics used by the BRFSS. Overall Upper Peninsula estimates were also weighted for county, with Keweenaw and Houghton counties combined due to the small population of Keweenaw County. Keweenaw County, by far the least populous county in Michigan, literally does not have the requisite 1,700 households used in the survey sample design, and Keweenaw County residents access health care and social services primarily in adjacent Houghton County. The address sample for the combined two-county population frame was drawn proportionately to the numbers of household addresses in the Marketing Systems Group database, so with many times greater representation from residents of the more populous Houghton County, but the respondents among the two counties were combined and weighted

according to the total two-county adult population, without further re-weighting for relative distribution between the counties.

County-level data from the 2011-2015 American Community Survey were used to represent population estimates of the distribution of age and sex, education, and income. Weighting for each characteristic was calculated sequentially, with age and gender calculated together. The weight for age and gender was calculated and applied to the data. A weighted frequency for education was generated and an education weight was calculated. The product of the two weights was applied to the data and a weighted frequency for income was then generated. An income weight was calculated and the post-stratification weight was calculated as the product of the three weights for each observation. The weighted frequency of age, gender, education, and income were compared to the population data for each county. A second iteration was completed to improve comparability between the population data and weighted sample estimates. Observations missing a response to a weighting variable were assigned a weight of "1" for the missing response. Due to variability in response rates to individual questions and differences in relevant subpopulations for particular questions, not all estimates are based on the same total sample size. Questions regarding health screening tests and knowledge of chronic disease diagnoses included a response option of "Don't know". Responses of "Don't know" were categorized as "No".

State-level data are available from the 2016 survey cycle for most indicators presented here. These results have been included for rough benchmarking purposes in the tables that follow. If a Michigan rate from a year prior to 2016 is provided for a particular indicator, the year of the source data will be noted in the table. Not all questions are included each year in the statewide BRFSS (Behavioral Risk Factor Survey). There are a few questions developed locally or where the phrasing of the question varies significantly from the statewide BRFSS. In these cases, no analogous Michigan standard is available, as noted in the table.

References

Centers for Disease Control and Prevention (2011 and 2012). Behavioral Risk Factor Surveillance System Survey Questionnaire. Atlanta, Georgia: U.S. Department of Health and Human Services.

Link M.W., Battaglia M.P., Frankel M.R., Osborn L., Mokdad A.H. (2006). Address-based versus random-digit-dial surveys: Comparison of key health and risk indicators. *American Journal of Epidemiology*, 164(10), 1019-1025.

Methodologic changes in the Behavioral Risk Factors Surveillance System in 2011 and potential effects on prevalence estimates. (2012) *MMWR*, 61(22), 410-413.

Results

A summary of key takeaways from the data arranged by broad topic and table number, and then a complete set of survey findings, appear on the pages that follow. For the data tables, the left page of

each two-page spread contains the results for a particular indicator or set of indicators for Michigan, the regional Upper Peninsula result, and the results by county. The right page of each two-page spread contains the results for the same indicator or set of indicators for the Upper Peninsula region combined, organized by population characteristic. For ease of reference, a list of table topics and page numbers is provided below.

Table Number and Topic	Pages
Table 1: General Health Status	208-209
Table 2: Health Status on at Least 14 days in Past Month	210-211
Table 3: Disability	212-213
Table 4: Health Care Access	214-215
Table 5: Health Care Barriers	216-217
Table 6: Most Recent Checkup	218-219
Table 7: Oral Health Care Access	220-221
Table 8: Oral Health Care Barriers	222-223
Table 9: Weight Status	224-225
Table 10: Cigarette Smoking	226-227
Table 11: Current Smokers Who Attempted to Quit	228-229
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Table 13: Fruit and Vegetable Consumption	232-233
Table 14: Physical Activity	234-235
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Table 17: Cholesterol Screening	240-241
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Table 27: Mental Health Care Access	260-261
Table 28: Mental Health Care Barriers	262-263
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Table 33: Substance Abuse Treatment Barriers	272-673
Table 34: Hepatitis C Testing	274-275
Table 35: Breast Cancer Screening	276-277
Table 36: Cervical Cancer Screening	278-279
Table 37: Prostate Cancer Screening	280-281
Table 38: Colorectal Cancer Screening	282-283

Key Survey Findings

Below are key findings from the survey data, including issues of particular concern, significant differences between geographic areas, and disparities in health access and outcomes, organized by broad categories, with brief notes about each data table. The notes below should be read while looking at the data on the corresponding table. They are grouped here because of space limitations on the data table pages.

Health Status (Tables 1, 2, 3, 9)

- Table 1: About 1-in-6 Upper Peninsula adults reported general health status that was only fair or poor, similar to the Michigan rate. While health status rates were similar for men versus women, the rates for fair-to-poor health were much higher with increased age, lower education, and lower household income. About half of those who didn't finish high school reported fair-to-poor health, compared with an estimated 4 percent for college graduates; and close to one-third of those in low-income households reported fair-to-poor health compared with about 5 percent in households with incomes above \$50,000.
- Table 2: About 1-in-6 Upper Peninsula adults reported poor physical health during at least 14 of the previous 30 days; a similar number reported poor mental health during at least 14 of the previous 30 days. Slightly fewer adults reported poor health kept them from their normal activities. Poor physical health increased with age, doubling from an estimated 10 percent in adults 18-39 years old to more than 20 percent in those 65 years and older. Activity limitation also increased with age, but to a lesser extent. Poor health decreased with higher education and income. While half of the adults who did not finish high school reported at least 14 days of poor physical health, only 5 percent of college graduates reported the same.
- Table 3: About one quarter of Upper Peninsula adults reported activity limitations due to physical, mental, or emotional problems, similar to Michigan rates. About 1-in-10 adults reported use of special equipment. Adults with a reported disability, which includes adults who reported either limitations in their activities due to health problems or use of special equipment, increases by age. By age 65, nearly 40 percent of adults report a disability. Rates were similar between men and women but decreased with higher education and increased household income.
- Less than 30 percent of adults in the Upper Peninsula were not overweight or obese, similar to rates in Michigan. More than one third of adults were obese (BMI greater than or equal to 30) in the Upper Peninsula overall, but in Luce County, an estimated 53 percent of adults were obese. Obesity did not differ by age or income status. Obesity was significantly different by education; while only 20 percent of adults who did not finish high school were not obese or overweight, 40 percent of adults with a college degree reported normal weight.

Access to Care (Tables 4, 5, 6, 7, 8)

- Table 4: Health insurance coverage rates for adults under 65 years old in the Upper Peninsula were much improved with an estimated 7 percent of adults lacking coverage in 2017, compared with 18.5 percent in the 2013 Michigan BRFSS before implementation of key elements of the Affordable Care Act. Very few adults (1 percent) in Dickinson County reported no health insurance. Lack of coverage was higher in younger adults and in adults with lower reported income, but did not differ between men and women or by education. Locally and nationwide the rates of uninsured adults have declined (improved) by half to two-thirds since the implementation of new insurance programs in 2014 under the Affordable Care Act. About 1-in-6 adults reported they did not have a medical provider they considered their personal health care provider. Nearly 25 percent of adults age 18-39 years old did not identify a personal health care provider, while only 5 percent of adults over 65 reported they did not have a personal health care provider. These rates did not differ by gender, education, or income.
- Table 5: Similar to Michigan rates, about 1-in-6 adults reported cost prevented them from accessing health care in the last year. Fewer adults (5 percent) reported a lack of transportation prevented them from accessing health care. Reported difficulty accessing health care due to cost and transportation decreased with age, and increased with education and higher income.
- Table 6: One in four adults in the Upper Peninsula said they did not get a regular preventive physical exam in the last year. Rates were similar across all income and education levels and did not differ between men and women. Younger adults were more likely to have not had a recent check-up than older adults; 40 percent of adults 18-39 years old had not had a recent check-up, while only 10 percent of adults over 65 years old reported no recent check-up. This is not unexpected; younger adults often don't have a regular doctor or access well care visits, whereas regular health screenings tend to become habitual around age 40.
- Table 7: Similar to Michigan rates, 1-in-3 Upper Peninsula adults do not have dental insurance and a similar number have not had dental care in the previous year. While lack of insurance increases with age, lack of dental care was similar across all age groups. Nearly 60 percent of adults over 65 years old lack dental insurance. Lack of insurance and lack of dental care decreased as education and income increased.
- Table 8: Similar to barriers to health care, cost was a commonly reported reason for inability to access dental care. One in five adults reported cost prevented or delayed them from receiving necessary dental care in the previous year. Seven percent of adults reported lack of an available dentist and 5 percent reported transportation prevented or delayed their oral care. All reported barriers decreased with increased age, higher education, and higher income but were similar for men and women.

Health Behaviors (Tables 10, 11, 12, 13, 14, 15)

- Table 10: Half of Upper Peninsula adults have never smoked, slightly lower than the Michigan rate. Less than 20 percent of adults in the Upper Peninsula currently smoke. Younger adults are more likely to have never smoked compared to older adults. While the rates of those who have ever smoked is similar between adults 40-64 years old and adults 65 years and older, adults in the oldest age group are more likely to be former smokers (47 percent) than the middle age group (32 percent). Smoking is more common among those with lower education and lower income. Women are more likely to have never smoked (53 percent) than men (46 percent).
- Table 11: Nearly 60 percent of smokers in the Upper Peninsula tried to quit smoking in the past year, similar to Michigan rates. However, only 33 percent of adult smokers in Baraga County tried to quit in the previous year. Smoking cessation increased with education; only 40 percent of those with less than a high school degree attempted to quit but 61 percent of those with a college degree attempted to stop smoking. Cessation attempts increased slightly with income and decreased slightly with age.
- Table 12: Adults in the Upper Peninsula are more likely to report using smokeless tobacco compared to the Michigan rates but use of e-cigarettes is similar. While 5 percent of adults across the Upper Peninsula reported using smokeless tobacco, rates varied by county. Less than 2 percent of adults in Dickinson County but 11 percent of adults in Baraga County reported using smokeless tobacco. Smokeless tobacco and e-cigarette use decreased with age, income, and education. Nearly all of the smokeless tobacco use is in men; less than 0.5 percent of women reported using chew. E-cigarette use varied by gender; 2 percent of women and 5 percent of men reported vaping.
- Table 13: Only 10 percent of Upper Peninsula adults consumed 5 or more servings of fruits and vegetables per day, slightly lower than the Michigan rates, even though the survey was conducted in August-September when local produce would have been most plentiful. Fruit and vegetable consumption did not differ by age but increased with education and income. More women reported eating 5 or more fruit and vegetable servings daily (13 percent) than men (7 percent).
- Table 14: Only 15 percent of adults in the Upper Peninsula reported no leisure-time physical activity, lower than the Michigan rate. Lack of leisure-time physical activity increased with age and was higher in men than women. While 17 percent of men reported no physical activity, only 12 percent of women reported no leisure-time physical activity. Physical activity also increased with education and income. Nearly 30 percent of adults who did not finish high school reported no leisure-time physical activity but only 4 percent of those with a college degree reported no activity.
- Table 15: More than 4 of every 5 adults in the Upper Peninsula reported always using a seat belt, similar to the Michigan rate; however, 6 percent of adults reported driving when they had too much to drink, higher than the Michigan rate. Seatbelt use did not differ by age, gender, income or education. Older adults (65 years and older), women, adults with higher education,

and those with higher income were less likely to report driving after drinking. Ten percent of adults with a reported income of less than \$25,000 reported driving after drinking; 5 percent of adults with a reported income \$50,000 or greater reported driving after they had too much to drink.

Chronic Conditions (Tables 18, 19, 20, 21, 22, 23, 24)

- Table 18: Adult asthma rates in the Upper Peninsula were similar to Michigan rates. About 1-in-6 adults reported they ever had asthma and about 1-in-10 reported they currently had asthma. Lifetime asthma was slightly lower in the oldest age group but did not differ by gender, income, or education. About 20 percent of adults 18-39 years old reported ever having asthma compared to 13 percent of adults over 65 years old reported having asthma in their lifetime. Similar rates of current asthma were seen across age, income, gender, and education groups.
- Table 19: One in ten Upper Peninsula adults have been told they have diabetes, similar to the Michigan rate. Diabetes rates increase with age; less than 2 percent of adults 18-39 years old have ever been told they have diabetes compared to 20 percent of adults 65 years and older. Men, adults with a lower education, and adults with a lower income had higher rates of diabetes. Six percent of adults with a reported income of \$50,000 or greater reported ever being told they had diabetes compared to 15 percent of adults with a reported income of less than \$25,000.
- Table 20: Nearly 10 percent of adults in the Upper Peninsula reported they had been told they had heart disease, higher than the Michigan rate. About 6 percent of Upper Peninsula adults reported they had a heart attack and 3 percent reported having had a stroke; at rates similar to Michigan rates. All three health conditions increase with age and were more commonly reported by men than women. Thirteen percent of men and 6 percent of women reported ever having been told they had heart disease. Rates of all three conditions were much higher among adults without a high school degree compared to all other education levels. Only 5 percent of college graduates reported having heart disease compared to 24 percent of those without a high school diploma. Adults with lower income were more likely to report having had each of the three conditions. While 8 percent of adults in the lowest income bracket reported having had a heart attack, 3 percent of those in the highest income bracket reported the same condition. Remember that correlation does not prove causation – these data do not explain whether low income causes heart disease.
- Table 21: More than 1 in every 7 adults in the Upper Peninsula reported having had cancer. Lifetime prevalence of both skin cancer and other types of cancer increased with age, but little difference was seen by gender, income, or education level. Two percent of adults 18-39 years old reported any type of cancer, but in the oldest age bracket, 30 percent of adults reported either skin cancer or any other type of cancer.
- Table 22: About 1-in-12 adults in the Upper Peninsula reported chronic pulmonary disease, slightly less than the Michigan rate. Chronic pulmonary disease prevalence was similar in men and women but increased with age and decreased with income and education. Only 1 percent of

adults 18-39 years old reported chronic pulmonary disease but 16 percent of adults 65 years and older reported the condition. Less than 3 percent of adults with a college degree reported chronic pulmonary disease; the rate among adults with less than a high school degree was more than seven times higher at nearly 19 percent; to be expected because smoking rates are inversely related to education levels, and while high school completion is the norm now, it was not among the very old, who are also more likely to develop COPD. Rates were statistically similar across the Upper Peninsula except in Iron County where 18 percent of adults reported they had chronic pulmonary disease.

- Table 23: Arthritis limits the activities of 1-in-3 adults in the Upper Peninsula. Rates are similar for men and women but vary by age, income, and education. More than half of adults without a high school degree are limited in their activities by arthritis but only 18 percent of adults with a college degree have the same limitations due to arthritis. Among adults 65 years and older, 45 percent reported arthritis limited them in their usual activities.
- Table 24: Alzheimer's Disease or dementia was rarely reported among Upper Peninsula adults. Michigan rates were not available for comparison. Results are too rare to note differences by gender, education, or income. Of course, reported rates do increase with increasing age.

Behavioral Health (Tables 26, 27, 28)

- Table 26: About 1-in-4 adults in the Upper Peninsula reported they had been told by a health care provider they had a depressive disorder, and 1-in-5 reported they had an anxiety disorder. Both depression and anxiety rates were higher in younger adults and women. Rates decreased as education and income increased. Among adults 18-39 years old, 37 percent reported a depressive disorder and 33 percent reported an anxiety disorder; among adults 65 years and older 18 percent reported a depressive disorder and 11 percent reported an anxiety disorder. About 40 percent of adults in either the lowest education or lowest income level reported a depressive disorder but only 20 percent of adults in the highest education or highest income level reported a depressive disorder.
- Table 27: Nearly one quarter of adults in the Upper Peninsula were on medication to help with mood, emotions, or mental health and 8 percent received counseling from a mental health professional in the previous year. Rates for medication and counseling are higher in younger adults, women, and those in the lower income brackets. Medication use decreases as education level increases, but the same trend is not seen with counseling. Thirty percent of women received medication for mood in the previous year compared to 18 percent of men. While 13 percent of adults age 18-39 years old received counseling, only 3 percent of adults age 65 and older received counseling in the past year. One percent of adults contacted a crisis line in the last year.
- Table 28: Seven percent of adults in the Upper Peninsula delayed or did not receive mental health care due to cost; 5 percent delayed or did not receive care due to a lack of available mental health professionals. Younger adults and men had higher rates of reported delays in treatment due to cost and availability. Nine percent of men and 5 percent of women delayed or

did not receive treatment because of cost. These barriers to mental health care were not different in adults by education or income level. Transportation was rarely reported as a cause of delayed or missed mental health care.

Alcohol and Drug Use (Tables 29, 30, 31, 32, 33)

- Table 29: Heavy drinking is higher but binge drinking is lower among adults in the Upper Peninsula compared to Michigan rates. About 1-in-7 adults in the Upper Peninsula are heavy drinkers. Adults reported binge drinking at a similar rate (13 percent). Adults aged 40-64 years have a higher rate of heavy drinking (18 percent) compared to younger and older age groups (11 percent). Younger adults had higher rates of binge drinking; 17 percent of adults 18-39 years old reported binge drinking while only 6 percent of adults 65 years and older reported the same behavior. There were no clear differences in heavy drinking between men and women or by education or income level. Men had higher rates of binge drinking (16 percent) than women (10 percent) but there were no differences by income or education level.
- Table 30: Drug use in the Upper Peninsula is similar to Michigan rates. About 3 percent of adults reported using over-the-counter drugs to get high; a similar rate was reported for prescription drugs. A higher rate (6 percent) was reported for injecting or snorting drugs to get high. Drug use varied by county and type of drug use, but due to a small number of respondents who answered yes to these questions, the uncertainty in the county-level estimates is high. Young adults and men had higher rates of drug use than other groups; these patterns held true for all three types of drug use. Eight percent of men and 3 percent of women reported they injected or snorted drugs to get high. Very few adults 65 years and older reported any drug use but 6 percent of adults 18-39 years old reported using over-the-counter drugs to get high.
- Table 31: About 8 percent of adults in the Upper Peninsula used marijuana in the past 30 days and 5 percent used marijuana at least 10 times in the past 30 days. Marijuana use rates are higher in younger adults, men, adults with lower education level, and lower household income. Five percent of adults with a reported income of \$50,000 or greater reported use of marijuana in the past month while 15 percent of adults with an income of less than \$25,000 reported using in the past month. Among Upper Peninsula adults, 4 percent reported they had a marijuana card, similar to the Michigan rate. Younger adults, adults with a lower income, and adults with a less than a high school education had higher rates of a marijuana prescription. While only 1 percent of adults 65 years and older had a marijuana prescription, 5 percent of adults age 18-39 reported they had a prescription.
- Table 32: Very few respondents reported receiving treatment or counseling for drug or alcohol problems in the previous month. Due to a small number of respondents who answered yes to these questions, the uncertainty in these estimates is high.
- Table 33: Very few respondents reported delays in receiving treatment or counseling for drug or alcohol problems in the previous year. Due to a small number of respondents who answered yes to these questions, the uncertainty in these estimates is high.

Preventive Services (Tables 16, 17, 34, 35, 36, 37, 38)

- Table 16: Forty percent of Upper Peninsula adults reported a health care professional told them they had high blood pressure, higher than the Michigan rate. More than 80 percent of those who were told they had high blood pressure reported taking medication for the condition. Older adults were more likely to report high blood pressure; nearly 70 percent of adults age 65 years and older reported high blood pressure and nearly all (94 percent) were taking medication to treat the condition. Adults with less than a high school degree were more likely to report they had high blood pressure and more likely to be taking medication if they had high blood pressure than adults with a college degree.
- Table 17: More than 3 of every 4 adults in the Upper Peninsula have had their cholesterol checked and half of those adults were told they have high cholesterol. The rates of screening were similar to Michigan rates, but the rate of high cholesterol was much higher than the statewide rate. Cholesterol screening increased with age, income, and education, but was similar between men and women. Rates of high cholesterol increased with age and decreased with education level. Only 22 percent of adults in the youngest age group had high cholesterol, but two thirds of adults 65 years and older reported high cholesterol. Men had slightly higher rates of high cholesterol (54 percent) than women (47 percent).
- Table 34: Overall, 18 percent of Upper Peninsula adults have been screened for hepatitis C. Screening varied by county; 30 percent of Mackinac County residents were screened for Hepatitis C while only 11 percent of adults in Ontonagon County were screened. Screening rates did not vary greatly by income, gender, or education. Fewer adults age 65 years and older reported they had been screened for Hepatitis C (13 percent) compared to younger adults (20 percent).
- Table 35: Nearly all women 40 years and older in the Upper Peninsula have had at least one mammogram in their lifetime (96 percent) and 80 percent have had a mammogram within the last 2 years. Women with less than a high school education were less likely to have a mammogram within the recommended time frame (62 percent) compared to women with at least a high school education (at least 80 percent).
- Table 36: More than 95 percent of women in the Upper Peninsula have ever had a Pap test, higher than the Michigan rate. Excluding women who have had a hysterectomy, 75 percent of women in the Upper Peninsula had a Pap test within the past 3 years. Regardless of age, education, or income, nearly all women have ever had a Pap test. However, there are significant differences in a recent Pap test by these characteristics. Among women 18-64 years old, 80 percent reported a recent Pap test. Only 50 percent of women with less than a high school education reported a Pap test in the past 3 years but 88 percent of women with a college degree had a recent screen.
- Table 37: Overall, 69 percent of men over 50 years old reported discussing a prostate screening test with their physician and 72 percent reported they ever had a PSA test. Men with higher education and higher income were more likely to discuss the screening test with their health

care provider and were more likely to receive a PSA test. Only 51 percent of men in the lowest income bracket had a PSA test while 80 percent of those in the highest bracket reported they had a PSA test. Men in both age groups (50-64, 65+) reported discussing prostate screening tests at similar rates but 82 percent of men age 65 and older had a PSA test compared to 66 percent of men age 50-64.

- Table 38: Three out of four adults over 50 years old in the Upper Peninsula have had an appropriately timed colorectal cancer screen, higher than the Michigan rate. Screening increased with age, income, and education but was similar between men and women. Although 83 percent of adults with a college degree have been screened for colorectal cancer, only 60 percent of adults with less than a high school education have receive appropriate screening.

76 pages of data tables containing complete survey results begin on the next page.

A reminder regarding Michigan rates, shown at the top of most left-side (even page numbered) tables:

State-level data are available from the 2016 survey cycle for most indicators presented here. These results have been included for rough benchmarking purposes in the tables that follow. If a Michigan rate from a year prior to 2016 is provided for a particular indicator, the year of the source data will be noted in the table. Not all questions are included each year in the statewide BRFSS (Behavioral Risk Factor Survey). There are a few questions developed locally or where the phrasing of the question varies significantly from the statewide BRFSS. In these cases, no analogous Michigan standard is available, as noted in the table.

Table 1A: General Health Status by County		
	General Health, Fair or Poor ^a	
	%	95% C.I.
Michigan	18.0	(17.2, 18.9)
Upper Peninsula	16.3	(13.8, 18.7)
Alger	16.3	(10.2, 22.4)
Baraga	18.6	(10.6, 26.6)
Chippewa	21.7	(12.6, 30.9)
Delta	13.5	(5.8, 21.3)
Dickinson	16.3	(9.9, 22.6)
Gogebic	13.8	(7.9, 19.8)
Houghton/Keweenaw	14.5	(4.6, 24.4)
Iron	23.3	(16.8, 29.7)
Luce	22.3	(14.6, 29.9)
Mackinac	12.2	(5.6, 18.8)
Marquette	15.5	(9.8, 21.2)
Menominee	12.7	(6.6, 18.8)
Ontonagon	15.6	(11.8, 19.3)
Schoolcraft	25.0	(13.8, 36.2)
^a Among all adults, the proportion who reported their health, in general, was either Fair or Poor. Other survey choices were Good, Very Good, and Excellent.		

Table 1B: General Health Status by Population Group		
	General Health, Fair or Poor ^a	
	%	95% C.I.
Upper Peninsula	16.3	(13.8, 18.7)
Age		
18-39	10.8	(5.0, 16.6)
40-65	17.6	(14.2, 20.9)
65+	21.5	(18.6, 24.4)
Gender		
Male	16.6	(12.5, 20.7)
Female	15.9	(13.1, 18.8)
Educational Attainment		
Less than 12th grade	49.5	(36.4, 62.7)
High School Graduate	17.2	(13.0, 21.4)
1-3 years of college	12.0	(9.0, 15.0)
4 year degree or higher	4.0	(2.8, 5.1)
Household Income		
Less than \$25,000	29.9	(24.5, 35.2)
\$25,000 to \$49,999	22.1	(15.8, 28.4)
\$50,000 or higher	5.1	(3.4, 6.7)
^a Among all adults, the proportion who reported their health, in general, was either Fair or Poor. Other survey choices were Good, Very Good, and Excellent.		

Table 2A: Health Status on at Least 14 Days in Past Month by County

	Poor Physical Health ^a	Poor Mental Health ^b	Activity Limitation ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	14.1 (13.3, 14.9)	13.4 (12.6, 14.3)	9.7 (9.0, 10.4)
Upper Peninsula	17.3 (15.0, 19.7)	15.0 (12.6, 17.4)	13.8 (11.2, 16.4)
Alger	15.0 (9.7, 20.4)	18.9 (11.9, 25.9)	12.3 (5.6, 19.0)
Baraga	20.1 (12.1, 28.2)	13.9 (8.3, 19.6)	14.1 (8.0, 20.2)
Chippewa	21.7 (12.6, 30.9)	27.2 (15.5, 38.8)	17.4 (7.3, 27.5)
Delta	18.0 (9.9, 26.1)	10.6 (6.4, 14.9)	11.0 (1.8, 20.2)
Dickinson	16.2 (10.0, 22.4)	10.7 (6.4, 15.0)	10.3 (4.6, 16.1)
Gogebic	22.6 (15.1, 30.1)	16.7 (9.6, 23.8)	14.0 (7.6, 20.5)
Houghton/Kew.	12.8 (8.4, 17.1)	8.7 (5.1, 12.2)	8.0 (4.1, 11.9)
Iron	22.5 (15.9, 29.0)	16.9 (10.0, 23.7)	19.9 (12.9, 26.9)
Luce	23.1 (15.4, 30.8)	17.6 (11.3, 23.9)	16.3 (8.9, 23.7)
Mackinac	13.3 (6.4, 20.1)	6.7 (2.7, 10.7)	14.4 (5.7, 23.2)
Marquette	14.5 (9.0, 20.1)	14.8 (8.3, 21.4)	15.4 (8.5, 22.4)
Menominee	20.3 (10.2, 30.4)	16.5 (9.2, 23.9)	17.5 (5.3, 29.7)
Ontonagon	18.0 (14.0, 22.1)	14.6 (10.6, 18.7)	11.6 (7.8, 15.4)
Schoolcraft	20.0 (13.3, 26.7)	23.7 (12.0, 35.5)	16.3 (8.9, 23.7)

^a Among all adults, the proportion who reported 14 or more days of fair or poor physical health, which includes illness and injury, during the past 30 days.

^b Among all adults, the proportion who reported 14 or more days of fair or poor mental health, which includes stress, depression, and problems with emotions during the past 30 days.

^c Among all adults, the proportion who reported 14 or more days in the past 30 days in which either poor physical or poor mental health kept respondents from doing their usual activities.

Table 2B: Health Status on at Least 14 Days in Past Month by Population Group			
	Poor Physical Health ^a	Poor Mental Health ^b	Activity Limitation ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	17.3 (15.0, 19.7)	15.0 (12.6, 17.4)	13.8 (11.2, 16.4)
Age			
<i>18-39</i>	10.1 (5.3, 14.9)	16.0 (9.9, 22.1)	9.5 (4.3, 14.8)
<i>40-64</i>	19.8 (16.4, 23.2)	15.3 (12.6, 18.0)	16.7 (12.9, 20.6)
<i>65+</i>	22.8 (19.8, 25.8)	12.0 (9.8, 14.3)	14.6 (11.8, 17.4)
Gender			
<i>Male</i>	16.5 (12.9, 20.1)	13.8 (10.0, 17.5)	14.7 (10.1, 19.3)
<i>Female</i>	18.1 (15.2, 21.1)	16.1 (13.1, 19.1)	13.0 (10.4, 15.5)
Educational Attainment			
<i>Less than 12th grade</i>	49.2 (35.8, 62.6)	31.9 (19.5, 44.4)	31.2 (17.4, 44.9)
<i>High School Graduate</i>	19.2 (15.5, 22.9)	15.0 (11.8, 18.2)	14.3 (10.4, 18.3)
<i>1 to 3 years of college</i>	12.5 (9.7, 15.4)	14.6 (10.1, 19.1)	11.8 (7.6, 16.0)
<i>4 year degree or higher</i>	5.2 (3.6, 6.7)	5.1 (3.2, 7.0)	5.3 (2.8, 7.8)
Household Income			
<i>Less than \$25,000</i>	32.9 (27.1, 38.7)	29.0 (23.1, 34.9)	26.9 (20.5, 33.2)
<i>\$25,000 to \$49,999</i>	19.9 (14.9, 24.9)	15.0 (10.8, 19.2)	14.6 (8.9, 20.2)
<i>\$50,000 or higher</i>	7.1 (5.2, 9.0)	6.5 (3.7, 9.2)	5.0 (3.2, 6.9)
<p>^a Among all adults, the proportion who reported 14 or more days of fair or poor physical health, which includes illness and injury, during the past 30 days.</p> <p>^b Among all adults, the proportion who reported 14 or more days of fair or poor mental health, which includes stress, depression, and problems with emotions during the past 30 days.</p> <p>^c Among all adults, the proportion who reported 14 or more days in the past 30 days in which either poor physical or poor mental health kept respondents from doing their usual activities.</p>			

Table 3A: Disability by County			
	Any Disability ^a	Any Activity Limitation ^b	Uses Special Equipment ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	26.7 (25.7, 27.8)	24.3 (23.3, 25.2)	10.7 (10.0, 11.4)
Upper Peninsula	29.1 (26.2, 32.0)	27.7 (24.8, 30.6)	10.1 (8.6, 11.7)
Alger	33.0 (25.6, 40.5)	32.0 (24.7, 39.4)	8.5 (5.1, 11.9)
Baraga	26.8 (17.9, 35.7)	26.4 (17.5, 35.2)	8.4 (4.6, 12.1)
Chippewa	34.9 (24.2, 45.6)	33.2 (22.6, 43.7)	12.1 (7.0, 17.1)
Delta	33.2 (23.9, 42.5)	29.7 (20.6, 38.8)	10.7 (6.2, 15.1)
Dickinson	28.0 (20.2, 35.8)	26.5 (18.7, 34.3)	10.3 (5.9, 16.7)
Gogebic	27.8 (20.5, 35.1)	26.4 (19.3, 33.6)	7.8 (4.0, 11.6)
Houghton/Kew.	26.0 (16.2, 35.9)	25.0 (15.1, 34.9)	7.9 (4.6, 11.2)
Iron	35.0 (27.4, 42.6)	32.1 (24.8, 39.4)	20.7 (14.4, 27.0)
Luce	39.9 (31.0, 48.8)	38.5 (29.6, 47.4)	12.7 (8.3, 17.2)
Mackinac	26.6 (18.1, 35.0)	25.7 (17.3, 34.0)	7.9 (4.3, 11.4)
Marquette	23.9 (17.3, 30.6)	23.6 (17.0, 30.2)	7.9 (3.9, 11.9)
Menominee	28.5 (18.3, 38.8)	26.8 (16.6, 37.0)	13.0 (3.9, 22.1)
Ontonagon	28.5 (23.3, 33.7)	27.3 (22.1, 32.4)	11.3 (8.0, 14.5)
Schoolcraft	40.0 (29.5, 50.5)	37.5 (26.8, 48.2)	13.7 (8.9, 18.5)
<p>^a Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported they required use of special equipment (such as a cane, wheelchair, a special bed, or a special telephone) due to a health problem.</p> <p>^b Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems.</p> <p>^c Among all adults, the proportion who reported they required use of special equipment (such as a cane, wheelchair, a special bed, or a special telephone) due to a health problem.</p>			

Table 3B: Disability by Population Group			
	Any Disability ^a	Any Activity Limitation ^b	Uses Special Equipment ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	29.1 (26.2, 32.0)	27.7 (24.8, 30.6)	10.1 (8.6, 11.7)
Age			
18-39	16.2 (9.6, 22.8)	15.7 (9.1, 22.2)	4.6 (1.2, 7.9)
40-64	33.4 (29.6, 37.2)	32.3 (28.5, 36.1)	9.2 (7.1, 11.2)
65+	38.9 (35.6, 42.1)	35.5 (32.3, 38.7)	19.8 (17.2, 22.3)
Gender			
Male	31.7 (26.6, 36.7)	30.2 (25.2, 35.2)	9.9 (7.4, 12.4)
Female	26.7 (23.7, 29.7)	25.3 (22.4, 28.3)	10.4 (8.5, 12.3)
Educational Attainment			
Less than 12th grade	47.9 (34.6, 61.1)	45.4 (32.3, 58.5)	15.7 (9.1, 22.2)
High School Graduate	31.7 (26.7, 36.7)	29.9 (25.0, 34.9)	12.7 (9.6, 15.8)
1 to 3 years of college	27.0 (22.4, 31.7)	26.2 (21.6, 30.7)	8.3 (6.1, 10.5)
4 year degree or higher	15.4 (12.5, 18.4)	13.9 (11.2, 16.7)	4.9 (3.4, 6.3)
Household Income			
Less than \$25,000	47.0 (40.6, 53.3)	44.8 (38.5, 51.1)	19.4 (15.1, 23.7)
\$25,000 to \$49,999	34.4 (28.2, 40.5)	33.1 (27.0, 39.3)	12.4 (9.0, 15.8)
\$50,000 or higher	15.1 (12.2, 18.1)	14.0 (11.2, 16.8)	3.6 (2.4, 4.9)
<p>^a Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported they required use of special equipment (such as a cane, wheelchair, a special bed, or a special telephone) due to a health problem.</p> <p>^b Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems.</p> <p>^c Among all adults, the proportion who reported they required use of special equipment (such as a cane, wheelchair, a special bed, or a special telephone) due to a health problem.</p>			

Table 4A: Health Care Access by County

	No Health Insurance Age 18-64 ^a	No Personal Health Care Provider ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	9.9 (9.0, 10.8)	14.8 (13.9, 15.7)
Upper Peninsula	7.0 (4.6, 9.4)	14.1 (11.5, 16.8)
Alger	5.8 (1.3, 10.3)	15.9 (10.0, 21.7)
Baraga	8.5 (0.0, 17.3)	16.0 (4.3, 27.6)
Chippewa	5.8 (0.0, 13.2)	18.9 (7.1, 30.7)
Delta	4.4 (0.7, 8.1)	5.7 (2.5, 8.9)
Dickinson	1.0 (0.0, 2.2)	10.4 (3.2, 17.6)
Gogebic	7.1 (1.3, 12.8)	18.5 (11.7, 25.3)
Houghton/Keweenaw	14.7 (3.9, 25.5)	9.2 (4.7, 13.7)
Iron	9.9 (1.1, 18.6)	21.4 (11.6, 31.1)
Luce	3.8 (0.6, 7.0)	15.2 (6.6, 23.8)
Mackinac	4.3 (0.0, 10.2)	11.1 (4.8, 17.5)
Marquette	8.0 (1.9, 14.2)	19.7 (11.6, 27.7)
Menominee	5.8 (0.7, 10.8)	11.2 (4.9, 17.5)
Ontonagon	7.8 (3.2, 12.5)	19.3 (11.9, 26.7)
Schoolcraft	3.0 (0.0, 6.8)	7.5 (3.0, 12.0)

^a Among adults aged 18-64 years, the proportion who reported having no health insurance of any type.

^b Among all adults, the proportion who reported they did not have anyone they thought of as their personal doctor or health care provider.

Table 4B: Health Care Access by Population Group		
	No Health Insurance Age 18-64 ^a	No Personal Health Care Provider ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	7.0 (4.6, 9.4)	14.1 (11.5, 16.8)
Age		
<i>18-39</i>	9.9 (4.7, 15.1)	24.3 (17.1, 31.6)
<i>40-64</i>	4.9 (3.5, 6.3)	11.2 (8.8, 13.7)
<i>65+</i>	—	5.5 (3.7, 7.4)
Gender		
<i>Male</i>	8.3 (4.3, 12.3)	16.7 (12.1, 21.3)
<i>Female</i>	5.8 (3.1, 8.5)	11.7 (8.9, 14.5)
Educational Attainment		
<i>Less than 12th grade</i>	5.0 (0.5, 9.4)	12.5 (5.2, 19.9)
<i>High School Graduate</i>	7.1 (4.0, 10.2)	15.1 (10.1, 20.1)
<i>1-3 years of college</i>	8.2 (3.1, 13.4)	13.8 (9.5, 18.1)
<i>4 year degree or higher</i>	4.8 (2.2, 7.4)	13.3 (9.4, 17.2)
Household Income		
<i>Less than \$25,000</i>	10.6 (5.6, 15.6)	13.4 (9.4, 17.4)
<i>\$25,000 to \$49,999</i>	7.7 (3.7, 11.6)	14.1 (9.4, 18.8)
<i>\$50,000 or higher</i>	4.9 (1.2, 8.6)	14.8 (10.0, 19.5)
^a Among adults aged 18-64 years, the proportion who reported having no health insurance of any type.		
^b Among all adults, the proportion who reported they did not have anyone they thought of as their personal doctor or health care provider.		

Table 5A: Health Care Barriers by County		
	Unable to Access Health Care in Past 12 Months Due to Cost ^a	Unable to Access Health Care in Past 12 Months Due to Lack of Transportation ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	12.8 (12.0, 13.6)	Not available
Upper Peninsula	15.8 (12.8, 18.8)	4.8 (3.3, 6.3)
Alger	7.3 (3.7, 10.9)	5.5 (1.0, 10.1)
Baraga	14.2 (7.6, 20.7)	8.8 (0.0, 19.5)
Chippewa	8.2 (0.9, 15.5)	10.5 (2.0, 19.1)
Delta	13.9 (4.8, 23.0)	2.2 (0.8, 3.6)
Dickinson	13.3 (6.9, 19.8)	3.0 (0.5, 5.5)
Gogebic	13.3 (7.4, 19.2)	3.3 (1.0, 5.6)
Houghton/Keweenaw	19.0 (10.0, 28.1)	3.5 (0.8, 6.1)
Iron	21.8 (14.2, 29.4)	6.2 (2.8, 9.5)
Luce	10.8 (6.0, 15.6)	10.7 (3.7, 17.7)
Mackinac	21.3 (7.0, 35.5)	5.0 (0.7, 9.2)
Marquette	19.9 (11.2, 28.6)	4.6 (0.4, 8.8)
Menominee	19.0 (8.8, 29.2)	3.0 (0.2, 5.7)
Ontonagon	12.3 (8.3, 16.3)	5.1 (2.5, 7.6)
Schoolcraft	9.4 (4.4, 14.4)	3.7 (1.5, 5.9)

^a Among all adults, the proportion who reported they could not see a doctor when they needed in the past 12 months due to cost.

^b Among all adults, the proportion who reported they could not see a doctor when they needed in the past 12 months due to a lack of transportation. This question is not part of the statewide BRFSS.

Table 5B: Health Care Barriers by Population Group

	Unable to Access Health Care in Past 12 Months Due to Cost ^a	Unable to Access Health Care in Past 12 Months Due to Lack of Transportation ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	15.8 (12.8, 18.8)	4.8 (3.3, 6.3)
Age		
<i>18-39</i>	24.8 (17.0, 32.7)	6.1 (1.9, 10.4)
<i>40-64</i>	15.3 (12.2, 18.4)	4.7 (3.4, 6.0)
<i>65+</i>	3.8 (2.4, 5.1)	2.7 (1.6, 3.7)
Gender		
<i>Male</i>	15.6 (10.5, 20.7)	3.6 (2.0, 5.3)
<i>Female</i>	15.9 (12.7, 19.1)	5.9 (3.5, 8.4)
Educational Attainment		
<i>Less than 12th grade</i>	16.4 (4.9, 27.9)	15.7 (5.5, 25.8)
<i>High School Graduate</i>	18.4 (13.1, 23.6)	4.8 (2.8, 6.7)
<i>1-3 years of college</i>	15.4 (10.4, 20.3)	3.5 (1.1, 5.9)
<i>4 year degree or higher</i>	9.3 (6.0, 12.6)	0.9 (0.4, 1.5)
Household Income		
<i>Less than \$25,000</i>	19.2 (14.0, 24.3)	13.0 (8.8, 17.3)
<i>\$25,000 to \$49,999</i>	20.4 (14.6, 26.2)	2.1 (0.08, 4.1)
<i>\$50,000 or higher</i>	11.3 (6.5, 16.1)	1.6 (0.0, 3.5)

^a Among all adults, the proportion who reported they could not see a doctor when they needed in the past 12 months due to cost.

^b Among all adults, the proportion who reported they could not see a doctor when they needed in the past 12 months due to a lack of transportation. This question is not part of the statewide BRFS.

Topic 6A: Most Recent Checkup by County		
	No Routine Checkup in Past 12 Months ^a	
	%	95% C.I.
Michigan	26.9	(25.9, 28.0)
Upper Peninsula	25.9	(22.8, 29.1)
Alger	29.2	(20.6, 37.8)
Baraga	34.0	(23.3, 44.8)
Chippewa	30.6	(17.6, 43.7)
Delta	19.8	(13.4, 26.2)
Dickinson	17.0	(9.7, 24.3)
Gogebic	32.9	(24.6, 41.1)
Houghton/Keweenaw	21.4	(12.6, 30.2)
Iron	28.8	(19.5, 38.2)
Luce	21.0	(12.4, 29.7)
Mackinac	31.2	(20.5, 43.9)
Marquette	28.5	(20.2, 36.9)
Menominee	27.5	(14.5, 40.4)
Ontonagon	32.6	(25.3, 39.8)
Schoolcraft	18.3	(11.4, 25.2)

^a Among all adults, the proportion who reported they did not have a routine checkup in the past year.

Topic 6B: Most Recent Checkup by Population Group		
	No Routine Checkup in Past 12 Months ^a	
	%	95% C.I.
Upper Peninsula	25.9	(22.8, 29.1)
Age		
<i>18-39</i>	40.2	(31.8, 48.5)
<i>40-65</i>	23.2	(20.1, 26.3)
<i>65+</i>	11.3	(8.8, 13.8)
Gender		
<i>Male</i>	26.3	(21.1, 31.4)
<i>Female</i>	25.6	(21.9, 29.4)
Educational Attainment		
<i>Less than 12th grade</i>	24.7	(13.6, 35.8)
<i>High School Graduate</i>	25.9	(20.6, 31.1)
<i>1-3 years of college</i>	26.7	(21.0, 32.5)
<i>4 year degree or higher</i>	24.9	(20.2, 29.7)
Household Income		
<i>Less than \$25,000</i>	27.4	(21.6, 33.2)
<i>\$25,000 to \$49,999</i>	24.9	(20.0, 29.9)
<i>\$50,000 or higher</i>	25.8	(20.3, 31.4)
^a Among all adults, the proportion who reported they did not have a routine checkup in the last year.		

Table 7A: Oral Health Care Access by County		
	No Dental Care Past 12 Months ^a	No Dental Insurance ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	29.9 (28.8, 31.0)	27.0 (25.1, 29.1)
Upper Peninsula	31.8 (28.7, 34.9)	35.9 (32.9, 39.0)
Alger	35.5 (27.2, 43.8)	35.1 (27.7, 42.6)
Baraga	23.6 (15.4, 31.9)	33.6 (24.4, 42.7)
Chippewa	30.6 (20.4, 40.8)	25.7 (15.5, 35.9)
Delta	38.4 (28.3, 48.5)	38.6 (29.3, 47.8)
Dickinson	31.2 (22.3, 40.1)	43.7 (35.0, 52.4)
Gogebic	29.6 (22.2, 36.9)	42.7 (34.8, 50.7)
Houghton/Keweenaw	32.9 (23.5, 42.4)	38.8 (29.2, 48.3)
Iron	41.7 (32.7, 50.7)	41.7 (33.7, 49.7)
Luce	32.9 (24.5, 41.2)	28.0 (20.7, 35.2)
Mackinac	25.6 (14.7, 36.5)	38.3 (25.5, 51.1)
Marquette	28.2 (20.2, 36.3)	35.1 (27.0, 43.1)
Menominee	28.0 (18.5, 37.5)	29.3 (21.1, 37.5)
Ontonagon	34.7 (28.4, 41.0)	43.0 (36.5, 49.4)
Schoolcraft	44.1 (33.7, 54.6)	36.8 (28.2, 45.4)
<p>^a Among all adults, the proportion who reported they had not visited a dentist or dental clinic for any reason in the past year.</p> <p>^b Among all adults, the proportion who reported having no insurance coverage for dental care. Statewide survey question refers to the proportion who reported they did not have dental coverage for the entire past 12 months.</p>		

Table 7B: Oral Health Access by Population Group		
	No Dental Care Past 12 Months ^a	No Dental Insurance ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	31.8 (28.7, 34.9)	35.9 (32.9, 39.0)
Age		
<i>18-39</i>	35.2 (27.3, 43.1)	24.9 (17.7, 32.1)
<i>40-64</i>	29.8 (26.1, 33.5)	32.1 (28.4, 35.9)
<i>65+</i>	30.8 (27.6, 33.9)	58.1 (54.8, 61.4)
Gender		
<i>Male</i>	37.2 (31.9, 42.5)	37.2 (32.2, 42.3)
<i>Female</i>	26.6 (23.3, 30.0)	34.7 (31.2, 38.2)
Educational Attainment		
<i>Less than 12th grade</i>	52.4 (39.4, 65.4)	51.5 (38.4, 64.6)
<i>High School Graduate</i>	35.8 (30.7, 40.9)	38.8 (33.9, 43.7)
<i>1-3 years of college</i>	28.3 (22.9, 33.6)	33.7 (28.4, 39.1)
<i>4 year degree or higher</i>	17.0 (12.8, 21.2)	22.8 (19.0, 26.6)
Household Income		
<i>Less than \$25,000</i>	55.1 (48.7, 61.4)	46.1 (39.8, 52.3)
<i>\$25,000 to \$49,999</i>	33.2 (27.4, 38.9)	46.3 (40.5, 52.2)
<i>\$50,000 or higher</i>	18.1 (13.9, 22.3)	22.7 (18.6, 26.8)
^a Among all adults, the proportion who reported they had not visited a dentist or dental clinic for any reason in the past year.		
^b Among all adults, the proportion who reported having no insurance coverage for dental care.		

Topic 8A: Oral Health Care Barriers by County			
	Unable to Access Dental Care in Past 12 Months Due to Cost ^a	Unable to Access Dental Care in Past 12 Months Due to Lack of Transportation ^b	Delayed Dental Care in Past 12 Months Because Could Not Find Available Dentist ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	Not available
Upper Peninsula	20.7 (17.6, 23.7)	5.1 (3.2, 7.0)	7.4 (5.6, 9.1)
Alger	17.8 (11.0, 24.6)	4.6 (0.2, 8.9)	7.0 (2.7, 11.3)
Baraga	13.9 (7.9, 19.8)	1.8 (0.0, 3.8)	3.1 (0.5, 5.7)
Chippewa	13.9 (5.8, 22.0)	11.7 (1.9, 21.5)	5.3 (1.3, 9.3)
Delta	19.4 (12.0, 26.9)	3.2 (0.6, 5.9)	8.4 (0.8, 15.9)
Dickinson	14.5 (8.9, 20.1)	1.5 (0.4, 2.7)	5.3 (1.7, 8.9)
Gogebic	13.5 (8.1, 18.9)	2.2 (0.2, 4.3)	3.8 (1.9, 5.7)
Houghton/Kew.	21.8 (12.3, 31.3)	2.7 (0.2, 5.2)	8.7 (5.2, 12.1)
Iron	24.9 (17.6, 32.3)	4.4 (1.4, 9.5)	9.6 (5.0, 14.3)
Luce	23.2 (15.3, 31.1)	9.9 (2.6, 17.2)	12.2 (5.9, 18.6)
Mackinac	21.9 (8.1, 35.7)	11.9 (0.0, 26.6)	15.3 (0.9, 29.6)
Marquette	28.3 (19.2, 37.4)	4.7 (0.2, 9.1)	6.0 (1.6, 10.5)
Menominee	19.0 (9.2, 28.8)	8.4 (0.0, 17.7)	8.2 (2.6, 13.8)
Ontonagon	14.3 (10.1, 18.4)	2.9 (0.7, 5.1)	6.0 (3.7, 8.2)
Schoolcraft	26.8 (15.2, 38.4)	2.2 (0.6, 3.8)	14.4 (7.6, 21.3)
^a Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months due to cost. ^b Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months due to a lack of transportation. ^c Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months because they could not find an available dental professional. These questions are not part of the statewide BRFSS.			

Topic 8B: Oral Health Care Barriers by Population Group			
	Unable to Access Dental Care in Past 12 Months Due to Cost ^a	Unable to Access Dental Care in Past 12 Months Due to Lack of Transportation ^b	Delayed Dental Care in Past 12 Months Because Could Not Find Available Dentist ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	20.7 (17.6, 23.7)	5.1 (3.2, 7.0)	7.4 (5.6, 9.1)
Age			
<i>18-39</i>	29.6 (21.5, 37.7)	9.5 (4.0, 14.9)	7.1 (3.3, 10.9)
<i>40-64</i>	19.1 (16.3, 22.0)	3.6 (2.4, 4.9)	9.4 (6.8, 12.0)
<i>65+</i>	10.6 (8.8, 12.5)	1.3 (0.5, 2.1)	3.3 (2.1, 4.4)
Gender			
<i>Male</i>	20.0 (15.0, 25.0)	4.9 (2.1, 7.8)	6.0 (3.4, 8.6)
<i>Female</i>	21.3 (17.7, 24.8)	5.3 (2.7, 7.9)	8.6 (6.3, 10.9)
Educational Attainment			
<i>Less than 12th grade</i>	17.2 (9.3, 25.1)	11.7 (2.2, 21.2)	14.9 (3.9, 25.8)
<i>High School Graduate</i>	22.5 (17.2, 27.7)	5.3 (2.3, 8.2)	7.3 (4.8, 9.8)
<i>1 to 3 years of college</i>	23.9 (18.4, 29.5)	4.9 (1.6, 8.2)	6.9 (4.2, 9.5)
<i>4 year degree or higher</i>	9.6 (6.8, 12.3)	0.7 (0.2, 1.2)	3.4 (2.2, 4.6)
Household Income			
<i>Less than \$25,000</i>	30.7 (24.8, 36.6)	13.5 (8.0, 19.0)	13.5 (9.4, 17.6)
<i>\$25,000 to \$49,999</i>	24.0 (18.6, 29.4)	2.8 (0.0, 5.8)	9.1 (4.7, 13.5)
<i>\$50,000 or higher</i>	12.4 (7.5, 17.3)	1.6 (0.0, 3.5)	2.8 (1.6, 4.1)
<p>^a Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months due to cost.</p> <p>^b Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months due to a lack of transportation.</p> <p>^c Among all adults, the proportion who reported they could not see a dentist when they needed in the past 12 months because they could not find an available dental professional.</p>			

Table 9A: Weight Status by County			
	Obese ^a	Overweight ^b	Not Overweight ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	32.5 (31.4, 33.6)	35.0 (33.9, 36.2)	31.0 (29.9, 32.1)
Upper Peninsula	36.9 (33.7, 40.2)	34.0 (30.8, 37.2)	29.1 (26.1, 32.0)
Alger	41.5 (33.1, 49.8)	29.2 (22.1, 36.3)	29.4 (21.4, 37.3)
Baraga	43.5 (32.4, 54.7)	36.4 (25.7, 47.1)	20.1 (12.9, 27.2)
Chippewa	43.7 (31.6, 55.8)	26.9 (18.7, 35.1)	29.4 (18.8, 40.1)
Delta	41.7 (32.1, 51.3)	36.7 (27.4, 46.0)	21.6 (15.4, 27.8)
Dickinson	31.8 (23.2, 40.3)	32.9 (24.8, 41.1)	35.3 (26.8, 43.8)
Gogebic	42.1 (33.8, 50.5)	33.3 (25.7, 40.9)	24.5 (17.5, 31.6)
Houghton/Kew.	29.6 (21.4, 37.8)	35.6 (25.8, 45.4)	34.9 (24.5, 45.2)
Iron	40.3 (32.0, 48.7)	30.8 (22.2, 39.5)	28.8 (21.8, 35.8)
Luce	53.4 (44.4, 62.5)	28.5 (19.9, 37.1)	18.0 (11.7, 24.4)
Mackinac	35.2 (22.0, 48.5)	29.3 (20.3, 38.4)	35.4 (23.7, 47.2)
Marquette	32.6 (23.7, 41.6)	37.4 (28.3, 46.5)	30.0 (22.4, 37.6)
Menominee	35.8 (25.7, 45.9)	36.1 (23.6, 48.6)	28.1 (17.5, 38.8)
Ontonagon	39.2 (32.2, 46.3)	37.3 (30.8, 43.8)	23.4 (18.0, 28.8)
Schoolcraft	42.0 (31.5, 52.4)	27.3 (20.1, 34.5)	30.7 (21.6, 39.8)

Note: BMI (body mass index) is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in m)²]. Weight and height were self-reported.

^a Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.

^b Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0 but less than 30.0

^c Among all adults, the proportion of respondents whose BMI was less than 25.0. The Michigan estimate represents the proportion of respondents whose BMI was greater than or equal to 18.5 and less than 25.0.

Table 9B: Weight Status by Population Group			
	Obese ^a	Overweight ^b	Not Overweight ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	36.9 (33.7, 40.2)	34.0 (30.8, 37.2)	29.1 (26.1, 32.0)
Age			
18-39	32.4 (24.2, 40.6)	32.2 (23.9, 40.5)	35.4 (27.7, 43.0)
40-64	40.7 (36.7, 44.6)	32.9 (29.2, 36.5)	26.4 (23.1, 29.8)
65+	36.3 (33.0, 39.6)	38.6 (35.3, 41.9)	25.1 (22.3, 27.8)
Gender			
Male	39.0 (33.5, 44.6)	38.4 (32.9, 43.9)	22.5 (17.9, 27.1)
Female	34.9 (31.4, 38.5)	29.7 (26.3, 33.1)	35.3 (31.8, 38.9)
Educational Attainment			
Less than 12th grade	46.1 (32.9, 59.3)	33.7 (20.8, 46.7)	20.2 (12.1, 28.3)
High School Graduate	39.1 (33.4, 44.8)	33.1 (28.1, 38.1)	27.8 (23.0, 32.7)
1 to 3 years of college	35.7 (30.6, 40.8)	36.5 (30.7, 42.4)	27.7 (22.5, 33.0)
4 year degree or higher	28.8 (23.9, 33.6)	30.4 (25.8, 35.0)	40.9 (35.7, 46.0)
Household Income			
Less than \$25,000	35.3 (29.5, 41.1)	31.0 (24.9, 37.0)	33.7 (27.5, 39.9)
\$25,000 to \$49,999	38.7 (33.0, 44.3)	33.7 (28.1, 39.4)	27.6 (22.0, 33.1)
\$50,000 or higher	37.6 (32.2, 43.1)	35.4 (30.2, 40.5)	27.0 (22.8, 31.2)
<p>Note: BMI (body mass index) is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in m)²]. Weight and height were self-reported.</p> <p>^a Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.</p> <p>^b Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0 but less than 30.0</p> <p>^c Among all adults, the proportion of respondents whose BMI was less than 25.0.</p>			

Table 10A: Cigarette Smoking by County			
	Current Smoker ^a	Former Smoker ^b	Never Smoked ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	20.4 (19.4, 21.4)	25.8 (24.8, 26.8)	53.8 (52.6, 54.9)
Upper Peninsula	17.8 (15.3, 20.4)	32.5 (29.6, 35.4)	49.7 (46.4, 53.0)
Alger	14.6 (9.0, 20.2)	39.4 (31.6, 47.2)	46.0 (37.5, 54.4)
Baraga	17.3 (9.3, 25.4)	42.0 (30.9, 53.1)	40.7 (30.0, 51.3)
Chippewa	24.4 (13.9, 34.8)	26.5 (17.9, 35.2)	49.1 (37.4, 60.8)
Delta	10.0 (6.0, 13.9)	32.8 (24.4, 41.2)	57.2 (48.3, 66.2)
Dickinson	12.8 (6.8, 18.8)	32.6 (24.0, 41.2)	54.6 (45.7, 63.5)
Gogebic	20.1 (12.9, 27.4)	37.4 (29.4, 45.3)	42.5 (34.4, 50.6)
Houghton/Kew.	11.5 (5.7, 17.3)	28.8 (21.1, 36.5)	59.7 (50.5, 69.0)
Iron	19.0 (10.3, 27.8)	37.3 (29.1, 45.5)	43.7 (35.6, 51.8)
Luce	22.0 (13.0, 31.0)	38.0 (29.7, 46.4)	40.0 (31.5, 48.4)
Mackinac	18.0 (10.8, 25.3)	41.3 (28.1, 54.5)	40.7 (29.8, 51.6)
Marquette	19.7 (12.5, 26.8)	31.3 (23.3, 39.3)	49.0 (39.9, 58.2)
Menominee	27.0 (16.1, 37.8)	30.6 (19.4, 41.9)	42.4 (31.2, 53.6)
Ontonagon	20.3 (13.2, 27.4)	35.6 (29.5, 41.8)	44.1 (37.5, 50.7)
Schoolcraft	20.4 (13.1, 27.8)	37.2 (26.6, 47.8)	42.3 (33.0, 51.7)

^a Among all adults, the proportion who reported they ever smoked at least 100 cigarettes (5 packs) in their life and they currently smoke cigarettes now, either everyday or on some days.

^b Among all adults, the proportion who reported they ever smoked at least 100 cigarettes (5 packs) in their life but they do not smoke cigarettes now.

^c Among all adults, the proportion who reported they had never smoked.

Table 10B: Cigarette Smoking by Population Group

	Current Smoker ^a	Former Smoker ^b	Never Smoked ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	17.8 (15.3, 20.4)	32.5 (29.6, 35.4)	49.7 (46.4, 53.0)
Age			
18-39	21.3 (14.6, 28.1)	22.2 (15.4, 28.9)	56.5 (48.2, 64.8)
40-64	20.4 (17.4, 23.3)	32.5 (28.8, 36.2)	47.2 (43.2, 51.1)
65+	8.1 (6.3, 9.9)	46.5 (43.1, 49.8)	45.5 (42.1, 48.8)
Gender			
Male	16.8 (13.0, 20.6)	36.6 (31.6, 41.7)	46.6 (40.9, 52.3)
Female	18.8 (15.4, 22.1)	28.5 (25.3, 31.7)	52.7 (49.1, 56.4)
Educational Attainment			
Less than 12th grade	30.2 (16.8, 43.7)	31.2 (20.7, 41.6)	38.6 (25.8, 51.4)
High School Graduate	18.7 (15.0, 22.4)	35.7 (30.7, 40.8)	45.6 (39.9, 51.3)
1 to 3 years of college	18.2 (13.8, 22.7)	32.8 (27.7, 37.9)	49.0 (43.3, 54.7)
4 year degree or higher	7.1 (4.3, 9.9)	23.8 (19.9, 27.7)	69.1 (64.6, 73.6)
Household Income			
Less than \$25,000	31.9 (25.4, 38.5)	28.9 (24.0, 33.9)	39.1 (32.8, 45.4)
\$25,000 to \$49,999	17.3 (13.2, 21.3)	33.2 (28.1, 38.4)	49.5 (43.6, 55.4)
\$50,000 or higher	10.5 (7.5, 13.5)	33.6 (28.6, 38.5)	55.9 (50.7, 61.2)

^a Among all adults, the proportion who reported they ever smoked at least 100 cigarettes (5 packs) in their life and they currently smoke cigarettes now, either everyday or on some days.

^b Among all adults, the proportion who reported they ever smoked at least 100 cigarettes (5 packs) in their life but they do not smoke cigarettes now.

^c Among all adults, the proportion who reported they had never smoked.

Table 11A: Current Smokers Who Attempted to Quit by County		
	Tried to Quit in Past Year ^a	
	%	95% C.I.
Michigan	58.8	(56.0, 61.5)
Upper Peninsula	58.7	(50.8, 66.6)
Alger	67.4	(47.9, 86.8)
Baraga	33.4	(12.8, 54.1)
Chippewa	45.4	(20.5, 70.4)
Delta	44.3	(24.9, 63.7)
Dickinson	44.0	(18.1, 70.0)
Gogebic	61.6	(40.6, 82.6)
Houghton/Keweenaw	54.0	(29.4, 78.5)
Iron	79.1	(61.9, 96.3)
Luce	79.4	(62.2, 96.6)
Mackinac	54.4	(33.7, 75.1)
Marquette	70.0	(49.3, 90.6)
Menominee	64.7	(43.1, 86.4)
Ontonagon	53.3	(32.5, 74.1)
Schoolcraft	60.2	(41.0, 79.5)

^a Among current smokers, the proportion who reported they had tried to quit smoking for one day or longer in the past 12 months.

Table 11B: Current Smokers Who Attempted to Quit by Population Group		
	Tried to Quit in Past Year ^a	
	%	95% C.I.
Upper Peninsula	58.7	(50.8, 66.6)
Age		
<i>18-39</i>	60.1	(42.1, 78.2)
<i>40-65</i>	59.2	(51.7, 66.7)
<i>65+</i>	52.7	(41.4, 64.0)
Gender		
<i>Male</i>	57.1	(44.5, 69.7)
<i>Female</i>	60.0	(50.1, 70.0)
Educational Attainment		
<i>Less than 12th grade</i>	38.8	(13.3, 64.2)
<i>High School Graduate</i>	59.8	(49.9, 69.6)
<i>1-3 years of college</i>	64.6	(52.4, 76.7)
<i>4 year degree or higher</i>	61.0	(41.1, 80.9)
Household Income		
<i>Less than \$25,000</i>	52.5	(39.1, 65.9)
<i>\$25,000 to \$49,999</i>	61.0	(49.6, 72..4)
<i>\$50,000 or higher</i>	67.4	(54.5, 80.4)
^a Among current smokers, the proportion who reported they had tried to quit smoking for one day or longer in the past 12 months.		

Table 12A: Other Tobacco Products by County

	Smokeless Tobacco Use (Chew) ^a	Vaping or E-Cigarette Use ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	3.6 (3.2, 4.1)	4.9 (4.4, 5.5)
Upper Peninsula	5.2 (3.2, 7.3)	3.8 (2.1, 5.6)
Alger	4.6 (0.8, 8.3)	1.3 (0.0, 3.1)
Baraga	10.9 (2.6, 19.2)	3.6 (0.5, 6.7)
Chippewa	3.4 (0.0, 6.9)	1.5 (0.0, 3.5)
Delta	4.2 (0.0, 10.1)	1.1 (0.07, 2.0)
Dickinson	1.7 (0.0, 3.9)	2.2 (0.0, 5.2)
Gogebic	3.2 (0.5, 5.9)	3.1 (0.0, 7.1)
Houghton/Keweenaw	2.3 (0.1, 4.5)	8.6 (0.0, 18.7)
Iron	4.0 (0.0, 8.2)	4.3 (0.7, 7.9)
Luce	8.2 (0.4, 16.1)	7.0 (0.0, 14.7)
Mackinac	8.2 (0.0, 23.0)	2.4 (0.0, 4.8)
Marquette	6.7 (1.1, 12.3)	5.2 (0.2, 10.2)
Menominee	12.1 (0.0, 25.3)	4.3 (0.0, 9.0)
Ontonagon	5.7 (2.3, 9.2)	2.2 (0.0, 5.4)
Schoolcraft	2.3 (0.0, 5.0)	1.5 (0.1, 2.9)

^a Among all adults, the proportion who reported they currently use chewing tobacco, snuff or snus, either every day or on some days.

^b Among all adults, the proportion who reported they currently use e-cigarettes or vaping, either every day or on some days.

Table 12B: Other Tobacco Products by Population Group		
	Smokeless Tobacco Use (Chew) ^a	Vaping or E-Cigarette Use ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	5.2 (3.2, 7.3)	3.8 (2.1, 5.6)
Age		
<i>18-39</i>	8.9 (3.1, 14.6)	6.8 (1.6, 12.0)
<i>40-64</i>	3.9 (2.0, 5.7)	3.3 (1.6, 5.0)
<i>65+</i>	2.1 (0.9, 3.3)	1.0 (0.4, 1.6)
Gender		
<i>Male</i>	10.5 (6.4, 14.6)	5.5 (2.0, 8.9)
<i>Female</i>	0.2 (0.0, 0.4)	2.3 (1.2, 3.4)
Educational Attainment		
<i>Less than 12th grade</i>	9.1 (0.0, 20.0)	14.0 (1.3, 26.7)
<i>High School Graduate</i>	8.5 (4.2, 12.9)	2.1 (1.0, 3.3)
<i>1-3 years of college</i>	1.7 (0.9, 2.5)	4.4 (1.0, 7.7)
<i>4 year degree or higher</i>	1.6 (0.1, 3.1)	1.0 (0.0, 2.6)
Household Income		
<i>Less than \$25,000</i>	6.9 (1.9, 12.0)	6.2 (1.6, 10.8)
<i>\$25,000 to \$49,999</i>	5.1 (1.3, 9.0)	3.1 (1.2, 4.9)
<i>\$50,000 or higher</i>	4.2 (1.5, 7.0)	3.2 (0.3, 6.0)
^a Among all adults, the proportion who reported they currently use chewing tobacco, snuff or snus, either every day or on some days.		
^b Among all adults, the proportion who reported they currently use e-cigarettes or vaping, either every day or on some days.		

Table 13A: Fruit and Vegetable Consumption by County

	5 or More Daily Servings Fruits and Vegetables ^a	
	%	95% C.I.
Michigan	14.4	(13.5, 15.3)
Upper Peninsula	10.6	(8.6, 12.5)
Alger	7.7	(4.3, 11.0)
Baraga	6.9	(3.6, 10.2)
Chippewa	17.2	(5.8, 28.7)
Delta	5.2	(2.4, 8.0)
Dickinson	5.1	(2.6, 7.6)
Gogebic	14.0	(7.8, 20.1)
Houghton/Keweenaw	10.7	(6.4, 15.0)
Iron	8.0	(4.6, 11.5)
Luce	10.1	(5.2, 15.0)
Mackinac	11.4	(5.2, 17.6)
Marquette	14.5	(9.3, 19.7)
Menominee	6.5	(3.2, 9.8)
Ontonagon	7.4	(4.7, 10.0)
Schoolcraft	9.1	(4.6, 13.6)

^a Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables averaged five or more times per day in the past 7 days. Statewide estimates are from the 2015 Michigan BRFSS.

Table 13B: Fruit and Vegetable Consumption by Population Group		
	5 or More Daily Servings Fruits and Vegetables^b	
	%	95% C.I.
Upper Peninsula	10.6	(8.6, 12.5)
Age		
<i>18-39</i>	10.8	(5.6, 15.9)
<i>40-65</i>	9.6	(7.4, 11.7)
<i>65+</i>	12.1	(9.9, 14.4)
Gender		
<i>Male</i>	7.2	(4.1, 10.3)
<i>Female</i>	13.8	(11.3, 16.2)
Educational Attainment		
<i>Less than 12th grade</i>	5.3	(1.4, 9.2)
<i>High School Graduate</i>	9.2	(5.4, 12.9)
<i>1-3 years of college</i>	10.9	(7.8, 14.0)
<i>4 year degree or higher</i>	17.0	(13.1, 20.8)
Household Income		
<i>Less than \$25,000</i>	8.6	(5.6, 11.5)
<i>\$25,000 to \$49,999</i>	9.1	(6.5, 11.7)
<i>\$50,000 or higher</i>	12.8	(9.0, 16.6)
^a Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables averaged five or more times per day in the past 7 days.		

Table 14A: Physical Activity by County		
	No Leisure-Time Physical Activity ^a	
	%	95% C.I.
Michigan	23.9	(22.9, 24.9)
Upper Peninsula	14.6	(12.4, 16.8)
Alger	13.6	(8.5, 18.7)
Baraga	12.2	(6.9, 17.5)
Chippewa	20.8	(11.2, 30.5)
Delta	11.6	(7.1, 16.1)
Dickinson	14.8	(8.1, 21.5)
Gogebic	17.3	(11.2, 23.4)
Houghton/Keweenaw	9.9	(5.1, 14.7)
Iron	17.8	(12.3, 23.3)
Luce	15.9	(10.3, 21.5)
Mackinac	14.1	(7.9, 20.3)
Marquette	13.5	(7.1, 19.8)
Menominee	16.9	(9.4, 24.4)
Ontonagon	14.4	(8.1, 20.8)
Schoolcraft	19.8	(12.0, 27.6)

^a Among all adults, the proportion who reported not participating in any leisure-time physical activities or exercises, such as running, biking, golf, gardening, or walking for exercise during the past month.

Table 14B: Physical Activity by Population Group		
	No Leisure-Time Physical Activity ^a	
	%	95% C.I.
Upper Peninsula	14.6	(12.4, 16.8)
Age		
<i>18-39</i>	7.4	(2.5, 12.4)
<i>40-65</i>	14.9	(11.8, 17.9)
<i>65+</i>	24.1	(21.1, 27.1)
Gender		
<i>Male</i>	17.0	(13.1, 20.8)
<i>Female</i>	12.3	(10.0, 14.7)
Educational Attainment		
<i>Less than 12th grade</i>	29.2	(17.5, 40.9)
<i>High School Graduate</i>	16.9	(13.6, 20.3)
<i>1-3 years of college</i>	12.9	(9.0, 16.9)
<i>4 year degree or higher</i>	3.8	(2.8, 4.9)
Household Income		
<i>Less than \$25,000</i>	22.7	(17.5, 27.8)
<i>\$25,000 to \$49,999</i>	13.3	(10.1, 16.4)
<i>\$50,000 or higher</i>	10.4	(7.0, 13.9)
^a Among all adults, the proportion who reported not participating in any leisure-time physical activities or exercises, such as running, biking, golf, gardening, or walking for exercise during the past month.		

Table 15A: Motor Vehicle Safety by County		
	Always Uses Seat Belt ^a	Drove Motor Vehicle After Drinking ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	88.9 (88.0, 89.6)	3.6 (3.0, 4.3)
Upper Peninsula	86.7 (84.2, 89.3)	6.5 (4.5, 8.4)
Alger	85.4 (79.2, 91.6)	4.3 (1.4, 7.2)
Baraga	78.2 (66.0, 90.4)	17.1 (8.1, 26.1)
Chippewa	89.8 (83.3, 96.3)	8.3 (2.3, 14.4)
Delta	88.4 (83.1, 93.6)	7.2 (1.4, 13.0)
Dickinson	87.7 (81.1, 94.3)	5.6 (1.2, 10.0)
Gogebic	88.0 (81.8, 94.1)	4.2 (1.0, 7.4)
Houghton/Keweenaw	82.6 (72.1, 93.0)	4.9 (0.4, 9.3)
Iron	84.5 (75.8, 93.2)	8.5 (2.4, 14.6)
Luce	85.1 (76.9, 93.3)	6.9 (1.9, 11.9)
Mackinac	89.3 (82.9, 95.7)	5.0 (0.2, 9.8)
Marquette	89.9 (84.2, 95.6)	4.2 (0.4, 8.0)
Menominee	81.8 (68.8, 94.8)	12.2 (0.0, 25.7)
Ontonagon	81.4 (73.9, 88.9)	4.4 (1.7, 7.1)
Schoolcraft	83.2 (71.2, 95.1)	3.1 (0.5, 5.6)

^a Among all adults who reported driving or riding in a car or truck, the proportion who reported always using a seatbelt when driving or riding in a car or truck.

^b Among adults who reported drinking at least one drink in the past month, the proportion who reported they drove when they had too much to drink at least once in the past month.

Table 15B: Motor Vehicle Safety by Population Group		
	Always Uses Seat Belt ^a	Drove Motor Vehicle After Drinking ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	86.7 (84.2, 89.3)	6.5 (4.5, 8.4)
Age		
<i>18-39</i>	82.0 (75.2, 88.8)	6.3 (1.6, 11.0)
<i>40-64</i>	88.9 (86.3, 91.4)	7.4 (5.0, 9.8)
<i>65+</i>	88.9 (86.4, 91.4)	4.8 (1.9, 7.7)
Gender		
<i>Male</i>	80.9 (76.3, 85.5)	7.1 (4.1, 10.1)
<i>Female</i>	92.2 (89.9, 94.6)	5.8 (3.4, 8.2)
Educational Attainment		
<i>Less than 12th grade</i>	84.1 (75.5, 92.6)	7.1 (0.0, 18.1)
<i>High School Graduate</i>	84.3 (79.2, 89.3)	8.2 (4.1, 12.4)
<i>1-3 years of college</i>	89.3 (85.8, 92.8)	5.1 (2.7, 7.4)
<i>4 year degree or higher</i>	88.3 (84.6, 91.9)	5.8 (3.4, 8.2)
Household Income		
<i>Less than \$25,000</i>	90.2 (87.1, 93.4)	10.0 (2.3, 17.8)
<i>\$25,000 to \$49,999</i>	84.7 (79.4, 90.0)	6.7 (3.6, 9.8)
<i>\$50,000 or higher</i>	86.1 (82.0, 90.3)	5.5 (3.4, 7.6)
<p>^a Among all adults who reported driving or riding in a car or truck, the proportion who reported always using a seatbelt when driving or riding in a car or truck.</p> <p>^b Among adults who reported drinking at least one drink in the past month, the proportion who reported they drove when they had too much to drink at least once in the past month.</p>		

Table 16A: Hypertension Awareness and Medication Use by County		
	Ever Told High Blood Pressure ^a	Taking Blood Pressure Medication ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	33.1 (31.9, 34.3)	78.1 (76.2, 79.9)
Upper Peninsula	40.8 (37.8, 43.9)	83.1 (80.0, 86.2)
Alger	44.8 (36.5, 53.0)	83.7 (73.5, 93.9)
Baraga	51.9 (40.7, 63.1)	69.1 (56.1, 82.1)
Chippewa	40.6 (30.0, 51.2)	90.5 (84.1, 96.9)
Delta	38.7 (29.8, 47.6)	90.1 (84.2, 96.1)
Dickinson	44.2 (35.5, 52.8)	83.6 (74.8, 92.3)
Gogebic	52.3 (44.1, 60.6)	68.7(57.4, 80.0)
Houghton/Keweenaw	36.4 (27.7, 45.0)	80.7 (68.8, 92.6)
Iron	53.7 (45.2, 62.1)	87.4 (80.8, 94.0)
Luce	47.0 (38.2, 55.8)	91.7 (86.8, 96.5)
Mackinac	45.2 (32.8, 57.6)	79.7 (68.0, 91.4)
Marquette	33.9 (26.1, 41.7)	77.3 (66.3, 88.3)
Menominee	37.9 (28.1, 47.7)	92.6 (86.8, 98.5)
Ontonagon	53.0 (46.0, 59.9)	83.2 (77.2, 89.2)
Schoolcraft	55.0 (45.5, 64.6)	84.0 (74.9, 93.0)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered not to have been diagnosed.

^b Among adults who were ever told they had HBP, the proportion that reported they were currently taking blood pressure medicines for their HBP.

Statewide estimates are from the 2015 Michigan BRFS.

Table 16B: Hypertension Awareness and Medication Use by Population Group		
	Ever Told High Blood Pressure^a	Taking Blood Pressure Medication^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	40.8 (37.8, 43.9)	83.1 (80.0, 86.2)
Age		
<i>18-39</i>	13.6 (8.0, 19.1)	65.7 (47.1, 84.2)
<i>40-64</i>	45.9 (42.0, 49.9)	77.9 (73.1, 82.8)
<i>65+</i>	68.1 (65.0, 71.2)	94.2 (92.6, 95.9)
Gender		
<i>Male</i>	45.5 (40.1, 50.9)	84.0 (79.3, 88.7)
<i>Female</i>	36.4 (33.1, 39.6)	82.1 (78.3, 85.9)
Educational Attainment		
<i>Less than 12th grade</i>	56.5 (43.2, 69.7)	97.4 (95.0, 99.7)
<i>High School Graduate</i>	44.5 (39.2, 49.8)	87.7 (83.5, 91.9)
<i>1-3 years of college</i>	37.2 (32.3, 42.2)	74.8 (68.4, 81.3)
<i>4 year degree or higher</i>	29.1 (25.1, 33.2)	73.9 (66.7, 81.1)
Household Income		
<i>Less than \$25,000</i>	45.1 (39.0, 51.2)	86.7 (82.3, 91.1)
<i>\$25,000 to \$49,999</i>	45.4 (39.7, 51.1)	87.8 (83.5, 92.2)
<i>\$50,000 or higher</i>	34.6 (29.9, 39.3)	76.0 (69.5, 82.4)
<p>^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered not to have been diagnosed.</p> <p>^b Among adults who were ever told they had HBP, the proportion that reported they were cur-</p>		

Table 17A: Cholesterol Screening by County		
	Cholesterol Ever Checked ^a	Ever Told High Cholesterol ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	79.2 (77.9, 80.3)	38.2 (36.8, 39.5)
Upper Peninsula	77.6 (74.2, 81.0)	50.1 (46.7, 53.5)
Alger	78.4 (69.4, 87.3)	49.0 (40.9, 57.2)
Baraga	69.9 (57.0, 82.8)	48.9 (39.3, 58.6)
Chippewa	67.6 (54.5, 80.6)	54.1 (42.9, 65.3)
Delta	78.6 (69.7, 87.5)	58.2 (48.5, 67.9)
Dickinson	86.4 (78.8, 93.9)	50.6 (41.6, 59.7)
Gogebic	84.1 (77.9, 90.4)	55.5 (46.4, 64.6)
Houghton/Keweenaw	71.7 (60.9, 82.6)	42.5 (33.2, 51.8)
Iron	85.8 (78.8, 92.8)	61.2 (53.2, 69.2)
Luce	83.8 (76.7, 91.0)	58.8 (49.2, 68.4)
Mackinac	83.5 (75.8, 91.3)	48.1 (34.3, 62.0)
Marquette	74.0 (64.8, 83.2)	44.1 (34.7, 53.4)
Menominee	89.1 (82.6, 95.6)	46.6 (34.5, 58.8)
Ontonagon	75.4 (67.7, 83.1)	56.9 (50.7, 63.1)
Schoolcraft	85.7 (79.0, 92.5)	55.2 (44.9, 65.5)

^a Among all adults, the proportion who reported ever having their blood cholesterol checked. Statewide estimates the proportion who reported ever having their blood cholesterol checked in the past five years.

^b Among adults who ever had their blood cholesterol checked, the proportion who reported a doctor, nurse, or health professional told them their cholesterol was high.

Statewide estimates are from the 2015 Michigan BRFs.

Table 17B: Cholesterol Screening by Population Group		
	Cholesterol Ever Checked ^a	Ever Told High Cholesterol ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	77.6 (74.2, 81.0)	50.1 (46.7, 53.5)
Age		
<i>18-39</i>	50.7 (42.2, 59.1)	22.1 (12.7, 31.5)
<i>40-64</i>	88.3 (85.6, 91.0)	52.1 (48.0, 56.3)
<i>65+</i>	95.2 (93.8, 96.6)	67.0 (63.9, 70.1)
Gender		
<i>Male</i>	76.8 (70.9, 82.7)	53.8 (48.0, 59.6)
<i>Female</i>	78.4 (74.9, 82.0)	46.7 (42.9, 50.5)
Educational Attainment		
<i>Less than 12th grade</i>	65.4 (51.1, 79.6)	69.5 (57.9, 81.1)
<i>High School Graduate</i>	75.2 (69.2, 81.2)	52.4 (46.8, 58.1)
<i>1-3 years of college</i>	80.7 (75.4, 86.0)	47.8 (41.8, 53.7)
<i>4 year degree or higher</i>	83.7 (79.5, 87.9)	40.2 (34.9, 45.5)
Household Income		
<i>Less than \$25,000</i>	65.2 (58.2, 72.1)	52.8 (46.0, 59.5)
<i>\$25,000 to \$49,999</i>	79.4 (73.8, 85.0)	54.6 (48.2, 60.9)
<i>\$50,000 or higher</i>	83.5 (78.1, 88.9)	45.5 (40.4, 50.7)
^a Among all adults, the proportion who reported ever having their blood cholesterol checked. ^b Among adults who ever had their blood cholesterol checked, the proportion who reported a doctor, nurse, or health professional told them their cholesterol was high.		

Table 18A: Asthma by County		
	Lifetime Asthma Prevalence ^a	Current Asthma Prevalence ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	16.3 (15.4, 17.2)	10.9 (10.2, 11.7)
Upper Peninsula	17.8 (15.2, 20.5)	11.2 (9.3, 13.1)
Alger	18.2 (10.7, 25.7)	10.3 (5.1, 15.4)
Baraga	8.6 (4.9, 12.3)	6.4 (3.3, 9.6)
Chippewa	13.2 (7.1, 19.3)	9.6 (4.5, 14.8)
Delta	15.5 (9.5, 21.6)	8.7 (4.2, 13.1)
Dickinson	17.5 (11.2, 23.7)	11.6 (6.5, 16.7)
Gogebic	15.7 (8.8, 22.6)	8.2 (2.8, 13.6)
Houghton/Keweenaw	19.9 (9.5, 30.3)	8.5 (4.3, 12.8)
Iron	17.8 (11.7, 23.9)	15.1 (9.3, 20.9)
Luce	16.7 (11.1, 22.3)	11.7 (7.1, 16.3)
Mackinac	24.6 (9.3, 39.8)	6.5 (2.8, 10.3)
Marquette	22.9 (15.3, 30.5)	15.8 (9.4, 22.2)
Menominee	12.2 (6.2, 18.3)	10.5 (4.6, 16.4)
Ontonagon	16.2 (11.9, 20.6)	10.2 (6.9, 13.6)
Schoolcraft	18.9 (11.6, 26.2)	15.7 (8.7, 22.8)
<p>^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had asthma.</p> <p>^b Among all adults, the proportion who reported they still have asthma.</p>		

Table 18B: Asthma by Population Group		
	Lifetime Asthma Prevalence ^a	Current Asthma Prevalence ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	17.8 (15.2, 20.5)	11.2 (9.3, 13.1)
Age		
<i>18-39</i>	19.7 (12.9, 26.5)	9.7 (5.3, 14.0)
<i>40-64</i>	18.4 (15.3, 21.5)	12.8 (10.1, 15.5)
<i>65+</i>	13.3 (11.1, 15.5)	9.7 (7.8, 11.5)
Gender		
<i>Male</i>	17.3 (12.6, 21.9)	10.1 (6.9, 13.2)
<i>Female</i>	18.4 (15.8, 21.0)	12.3 (10.0, 14.5)
Educational Attainment		
<i>Less than 12th grade</i>	23.4 (11.5, 35.4)	13.8 (7.0, 20.7)
<i>High School Graduate</i>	16.5 (12.1, 20.9)	9.9 (7.4, 12.4)
<i>1-3 years of college</i>	17.9 (13.5, 22.3)	11.9 (7.9, 15.8)
<i>4 year degree or higher</i>	17.6 (13.6, 21.6)	10.7 (7.5, 13.9)
Household Income		
<i>Less than \$25,000</i>	21.3 (15.9, 26.7)	14.1 (10.5, 17.8)
<i>\$25,000 to \$49,999</i>	16.5 (11.1, 21.9)	8.5 (6.0, 11.1)
<i>\$50,000 or higher</i>	16.2 (12.6, 19.9)	10.5 (7.3, 13.7)
^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had asthma. ^b Among all adults, the proportion who reported they still have asthma.		

Table 19A: Diabetes by County		
	Ever Told Diabetes ^a	
	%	95% C.I.
Michigan	11.2	(10.5, 11.8)
Upper Peninsula	11.0	(9.3, 12.7)
Alger	13.0	(8.0, 17.9)
Baraga	12.8	(7.8, 17.8)
Chippewa	13.7	(8.0, 19.5)
Delta	15.7	(7.7, 23.7)
Dickinson	8.8	(4.4, 13.3)
Gogebic	15.6	(9.6, 21.6)
Houghton/Keweenaw	7.9	(4.8, 11.1)
Iron	12.5	(7.6, 17.5)
Luce	14.3	(8.7, 19.9)
Mackinac	6.2	(3.1, 9.3)
Marquette	8.4	(4.7, 12.1)
Menominee	10.1	(5.8, 14.5)
Ontonagon	15.8	(11.1, 20.4)
Schoolcraft	11.4	(7.3, 15.5)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had diabetes. Adults told they have prediabetes, borderline diabetes, and women who had diabetes only during pregnancy were classified as not having been diagnosed.

Table 19B: Diabetes by Population Group		
	Ever Told Diabetes ^a	
	%	95% C.I.
Upper Peninsula	11.0	(9.3, 12.7)
Age		
<i>18-39</i>	1.7	(0.03, 3.4)
<i>40-65</i>	13.2	(10.2, 16.2)
<i>65+</i>	19.6	(16.9, 22.4)
Gender		
<i>Male</i>	13.4	(10.4, 16.5)
<i>Female</i>	8.7	(7.2, 10.3)
Educational Attainment		
<i>Less than 12th grade</i>	22.3	(11.3, 33.3)
<i>High School Graduate</i>	11.3	(9.0, 13.5)
<i>1-3 years of college</i>	10.3	(7.5, 13.0)
<i>4 year degree or higher</i>	5.3	(3.9, 6.6)
Household Income		
<i>Less than \$25,000</i>	15.6	(12.3, 18.9)
<i>\$25,000 to \$49,999</i>	13.7	(9.5, 17.9)
<i>\$50,000 or higher</i>	6.5	(4.7, 8.4)
^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had diabetes. Adults told they have prediabetes, borderline diabetes, and women who had diabetes only during pregnancy were classified as not having been diagnosed.		

Table 20A: Cardiovascular Disease by County			
	Ever Told Heart Attack ^a	Ever Told Heart Disease ^b	Ever Told Stroke ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	5.0 (4.5, 5.4)	5.1 (4.7, 5.6)	3.5 (3.2, 3.9)
Upper Peninsula	5.8 (4.4, 7.1)	9.6 (8.0, 11.1)	3.2 (2.4, 4.0)
Alger	3.8 (1.5, 6.2)	10.9 (6.6, 15.2)	2.8 (0.0, 5.7)
Baraga	7.2 (3.3, 11.0)	8.2 (4.3, 12.0)	1.8 (0.1, 3.6)
Chippewa	7.3 (3.1, 11.5)	10.4 (5.2, 15.6)	4.2 (1.3, 7.2)
Delta	9.5 (1.7, 17.2)	12.4 (4.6, 20.3)	4.2 (1.3, 7.1)
Dickinson	5.8 (2.0, 9.6)	9.0 (4.7, 13.3)	1.5 (0.5, 2.5)
Gogebic	7.0 (2.5, 11.4)	12.8 (7.0, 18.5)	4.8 (0.7, 9.0)
Houghton/Kew.	3.9 (1.7, 6.1)	8.8 (5.1, 12.4)	1.9 (0.6, 3.2)
Iron	9.3 (4.9, 13.7)	14.4 (9.2, 19.6)	4.2 (1.7, 6.6)
Luce	8.4 (4.4, 12.5)	12.3 (7.3, 17.3)	2.3 (1.0, 3.7)
Mackinac	3.9 (1.4, 6.4)	8.9 (5.1, 12.7)	7.5 (0.0, 17.3)
Marquette	3.2 (1.2, 5.2)	7.3 (4.0, 10.6)	2.4 (0.7, 4.2)
Menominee	4.8 (1.5, 8.1)	7.8 (3.8, 11.8)	3.8 (0.8, 6.8)
Ontonagon	7.5 (4.7, 10.3)	12.1 (8.6, 15.5)	3.0 (1.5, 4.4)
Schoolcraft	8.3 (3.4, 13.3)	7.8 (4.7, 11.0)	2.7 (0.7, 4.8)

Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had...

^a Heart attack or myocardial infarction.

^b Heart disease. The Michigan estimate represents the proportion of respondents who reported ever being told they had angina or coronary heart disease.

^c Stroke.

Table 20B: Cardiovascular Disease by Population Group

	Ever Told Heart Attack ^a	Ever Told Heart Disease ^b	Ever Told Stroke ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	5.8 (4.4, 7.1)	9.6 (8.0, 11.1)	3.2 (2.4, 4.0)
Age			
<i>18-39</i>	0.04 (0.0, 0.1)	0.02 (0.0, 0.07)	1.3 (0.0, 2.8)
<i>40-64</i>	6.9 (4.2, 9.6)	9.8 (6.9, 12.7)	3.0 (1.9, 4.2)
<i>65+</i>	11.8 (9.6, 13.9)	22.0 (19.1, 25.0)	6.4 (4.6, 8.3)
Gender			
<i>Male</i>	9.2 (6.6, 11.8)	13.0 (10.0, 16.0)	3.8 (2.4, 5.3)
<i>Female</i>	2.5 (1.8, 3.2)	6.2 (5.0, 7.5)	2.6 (1.7, 3.5)
Educational Attainment			
<i>Less than 12th grade</i>	15.8 (5.1, 26.6)	24.0 (12.7, 32.3)	5.8 (2.1, 9.5)
<i>High School Graduate</i>	6.1 (4.5, 7.8)	9.8 (7.7, 11.9)	3.8 (2.2, 5.4)
<i>1 to 3 years of college</i>	4.4 (2.8, 5.9)	7.2 (5.1, 9.3)	2.5 (1.3, 3.7)
<i>4 year degree or higher</i>	2.2 (1.3, 3.0)	4.9 (3.6, 6.3)	1.7 (0.5, 2.8)
Household Income			
<i>Less than \$25,000</i>	8.2 (5.9, 10.6)	12.0 (9.3, 14.8)	6.8 (4.2, 9.3)
<i>\$25,000 to \$49,999</i>	7.1 (3.5, 10.7)	11.7 (7.8, 15.7)	3.2 (1.9, 4.6)
<i>\$50,000 or higher</i>	3.4 (2.0, 4.8)	6.4 (4.5, 8.3)	1.3 (0.4, 2.2)

Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had a...

^a Heart attack or myocardial infarction.

^b Heart disease.

^c Stroke.

Table 21A: Cancer by County			
	Ever Told Skin Cancer ^a	Ever Told Any Other Cancer Type ^b	Ever Told Cancer ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	5.8 (5.4, 6.3)	8.3 (7.8, 8.9)	12.8 (12.1, 13.5)
Upper Peninsula	6.3 (5.4, 7.3)	8.4 (7.2, 9.6)	13.3 (11.8, 14.8)
Alger	6.1 (3.0, 7.5)	9.1 (4.6, 13.5)	13.0 (8.1, 17.9)
Baraga	4.6 (2.0, 7.1)	11.0 (4.1, 17.8)	14.4 (7.3, 21.6)
Chippewa	5.0 (2.1, 7.9)	7.1 (3.6, 10.7)	11.4 (6.7, 16.1)
Delta	6.5 (3.1, 9.9)	9.4 (5.0, 13.8)	14.8 (9.4, 20.2)
Dickinson	8.2 (4.5, 11.9)	6.3 (3.7, 9.0)	13.2 (8.8, 17.7)
Gogebic	6.7 (3.5, 9.9)	6.5 (2.5, 10.5)	12.3 (7.3, 17.2)
Houghton/Kew.	5.0 (2.6, 7.5)	6.9 (4.1, 9.7)	11.2 (7.4, 15.1)
Iron	10.0 (6.5, 13.5)	10.4 (6.1, 14.7)	19.0 (13.6, 24.4)
Luce	6.9 (3.8, 10.0)	6.6 (4.0, 9.2)	12.1 (8.2, 16.0)
Mackinac	11.4 (6.6, 16.2)	9.4 (5.3, 13.5)	17.6 (11.4, 23.7)
Marquette	4.7 (2.5, 6.9)	7.7 (4.6, 10.9)	10.8 (7.2, 14.5)
Menominee	7.0 (3.6, 10.4)	10.3 (5.9, 14.8)	15.2 (9.7, 20.7)
Ontonagon	9.0 (6.3, 11.7)	14.6 (10.4, 18.8)	21.5 (16.7, 26.2)
Schoolcraft	10.1 (6.0, 14.2)	12.6 (7.5, 17.7)	20.5 (14.1, 26.8)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had skin cancer.

^b Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had a form of cancer other than skin cancer.

^c Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had skin cancer or any other type of cancer.

Table 21B: Cancer by Population Group			
	Ever Told Skin Cancer ^a	Ever Told Any Other Cancer Type ^b	Ever Told Cancer ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	6.3 (5.4, 7.3)	8.4 (7.2, 9.6)	13.3 (11.8, 14.8)
Age			
<i>18-39</i>	0.5 (0.0, 1.1)	1.5 (0.3, 2.8)	2.1 (0.7, 3.5)
<i>40-64</i>	5.4 (3.9, 6.9)	8.0 (6.1, 9.9)	12.5 (10.2, 14.8)
<i>65+</i>	16.4 (14.0, 18.9)	18.4 (15.9, 20.9)	30.4 (27.3, 33.4)
Gender			
<i>Male</i>	7.4 (5.8, 9.1)	7.7 (5.8, 9.6)	13.3 (10.8, 15.7)
<i>Female</i>	5.2 (4.2, 6.2)	9.0 (7.5, 10.5)	13.3 (11.5, 15.1)
Educational Attainment			
<i>Less than 12th grade</i>	5.0 (1.3, 8.8)	6.3 (2.9, 9.7)	10.4 (5.3, 15.5)
<i>High School Graduate</i>	5.9 (4.4, 7.5)	8.6 (6.8, 10.5)	13.2 (10.8, 15.5)
<i>1 to 3 years of college</i>	6.1 (4.4, 7.7)	8.6 (6.3, 10.9)	13.4 (10.7, 16.2)
<i>4 year degree or higher</i>	8.6 (6.6, 10.7)	7.5 (5.7, 9.2)	14.0 (11.5, 16.6)
Household Income			
<i>Less than \$25,000</i>	4.3 (2.9, 5.6)	9.8 (7.4, 12.2)	12.8 (10.0, 15.5)
<i>\$25,000 to \$49,999</i>	7.0 (5.2, 8.8)	9.1 (7.0, 11.1)	14.5 (11.8, 17.2)
<i>\$50,000 or higher</i>	6.9 (5.3, 8.6)	6.9 (5.0, 8.7)	12.4 (10.0, 14.8)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had skin cancer.

^b Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had a form of cancer other than skin cancer.

^c Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had skin cancer or any other type of cancer.

Table 22A: Chronic Pulmonary Disease by County		
	Ever Told COPD, CLRD, or Chronic Bronchitis ^a	
	%	95% C.I.
Michigan	8.9	(8.3, 9.6)
Upper Peninsula	7.7	(6.5, 8.9)
Alger	11.7	(6.5, 16.8)
Baraga	7.1	(3.6, 10.5)
Chippewa	7.3	(3.5, 11.0)
Delta	6.9	(3.0, 10.8)
Dickinson	8.5	(4.2, 12.7)
Gogebic	8.0	(3.5, 12.6)
Houghton/Keweenaw	5.5	(3.1, 7.8)
Iron	17.8	(11.8, 23.9)
Luce	10.9	(5.0, 16.7)
Mackinac	9.1	(5.1, 13.1)
Marquette	5.2	(2.6, 7.8)
Menominee	10.9	(5.2, 16.7)
Ontonagon	8.9	(5.9, 12.0)
Schoolcraft	10.6	(5.9, 15.2)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had chronic obstructive pulmonary disease (COPD), chronic lower respiratory disease (CLRD), emphysema, or chronic bronchitis.

Table 22B: Chronic Pulmonary Disease by Population Group		
	Ever Told COPD, CLRD, or Chronic Bronchitis ^a	
	%	95% C.I.
Upper Peninsula	7.7	(6.5, 8.9)
Age		
<i>18-39</i>	1.0	(0.0, 2.2)
<i>40-65</i>	8.2	(6.4, 10.1)
<i>65+</i>	15.8	(13.1, 18.4)
Gender		
<i>Male</i>	8.2	(6.2, 10.1)
<i>Female</i>	7.3	(5.9, 8.7)
Educational Attainment		
<i>Less than 12th grade</i>	18.6	(10.6, 26.6)
<i>High School Graduate</i>	8.2	(6.4, 10.0)
<i>1-3 years of college</i>	6.3	(4.7, 7.9)
<i>4 year degree or higher</i>	2.4	(1.6, 3.3)
Household Income		
<i>Less than \$25,000</i>	14.0	(10.8, 17.2)
<i>\$25,000 to \$49,999</i>	9.0	(6.8, 11.3)
<i>\$50,000 or higher</i>	3.0	(1.8, 4.2)
^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had chronic obstructive pulmonary disease (COPD), chronic lower respiratory disease (CLRD), emphysema, or chronic bronchitis.		

Table 23A: Activity Limited by Arthritis by County		
	Activity Limited by Arthritis^a	
	%	95% C.I.
Michigan	Not available	
Upper Peninsula	32.6	(29.7, 35.4)
Alger	39.4	(31.7, 47.1)
Baraga	29.2	(21.0, 37.4)
Chippewa	41.0	(30.1, 52.0)
Delta	35.8	(26.5, 45.1)
Dickinson	37.5	(28.9, 46.0)
Gogebic	30.6	(23.4, 37.8)
Houghton/Keweenaw	25.5	(18.6, 32.4)
Iron	37.8	(30.1, 45.6)
Luce	41.5	(32.6, 50.3)
Mackinac	40.6	(28.0, 53.3)
Marquette	26.8	(20.0, 33.6)
Menominee	26.5	(16.7, 36.4)
Ontonagon	33.0	(27.4, 38.7)
Schoolcraft	40.0	(31.0, 49.1)

^a Among all adults, the proportion who reported they were limited in their usual activities because of arthritis or joint symptoms. This question is not part of the statewide BFRS.

Table 23B: Activity Limited by Arthritis by Population Group

	Activity Limited by Arthritis ^a	
	%	95% C.I.
Upper Peninsula	32.6	(29.7, 35.4)
Age		
<i>18-39</i>	15.2	(9.5, 21.0)
<i>40-65</i>	38.4	(34.5, 42.2)
<i>65+</i>	45.4	(42.0, 48.7)
Gender		
<i>Male</i>	32.0	(27.3, 36.7)
<i>Female</i>	33.1	(29.8, 36.4)
Educational Attainment		
<i>Less than 12th grade</i>	52.5	(39.4, 68.7)
<i>High School Graduate</i>	35.4	(30.5, 40.3)
<i>1-3 years of college</i>	29.9	(25.5, 34.3)
<i>4 year degree or higher</i>	18.4	(15.2, 21.6)
Household Income		
<i>Less than \$25,000</i>	44.4	(38.2, 50.6)
<i>\$25,000 to \$49,999</i>	39.0	(33.2, 44.7)
<i>\$50,000 or higher</i>	21.4	(17.9, 24.9)
^a Among all adults, the proportion who reported they were limited in their usual activities because of arthritis or joint symptoms.		

Table 24A: Alzheimer’s Disease or Dementia by County

	Ever Told Alzheimer’s or Dementia ^a	Ever Recommended Alternative Living Arrangement for Declining Mental Capacity ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available
Upper Peninsula	0.6 (0.3, 0.8)	0.4 (0.2, 0.6)
Alger	0.8 (0.0, 2.0)	0.07 (0.0, 0.2)
Baraga	0.2 (0.0, 0.5)	0.1 (0.0, 0.3)
Chippewa	0.8 (0.0, 1.7)	0.8 (0.0, 2.0)
Delta	0.5 (0.0, 1.3)	0.6 (0.0, 1.2)
Dickinson	0.2 (0.0, 0.6)	0.5 (0.0, 1.0)
Gogebic	0.5 (0.0, 1.2)	0.8 (0.1, 1.4)
Houghton/Keweenaw	0.9 (0.0, 2.0)	0.2 (0.0, 0.5)
Iron	1.9 (0.0, 3.8)	1.4 (0.0, 3.3)
Luce	1.7 (0.0, 4.7)	0.4 (0.0, 1.1)
Mackinac	0.3 (0.0, 0.8)	0.03 (0.0, 0.08)
Marquette	0	0.1 (0.0, 0.3)
Menominee	0.2 (0.0, 0.7)	0.3 (0.0, 0.9)
Ontonagon	0.9 (0.07, 1.7)	0.5 (0.0, 1.1)
Schoolcraft	2.4 (0.0, 5.5)	0.7 (0.0, 1.5)

^a Among all adults, the proportion who reported they were told by a doctor, neurologist, psychiatrist, psychologist, or other health professional they had Alzheimer’s Disease or dementia.

^b Among all adults, the proportion who reported a doctor, social worker, or other professional recommended they move to a nursing home, long-term care facility, or other alternative living arrangement due to declining physical or mental capabilities.

These questions are not part of the statewide BRFSS.

Table 24B: Alzheimer’s Disease or Dementia by Population Group

	Ever Told Alzheimer’s or Dementia ^a	Ever Recommended Alternative Living Arrangement for Declining Mental Capacity ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	0.6 (0.3, 0.8)	0.4 (0.2, 0.6)
Age		
18-39	0	0.02 (0.0, 0.07)
40-64	0.3 (0.0, 0.5)	0.4 (0.02, 0.7)
65+	1.8 (0.9, 2.7)	1.0 (0.6, 1.5)
Gender		
Male	0.6 (0.2, 1.0)	0.4 (0.1, 0.7)
Female	0.5 (0.2, 0.9)	0.5 (0.2, 0.7)
Educational Attainment		
Less than 12th grade	2.0 (0.0, 4.1)	0.3 (0.0, 0.8)
High School Graduate	0.8 (0.4, 1.2)	0.3 (0.1, 0.6)
1-3 years of college	0.1 (0.02, 0.3)	0.6 (0.2, 1.1)
4 year degree or higher	0.09 (0.0, 0.2)	0.2 (0.03, 0.4)
Household Income		
Less than \$25,000	1.2 (0.4, 2.0)	0.8 (0.4, 1.3)
\$25,000 to \$49,999	0.5 (0.1, 0.8)	0.5 (0.03, 1.0)
\$50,000 or higher	0.2 (0.0, 0.4)	0.1 (0.0, 0.3)

^a Among all adults, the proportion who reported they were told by a doctor, neurologist, psychiatrist, psychologist, or other health professional they had Alzheimer’s Disease or dementia.

^b Among all adults, the proportion who reported a doctor, social worker, or other professional recommended they move to a nursing home, long-term care facility, or other alternative living arrangement due to declining physical or mental capabilities.

Table 25A: Immunization by County			
	Had a Flu Shot Past 12 Months (Age 18+) ^a	Had a Flu Shot Past 12 Months (Age 65+) ^b	Ever Had a Pneumonia Vaccine (Age 65+) ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	36.4 (35.3, 37.5)	56.1 (54.1, 58.0)	71.8 (70.0, 73.6)
Upper Peninsula	51.9 (48.6, 55.3)	76.9 (74.2, 79.7)	77.9 (74.8, 80.9)
Alger	55.6 (47.3, 63.8)	67.5 (58.5, 76.6)	72.3 (63.4, 81.1)
Baraga	45.1 (34.1, 56.1)	75.4 (64.9, 85.9)	78.9 (68.8, 89.1)
Chippewa	48.4 (36.6, 60.2)	81.5 (74.1, 89.0)	73.1 (63.1, 83.1)
Delta	45.9 (36.7, 55.0)	69.2 (58.1, 80.4)	73.0 (61.4, 84.6)
Dickinson	60.6 (52.0, 69.3)	82.5 (74.7, 90.3)	82.0 (73.8, 90.1)
Gogebic	53.1 (44.8, 61.4)	71.2 (62.2, 80.1)	73.2 (64.6, 81.9)
Houghton/Kew.	49.4 (39.3, 59.4)	78.2 (70.9, 85.6)	84.8 (78.7, 91.0)
Iron	56.0 (47.6, 64.4)	74.8 (66.9, 82.5)	80.0(73.7, 86.3)
Luce	54.8 (45.6, 63.9)	76.3 (67.9, 84.8)	82.6 (74.9, 90.3)
Mackinac	55.6 (43.7, 67.5)	78.4 (70.0, 86.8)	80.9 (72.9, 89.0)
Marquette	57.2 (48.0, 66.3)	82.2 (74.0, 90.4)	74.8 (61.2, 85.4)
Menominee	45.4 (34.1, 56.7)	78.5 (70.5, 86.6)	87.6 (81.1, 94.1)
Ontonagon	47.2 (40.6, 53.8)	73.2 (67.5, 78.9)	75.7 (69.2, 80.1)
Schoolcraft	47.0 (37.4, 56.6)	66.9 (57.7, 76.1)	76.0 (67.5, 84.4)

^a Among all adults, the proportion who reported they had a seasonal flu shot in the past 12 months.

^b Among adults aged 65 years and older, the proportion who reported they had a seasonal flu shot in the past 12 months.

^c Among adults 65 years and older, the proportion who reported they ever had a pneumonia or pneumococcal vaccine.

Table 25B: Immunization by Population Group			
	Had a Flu Shot Past 12 Months (Age 18+) ^a	Had a Flu Shot Past 12 Months (Age 65+) ^b	Ever Had a Pneumonia Vaccine (Age 65+) ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	51.9 (48.6, 55.3)	76.9 (74.2, 79.7)	77.9 (74.8, 80.9)
Age			
<i>18-39</i>	39.2 (30.9, 47.5)	—	—
<i>40-64</i>	48.3 (44.3, 52.2)	—	—
<i>65+</i>	76.9 (74.2, 79.7)	76.9 (74.2, 79.7)	77.9 (74.8, 80.9)
Gender			
<i>Male</i>	52.8 (47.1, 58.4)	78.0 (73.6, 82.4)	75.3 (70.2, 80.4)
<i>Female</i>	51.2 (47.5, 54.8)	75.9 (72.5, 79.2)	80.4 (77.0, 83.8)
Educational Attainment			
<i>Less than 12th grade</i>	53.0 (39.5, 66.5)	76.5 (65.3, 87.6)	73.4 (61.7, 85.2)
<i>High School Graduate</i>	51.8 (46.2, 57.4)	76.1 (72.3, 79.9)	79.6 (75.7, 83.4)
<i>1 to 3 years of college</i>	48.7 (43.0, 54.4)	78.0 (73.2, 82.9)	76.0 (69.9, 82.2)
<i>4 year degree or higher</i>	59.8 (54.8, 64.9)	78.1 (73.8, 82.3)	82.1 (78.2, 85.9)
Household Income			
<i>Less than \$25,000</i>	47.9 (41.5, 54.3)	72.9 (66.8, 79.0)	74.9 (68.5, 81.2)
<i>\$25,000 to \$49,999</i>	50.7 (44.8, 56.6)	76.7 (72.7, 80.7)	80.1 (76.2, 84.0)
<i>\$50,000 or higher</i>	55.0 (49.6, 60.4)	80.5 (75.7, 85.3)	78.7 (72.4, 85.1)
<p>^a Among all adults, the proportion who reported they had a seasonal flu shot in the past 12 months.</p> <p>^b Among adults aged 65 years and older, the proportion who reported they had a seasonal flu shot in the past 12 months.</p> <p>^c Among adults 65 years and older, the proportion who reported they ever had a pneumonia or pneumococcal vaccine.</p>			

Table 26A: Depression or Anxiety by County		
	Ever Told Depressive Disorder ^a	Ever Told Anxiety Disorder ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	22.0 (21.1, 23.0)	Not available
Upper Peninsula	25.6 (22.5, 28.7)	21.3 (18.4, 24.3)
Alger	27.7 (20.2, 35.2)	24.2 (14.1, 28.3)
Baraga	27.5 (15.9, 39.1)	18.6 (11.3, 25.8)
Chippewa	30.0 (19.6, 40.4)	22.9 (12.9, 32.9)
Delta	24.6 (16.8, 32.4)	26.6 (18.4, 34.9)
Dickinson	26.6 (18.7, 34.4)	19.2 (12.2, 26.2)
Gogebic	23.3 (16.1, 30.5)	23.0 (15.6, 30.3)
Houghton/Keweenaw	27.6 (16.8, 38.4)	17.8 (10.2, 25.4)
Iron	20.7 (14.8, 26.6)	18.1 (12.2, 24.1)
Luce	24.4 (17.1, 31.8)	24.6 (16.5, 32.8)
Mackinac	27.1 (16.1, 38.0)	20.8 (10.1, 31.4)
Marquette	27.2 (18.1, 36.3)	23.7 (14.8, 32.6)
Menominee	17.2 (10.0, 24.3)	12.1 (6.9, 17.3)
Ontonagon	17.9 (13.5, 22.3)	15.0 (10.8, 19.2)
Schoolcraft	23.2 (15.6, 30.9)	29.4 (17.8, 41.0)

^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had a depressive disorder including depression, major depression, dysthymia or minor depression.

^b Among all adults, the proportion who reported they were ever told by a doctor or mental health professional they had an anxiety disorder including generalized anxiety disorder, panic disorder, social anxiety disorder, or a specific phobia. This question is not part of the statewide BFRS.

Table 26B: Depression or Anxiety by Population Group		
	Ever Told Depressive Disorder ^a	Ever Told Anxiety Disorder ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	25.6 (22.5, 28.7)	21.3 (18.4, 24.3)
Age		
<i>18-39</i>	36.5 (28.2, 44.8)	32.5 (24.7, 40.4)
<i>40-64</i>	21.9 (19.0, 24.8)	18.6 (15.7, 21.4)
<i>65+</i>	17.7 (15.0, 20.4)	11.0 (9.2, 12.9)
Gender		
<i>Male</i>	21.0 (15.7, 26.3)	15.2 (10.6, 19.8)
<i>Female</i>	30.0 (26.4, 33.5)	27.2 (23.6, 30.8)
Educational Attainment		
<i>Less than 12th grade</i>	43.1 (29.5, 56.6)	29.5 (17.0, 42.0)
<i>High School Graduate</i>	26.1 (20.5, 31.6)	20.4 (15.4, 25.3)
<i>1-3 years of college</i>	23.7 (19.1, 28.3)	22.2 (17.4, 27.0)
<i>4 year degree or higher</i>	19.3 (15.3, 23.2)	17.4 (12.9, 21.8)
Household Income		
<i>Less than \$25,000</i>	37.6 (31.2, 44.1)	28.4 (22.6, 34.3)
<i>\$25,000 to \$49,999</i>	25.1 (19.5, 30.8)	20.8 (15.8, 25.8)
<i>\$50,000 or higher</i>	19.7 (14.9, 24.5)	18.1 (13.3, 22.9)
<p>^a Among all adults, the proportion who reported they were ever told by a doctor, nurse, or health professional they had a depressive disorder including depression, major depression, dysthymia or minor depression.</p> <p>^b Among all adults, the proportion who reported they were ever told by a doctor or mental health professional they had an anxiety disorder including generalized anxiety disorder, panic disorder, social anxiety disorder, or a specific phobia.</p>		

Table 27A: Mental Health Care Access by County			
	Contacted Crisis Line Past 12 Months ^a	Medication for Mood Past 12 Months ^b	Counseling Past 12 Months ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	Not available
Upper Peninsula	1.2 (0.5, 1.9)	24.0 (20.9, 27.1)	7.6 (5.7, 9.6)
Alger	1.1 (0.0, 2.5)	25.0 (17.9, 32.2)	13.6 (7.0, 20.3)
Baraga	0.5 (0.06, 1.0)	18.7 (11.4, 26.1)	2.8 (0.7, 4.9)
Chippewa	0.8 (0.0, 1.6)	24.2 (14.5, 33.8)	4.2 (0.3, 8.1)
Delta	0.6 (0.0, 1.3)	31.5 (21.6, 41.4)	6.5 (2.4, 10.7)
Dickinson	2.6 (0.0, 5.3)	21.9 (14.8, 29.0)	10.3 (3.9, 16.7)
Gogebic	0.9 (0.0, 2.1)	23.7 (16.4, 31.0)	6.0 (1.7, 10.3)
Houghton/Kew.	0.4 (0.0, 1.1)	24.9 (14.3, 35.6)	9.9 (0.0, 20.0)
Iron	0.2 (0.0, 0.7)	18.7 (12.9, 24.4)	6.8 (1.0, 12.6)
Luce	1.0 (0.0, 2.6)	25.7 (18.2, 33.2)	7.8 (3.3, 12.2)
Mackinac	8.4 (0.0, 23.2)	23.3 (12.9, 33.8)	10.1 (0.1, 20.1)
Marquette	0.4 (0.0, 1.2)	25.2 (16.7, 33.7)	9.7 (5.2, 14.2)
Menominee	2.0 (0.0, 4.4)	16.8 (10.8, 22.8)	4.5 (1.4, 7.7)
Ontonagon	1.4 (0.1, 2.7)	19.8 (15.3, 24.3)	2.6 (1.0, 4.1)
Schoolcraft	1.9 (0.0, 4.4)	18.0 (11.4, 24.6)	4.0 (1.1, 6.8)

^a Among all adults, the proportion who reported they called or texted a crisis line one or more times in the past 12 months.

^b Among all adults, the proportion who reported they took medication to help with mood, emotions, or mental health in the past 12 months.

^c Among all adults, the proportion who reported they had received counseling or other non-medication treatment from a mental health professional in the past 12 months.

Table 27B: Mental Health Care Access by Population Group

	Contacted Crisis Line Past 12 Months ^a	Medication for Mood Past 12 Months ^b	Counseling Past 12 Months ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	1.2 (0.5, 1.9)	24.0 (20.9, 27.1)	7.6 (5.7, 9.6)
Age			
<i>18-39</i>	1.2 (0.0, 3.1)	29.6 (21.7, 37.6)	12.9 (7.5, 18.3)
<i>40-64</i>	1.6 (0.7, 2.5)	24.0 (20.5, 27.4)	6.2 (4.4, 8.0)
<i>65+</i>	0.5 (0.2, 0.9)	16.3 (14.0, 18.6)	3.2 (2.1, 4.3)
Gender			
<i>Male</i>	1.5 (0.1, 2.9)	17.7 (12.6, 22.8)	6.5 (3.2, 9.9)
<i>Female</i>	0.9 (0.4, 1.4)	30.0 (26.4, 33.6)	8.7 (6.7, 10.8)
Educational Attainment			
<i>Less than 12th grade</i>	0.9 (0.0, 2.2)	39.1 (25.4, 52.7)	4.3 (0.0, 8.7)
<i>High School Graduate</i>	1.5 (0.0, 3.2)	26.7 (21.1, 32.4)	9.3 (5.1, 13.5)
<i>1 to 3 years of college</i>	1.2 (0.4, 2.0)	19.6 (15.7, 23.5)	5.5 (3.8, 7.3)
<i>4 year degree or higher</i>	0.6 (0.009, 1.2)	19.1 (15.1, 23.0)	10.8 (6.6, 15.0)
Household Income			
<i>Less than \$25,000</i>	1.5 (0.6, 2.5)	32.1 (26.2, 38.1)	11.2 (7.6, 14.9)
<i>\$25,000 to \$49,999</i>	2.1 (0.0, 4.4)	28.6 (22.2, 34.9)	9.7 (4.4, 15.0)
<i>\$50,000 or higher</i>	0.5 (0.002, 1.0)	17.3 (12.9, 21.6)	4.6 (2.8, 6.3)

^a Among all adults, the proportion who reported they called or texted a crisis line one or more times in the past 12 months.

^b Among all adults, the proportion who reported they took medication to help with mood, emotions, or mental health in the past 12 months.

^c Among all adults, the proportion who reported they had received counseling or other non-medication treatment from a mental health professional in the past 12 months.

Table 28A: Mental Health Care Barriers by County

	Delayed or Not Received Counseling in Past 12 Months Due to Cost ^a	Delayed or Not Received Counseling in Past 12 Months Due to Lack of Transportation ^b	Delayed or Not Received Counseling in Past 12 Months Because Could Not Find Provider ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	Not available
Upper Peninsula	6.9 (4.2, 9.6)	0.9 (0.4, 1.4)	4.6 (2.5, 6.7)
Alger	4.4 (0.4, 8.4)	2.4 (0.0, 5.9)	5.5 (0.2, 10.7)
Baraga	0.9 (0.1, 1.7)	0.4 (0.04, 0.7)	0.9 (0.2, 1.6)
Chippewa	7.9 (0.0, 16.8)	1.9 (0.0, 5.0)	8.1 (0.0, 17.0)
Delta	5.4 (0.0, 11.4)	0.9 (0.05, 1.7)	0.9 (0.0, 2.0)
Dickinson	4.3 (0.2, 8.4)	0.7 (0.0, 1.4)	2.3 (0.0, 4.7)
Gogebic	3.0 (0.0, 6.1)	0.3 (0.0, 0.9)	3.8 (0.6, 7.1)
Houghton/Kew.	11.0 (0.5, 21.5)	0.9 (0.0, 2.1)	2.6 (0.8, 4.5)
Iron	4.2 (0.8, 7.5)	0.7 (0.0, 1.4)	5.3 (0.0, 10.6)
Luce	7.2 (1.6, 12.7)	2.7 (0.0, 7.0)	6.9 (1.6, 12.2)
Mackinac	4.3 (0.5, 8.2)	1.0 (0.0, 2.4)	2.2 (0.1, 4.3)
Marquette	11.6 (3.6, 19.7)	0.4 (0.0, 1.3)	8.1 (0.4, 15.9)
Menominee	1.2 (0.0, 2.6)	1.2 (0.0, 3.5)	3.6 (0.5, 6.6)
Ontonagon	2.8 (1.1, 4.5)	1.0 (0.1, 1.9)	1.8 (0.7, 3.0)
Schoolcraft	2.5 (0.1, 4.9)	0.9 (0.0, 2.1)	3.5 (0.7, 6.3)

^a Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to cost.

^b Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to a lack of transportation.

^c Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to a lack of available mental health professionals.

These questions are not part of the statewide BRFs.

Table 28B: Mental Health Care Barriers by Population Group

	Delayed or Not Received Counseling in Past 12 Months Due to Cost ^a	Delayed or Not Received Counseling in Past 12 Months Due to Lack of Transportation ^b	Delayed or Not Received Counseling in Past 12 Months Because Could Not Find Provider ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	6.9 (4.2, 9.6)	0.9 (0.4, 1.4)	4.6 (2.5, 6.7)
Age			
<i>18-39</i>	15.4 (7.8, 23.0)	0.7 (0.0, 1.4)	9.3 (3.2, 15.4)
<i>40-64</i>	3.7 (2.1, 5.2)	1.5 (0.5, 2.5)	3.2 (1.7, 4.7)
<i>65+</i>	0.8 (0.3, 1.3)	0.3 (0.02, 0.7)	0.8 (0.4, 1.1)
Gender			
<i>Male</i>	8.6 (3.5, 13.7)	0.3 (0.0, 0.6)	5.4 (1.3, 9.6)
<i>Female</i>	5.3 (3.5, 7.1)	1.6 (0.6, 2.5)	3.8 (2.6, 5.0)
Educational Attainment			
<i>Less than 12th grade</i>	4.0 (0.0, 9.5)	3.2 (0.0, 7.5)	4.4 (0.0, 10.0)
<i>High School Graduate</i>	9.0 (3.6, 14.5)	0.7 (0.1, 1.2)	4.0 (0.2, 7.8)
<i>1 to 3 years of college</i>	6.8 (2.7, 10.8)	1.0 (0.3, 1.8)	5.6 (1.7, 9.5)
<i>4 year degree or higher</i>	2.8 (1.4, 4.1)	0.2 (0.0, 0.4)	4.1 (2.1, 6.0)
Household Income			
<i>Less than \$25,000</i>	7.6 (3.1, 12.0)	3.3 (1.4, 5.3)	7.3 (3.1, 11.5)
<i>\$25,000 to \$49,999</i>	9.0 (3.2, 14.8)	0.3 (0.0, 0.7)	2.8 (0.8, 4.9)
<i>\$50,000 or higher</i>	5.3 (1.2, 9.3)	0.04 (0.0, 0.1)	4.3 (0.3, 8.3)

^a Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to cost.

^b Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to a lack of transportation.

^c Among all adults, the proportion who reported they delayed or did not receive needed counseling in the past 12 months due to a lack of available mental health professionals.

Table 29A: Alcohol Consumption by County		
	Heavy Drinking ^a	Binge Drinking ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	6.9 (6.3, 7.5)	19.0 (18.1, 20.0)
Upper Peninsula	14.0 (11.7, 16.3)	12.9 (10.7, 15.2)
Alger	14.8 (9.6, 20.1)	15.6 (8.3, 22.9)
Baraga	18.3 (10.5, 26.1)	19.9 (10.9, 28.8)
Chippewa	16.1 (7.0, 25.3)	13.5 (5.1, 21.8)
Delta	10.4 (5.5, 15.2)	10.6 (5.2, 16.1)
Dickinson	9.1 (4.8, 13.4)	11.4 (5.6, 17.1)
Gogebic	15.2 (8.4, 22.0)	9.2 (5.1, 13.2)
Houghton/Keweenaw	12.5 (6.9, 18.1)	11.4 (5.9, 16.8)
Iron	19.2 (10.1, 28.2)	20.5 (11.1, 29.9)
Luce	14.4 (7.9, 21.0)	19.7 (10.3, 29.1)
Mackinac	13.6 (6.7, 20.5)	14.5 (7.5, 21.4)
Marquette	14.5 (8.6, 20.4)	11.9 (5.9, 17.8)
Menominee	18.3 (6.8, 29.8)	16.0 (4.6, 27.4)
Ontonagon	20.6 (13.0, 28.1)	13.8 (6.5, 21.1)
Schoolcraft	8.0 (4.0, 12.1)	12.7 (6.3, 19.1)

^a Among all adults, the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the past month.

^b Among all adults, the proportion who reported consuming five or more drinks per occasion for men or four or more drinks per occasion for women at least once in the past month.

In the local survey, rather than use the phrase “per occasion” a time interval of 2 hours was used. This definition of binge drinking is from <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. The difference in question phrasing may account for some differences in the observed estimates between the local and state survey.

Table 29B: Alcohol Consumption by Population Group		
	Heavy Drinking ^a	Binge Drinking ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	14.0 (11.7, 16.3)	12.9 (10.7, 15.2)
Age		
<i>18-39</i>	10.8 (5.8, 15.9)	17.0 (11.0, 22.9)
<i>40-64</i>	18.3 (15.0, 21.5)	13.5 (10.9, 16.2)
<i>65+</i>	10.5 (8.1, 12.9)	6.3 (4.5, 8.1)
Gender		
<i>Male</i>	15.7 (11.9, 19.4)	15.6 (11.7, 19.5)
<i>Female</i>	12.4 (9.9, 14.9)	10.4 (7.9, 12.9)
Educational Attainment		
<i>Less than 12th grade</i>	20.1 (7.9, 32.4)	14.2 (3.5, 24.8)
<i>High School Graduate</i>	15.2 (11.2, 19.2)	12.5 (9.0, 15.9)
<i>1-3 years of college</i>	11.6 (8.7, 14.6)	13.0 (9.1, 17.0)
<i>4 year degree or higher</i>	13.3 (9.9, 16.7)	13.5 (9.2, 17.8)
Household Income		
<i>Less than \$25,000</i>	12.8 (8.5, 17.0)	12.2 (7.9, 16.5)
<i>\$25,000 to \$49,999</i>	14.0 (10.0, 18.0)	12.6 (8.2, 17.0)
<i>\$50,000 or higher</i>	15.0 (11.3, 18.8)	14.3 (10.7, 17.8)

^a Among all adults, the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the past month.

^b Among all adults, the proportion who reported consuming five or more drinks per occasion for men or four or more drinks per occasion for women at least once in the past month.

In the local survey, rather than use the phrase “per occasion” a time interval of 2 hours was used. This definition of binge drinking is from <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. The difference in question phrasing may account for some differences in the observed estimates between the local and state survey.

Table 30A: Drug Use by County

	Ever Used Over-the-Counter or Synthetic Drugs ^a	Ever Used Prescription Drugs to Get High ^b	Ever Injected or Snorted to Get High ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	4.4 (3.4, 5.7)	4.7 (3.7, 6.1)	2.0 (1.4, 2.7)
Upper Peninsula	2.6 (1.2, 3.9)	3.3 (1.9, 4.7)	5.5 (3.7, 7.3)
Alger	2.8 (0.0, 6.1)	1.7 (0.0, 3.5)	4.9 (1.9, 7.9)
Baraga	7.2 (0.0, 14.5)	4.4 (1.4, 7.4)	4.0 (1.1, 6.8)
Chippewa	3.6 (0.0, 8.6)	5.0 (0.0, 10.3)	5.6 (0.4, 10.8)
Delta	1.6 (0.0, 3.6)	0.5 (0.0, 1.3)	2.2 (0.2, 4.3)
Dickinson	3.1 (0.0, 7.0)	0.2 (0.0, 0.7)	3.5 (0.0, 7.2)
Gogebic	4.7 (0.0, 9.5)	2.7 (0.0, 6.1)	2.3 (0.3, 4.4)
Houghton/Kew.	0.4 (0.0, 1.1)	1.8 (0.0, 4.0)	2.2 (0.5, 3.8)
Iron	0	6.1 (0.0, 12.5)	7.1 (3.0, 11.1)
Luce	2.3 (0.0, 4.6)	1.2 (0.0, 2.4)	2.2 (0.4, 4.1)
Mackinac	5.8 (0.0, 15.5)	6.8 (0.0, 16.5)	9.9 (0.0, 19.9)
Marquette	3.7 (0.0, 8.3)	5.8 (0.9, 10.7)	10.0 (3.3, 16.7)
Menominee	0.06 (0.0, 0.2)	2.5 (0.0, 5.6)	4.4 (1.1, 7.8)
Ontonagon	1.1 (0.04, 2.2)	1.5 (0.4, 2.6)	3.2 (1.0, 5.3)
Schoolcraft	0.4 (0.0, 0.9)	1.8 (0.0, 4.2)	10.1 (0.0, 21.9)

^a Among all adults, the proportion who reported ever using over the counter or synthetic/designer drugs such as K2/Spice, Salvia, Bath Salts, or synthetic cannabinoids for the purpose of getting high.

^b Among all adults, the proportion who reported ever using prescription drugs not prescribed to them for the purpose of getting high.

^c Among all adults, the proportion who reported ever injecting or snorting drugs for the purpose of getting high. Statewide estimate is the proportion who reported ever injecting drugs for the purpose of getting high.

Table 30B: Drug Use by Population Group			
	Ever Used Over-the-Counter or Synthetic Drugs ^a	Ever Used Prescription Drugs to Get High ^b	Ever Injected or Snorted to Get High ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	2.6 (1.2, 3.9)	3.3 (1.9, 4.7)	5.5 (3.7, 7.3)
Age			
<i>18-39</i>	6.1 (2.1, 10.2)	6.9 (2.8, 11.1)	7.2 (2.3, 12.2)
<i>40-64</i>	1.2 (0.5, 1.9)	2.1 (1.2, 2.9)	6.0 (4.1, 7.9)
<i>65+</i>	0.1 (0.007, 0.2)	0.5 (0.0, 1.1)	2.1 (1.0, 3.1)
Gender			
<i>Male</i>	3.7 (1.1, 6.2)	4.6 (2.0, 7.2)	8.2 (4.7, 11.6)
<i>Female</i>	1.5 (0.4, 2.6)	2.0 (0.8, 3.3)	3.0 (1.7, 4.2)
Educational Attainment			
<i>Less than 12th grade</i>	1.6 (0.0, 3.8)	1.1 (0.0, 2.3)	7.3 (0.0, 18.2)
<i>High School Graduate</i>	2.6 (0.4, 4.7)	3.0 (0.8, 5.2)	4.4 (2.1, 6.7)
<i>1 to 3 years of college</i>	3.2 (0.4, 6.0)	4.4 (1.5, 7.4)	7.1 (3.7, 10.5)
<i>4 year degree or higher</i>	1.6 (0.0, 3.1)	2.6 (0.5, 4.8)	3.7 (2.0, 5.4)
Household Income			
<i>Less than \$25,000</i>	2.7 (0.6, 4.7)	4.4 (2.0, 6.7)	7.2 (2.8, 11.6)
<i>\$25,000 to \$49,999</i>	3.0 (0.3, 5.7)	4.0 (1.2, 6.9)	5.7 (2.7, 8.6)
<i>\$50,000 or higher</i>	2.4 (0.06, 4.7)	2.3 (0.05, 4.6)	4.7 (2.0, 7.4)
<p>^a Among all adults, the proportion who reported ever using over the counter or synthetic/designer drugs such as K2/Spice, Salvia, Bath Salts, or synthetic cannabinoids for the purpose of getting high.</p> <p>^b Among all adults, the proportion who reported ever using prescription drugs not prescribed to them for the purpose of getting high.</p> <p>^c Among all adults, the proportion who reported ever injecting or snorting drugs for the purpose of getting high.</p>			

Table 31A: Marijuana Use by County			
	Used Marijuana in Past 30 Days ^a	Used Marijuana 10 or More Times in the Past 30 Days ^b	Has Medical Marijuana Card ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	2.6 (not applicable)
Upper Peninsula	7.7 (6.1, 9.3)	4.7 (3.4, 5.9)	3.7 (2.5, 4.8)
Alger	8.5 (4.0, 13.1)	5.2 (1.5, 8.8)	4.4 (0.8, 7.9)
Baraga	17.8 (8.0, 27.7)	7.7 (0.9, 14.4)	2.4 (0.0, 6.1)
Chippewa	8.5 (2.7, 14.3)	5.5 (0.2, 10.8)	4.9 (0.0, 10.3)
Delta	6.1 (2.3, 9.8)	3.2 (0.4, 6.1)	2.9 (0.8, 5.1)
Dickinson	6.0 (1.5, 10.6)	5.2 (0.8, 9.6)	4.3 (0.3, 8.3)
Gogebic	7.0 (1.8, 12.1)	5.2 (0.3, 10.1)	4.5 (0.0, 9.2)
Houghton/Kew.	4.7 (1.5, 7.8)	3.4 (0.5, 6.4)	0.9 (0.07, 1.8)
Iron	11.8 (4.9, 18.6)	8.6 (2.3, 14.8)	6.1 (1.4, 10.9)
Luce	5.6 (1.4, 9.8)	2.6 (0.5, 4.6)	1.5 (0.0, 3.3)
Mackinac	7.0 (1.3, 12.8)	1.3 (0.01, 2.6)	5.9 (0.0, 15.6)
Marquette	9.3 (4.4, 14.1)	4.8 (1.6, 8.0)	3.1 (0.4, 5.7)
Menominee	6.7 (1.7, 11.8)	4.4 (0.0, 9.1)	5.7 (0.4, 10.9)
Ontonagon	6.8 (3.5, 10.0)	4.2 (1.8, 6.7)	1.8 (0.6, 2.9)
Schoolcraft	9.2 (3.7, 14.8)	7.6 (2.2, 13.1)	7.0 (1.7, 12.2)

^a Among all adults, the proportion who reported using marijuana, hashish, marijuana wax, or marijuana-infused edibles in the past month. This question is not part of the statewide BRFSS.

^b Among all adults, the proportion who reported using marijuana, hashish, marijuana wax, or marijuana-infused edibles 10 or more times in the past month. This question is not part of the statewide BRFSS.

^c Among all adults, the proportion who reported having a prescription for medical marijuana. Statewide data is the number of qualifying patients and caregivers in 2016 (Medical Marijuana Act Statistical Report, FY2016, Michigan Bureau of Professional Licensing) divided by the population estimate of Michigan on July 1, 2016 (U.S. Census Bureau).

Table 31B: Marijuana Use by Population Group			
	Used Marijuana in Past 30 Days ^a	Used Marijuana 10 or More Times in the Past 30 Days ^b	Has Medical Marijuana Card ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	7.7 (6.1, 9.3)	4.7 (3.4, 5.9)	3.7 (2.5, 4.8)
Age			
<i>18-39</i>	9.0 (4.9, 13.2)	6.3 (3.0, 9.6)	5.4 (2.3, 8.6)
<i>40-64</i>	9.3 (7.3, 11.3)	5.1 (3.6, 6.6)	3.8 (2.4, 5.1)
<i>65+</i>	3.0 (1.7, 4.3)	1.6 (0.6, 2.6)	1.1 (0.5, 1.8)
Gender			
<i>Male</i>	8.7 (6.3, 11.0)	5.2 (3.2, 7.2)	4.0 (2.1, 5.8)
<i>Female</i>	6.8 (4.6, 9.1)	4.1 (2.6, 5.7)	3.4 (1.9, 4.9)
Educational Attainment			
<i>Less than 12th grade</i>	12.3 (5.7, 18.9)	9.1 (3.2, 15.0)	7.2 (1.8, 12.6)
<i>High School Graduate</i>	8.0 (5.3, 10.7)	4.6 (2.3, 7.0)	3.8 (1.6, 6.1)
<i>1 to 3 years of college</i>	7.6 (4.7, 10.4)	4.6 (2.7, 6.4)	3.7 (2.0, 5.4)
<i>4 year degree or higher</i>	5.1 (3.1, 7.0)	2.6 (1.3, 3.9)	1.2 (0.3, 2.0)
Household Income			
<i>Less than \$25,000</i>	15.2 (10.8, 19.6)	9.6 (6.4, 12.8)	7.1 (4.1, 10.1)
<i>\$25,000 to \$49,999</i>	6.7 (3.7, 9.7)	4.4 (1.6, 7.1)	4.5 (1.7, 7.2)
<i>\$50,000 or higher</i>	4.5 (2.8, 6.3)	2.3 (1.0, 3.6)	1.4 (0.5, 2.4)

^a Among all adults, the proportion who reported using marijuana, hashish, marijuana wax, or marijuana-infused edibles in the past month.

^b Among all adults, the proportion who reported using marijuana, hashish, marijuana wax, or marijuana-infused edibles 10 or more times in the past month.

^c Among all adults, the proportion who reported having a prescription for medical marijuana.

Table 32A: Substance Abuse Treatment by County			
	Alcohol Treatment or Counseling Past 30 Days ^a	Drug Treatment or Counseling Past 30 Days ^b	Alcohol or Other Drug Treatment Past 12 Months ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	Not available
Upper Peninsula	0.9 (0.1, 1.6)	0.6 (0.008, 1.1)	1.4 (0.5, 2.4)
Alger	0.07 (0.0, 0.2)	0	0.07 (0.0, 0.2)
Baraga	0.8 (0.0, 2.3)	0.05 (0.0, 0.1)	0.8 (0.0, 2.4)
Chippewa	0	0.6 (0.0, 1.6)	0.6 (0.0, 1.6)
Delta	0.1 (0.0, 0.4)	0.1 (0.0, 0.4)	0.1 (0.0, 0.4)
Dickinson	2.3 (0.0, 6.9)	0	2.3 (0.0, 6.9)
Gogebic	0	0	0
Houghton/Kew.	0.07 (0.0, 0.2)	0	0.07 (0.0, 0.2)
Iron	0	0	0
Luce	0.02 (0.0, 0.05)	0	0.02 (0.0, 0.05)
Mackinac	0	5.4 (0.0, 15.4)	5.4 (0.0, 15.4)
Marquette	2.6 (0.0, 5.4)	1.2 (0.0, 2.9)	3.8 (0.6, 7.1)
Menominee	0	0	0
Ontonagon	1.1 (0.0, 2.3)	0.6 (0.0, 1.3)	1.3 (0.1, 2.6)
Schoolcraft	0.5 (0.0, 1.6)	0	0.5 (0.0, 1.6)

Among all adults, the proportion who reported receiving voluntary or court-ordered substance abuse treatment services in the past year for...

^a Alcohol addiction or problem behaviors associated with alcohol use.

^b Drug addiction or problem behaviors associated with drug use.

^c Either alcohol or drug addiction or problem behaviors associated with alcohol or drug use.

These questions are not part of the statewide BRFSS.

Table 32B: Substance Abuse Treatment by Population Group

	Alcohol Treatment or Counseling Past 30 Days ^a	Drug Treatment or Counseling Past 30 Days ^b	Alcohol or Other Drug Treatment Past 12 Months ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	0.9 (0.1, 1.6)	0.6 (0.008, 1.1)	1.4 (0.5, 2.4)
Age			
<i>18-39</i>	2.3 (0.0, 4.6)	1.5 (0.0, 3.2)	3.8 (0.9, 6.6)
<i>40-64</i>	0.3 (0.03, 0.7)	0.2 (0.0, 0.5)	0.5 (0.08, 0.9)
<i>65+</i>	0.01 (0.0, 0.03)	0	0.01 (0.0, 0.03)
Gender			
<i>Male</i>	1.2 (0.0, 2.5)	0.9 (0.0, 1.9)	2.0 (0.4, 3.7)
<i>Female</i>	0.6 (0.0, 1.3)	0.3 (0.0, 0.8)	0.9 (0.0, 1.7)
Educational Attainment			
<i>Less than 12th grade</i>	0	0	0
<i>High School Graduate</i>	1.6 (0.0, 3.3)	0.5 (0.0, 1.5)	2.1 (0.1, 4.1)
<i>1 to 3 years of college</i>	0.5 (0.0, 1.2)	1.0 (0.0, 2.1)	1.4 (0.1, 2.8)
<i>4 year degree or higher</i>	0.5 (0.0, 1.3)	0.009 (0.0, 0.03)	0.5 (0.0, 1.3)
Household Income			
<i>Less than \$25,000</i>	2.1 (0.0, 4.2)	2.0 (0.0, 4.2)	4.0 (1.0, 7.0)
<i>\$25,000 to \$49,999</i>	1.0 (0.0, 2.8)	0.2 (0.0, 0.6)	1.2 (0.0, 3.1)
<i>\$50,000 or higher</i>	0.2 (0.0, 0.5)	0.02 (0.0, 0.06)	0.2 (0.0, 0.5)

Among all adults, the proportion who reported receiving voluntary or court-ordered substance abuse treatment services in the past year for...

^a Alcohol addiction or problem behaviors associated with alcohol use.

^b Drug addiction or problem behaviors associated with drug use.

^c Either alcohol or drug addiction or problem behaviors associated with alcohol or drug use.

Table 33A: Substance Abuse Treatment Barriers by County			
	Delayed or Not Received Treatment in Past 12 Months Due to Cost ^a	Delayed or Not Received Treatment in Past 12 Months Due to Lack of Transportation ^b	Delayed or Not Received Treatment in Past 12 Months Because Could Not Find Provider ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	Not available	Not available
Upper Peninsula	0.5 (0.0, 1.6)	0.2 (0.0, 0.5)	0.6 (0.0, 1.3)
Alger	0.5 (0.0, 1.5)	0.04 (0.0, 0.1)	0.5 (0.0, 1.5)
Baraga	0	0	0
Chippewa	0	0.07 (0.0, 0.2)	0
Delta	0.2 (0.0, 0.5)	0.2 (0.0, 0.5)	0.2 (0.0, 0.5)
Dickinson	0	0	0
Gogebic	0	0	0
Houghton/Kew.	0	0	0.3 (0.0, 0.8)
Iron	0.3 (0.0, 0.8)	0.09 (0.0, 0.3)	0.5 (0.0, 1.1)
Luce	0.1 (0.0, 0.3)	0	0.1 (0.0, 0.3)
Mackinac	0	0	0.7 (0.0, 2.0)
Marquette	1.8 (0.0, 4.4)	0.7 (0.0, 1.9)	2.2 (0.0, 5.2)
Menominee	0	0	0
Ontonagon	0	0	0
Schoolcraft	0	0.5 (0.0, 1.6)	0.3 (0.0, 0.8)

^a Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to cost.

^b Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to a lack of transportation.

^c Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to lack of available programs or professional addiction counselors.

These questions are not part of the statewide BRFSS.

Table 33B: Substance Abuse Treatment Barriers by Population Group			
	Delayed or Not Received Treatment in Past 12 Months Due to Cost ^a	Delayed or Not Received Treatment in Past 12 Months Due to Lack of Transportation ^b	Delayed or Not Received Treatment in Past 12 Months Because Could Not Find Provider ^c
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	0.5 (0.0, 1.6)	0.2 (0.0, 0.5)	0.6. (0.0, 1.3)
Age			
<i>18-39</i>	1.3 (0.0, 3.2)	0.5 (0.0, 1.4)	1.6 (0.0, 3.8)
<i>40-64</i>	0.02 (0.0, 0.06)	0.04 (0.0, 0.1)	0.1 (0.0, 0.3)
<i>65+</i>	0.01 (0.0, 0.04)	0.05 (0.0, 0.1)	0.07 (0.0, 0.1)
Gender			
<i>Male</i>	0.9 (0.0, 2.1)	0.4 (0.0, 1.0)	0.6 (0.0, 1.7)
<i>Female</i>	0.09 (0.0, 0.2)	0.04 (0.0, 0.1)	0.6 (0.0, 1.5)
Educational Attainment			
<i>Less than 12th grade</i>	0	0	0
<i>High School Graduate</i>	0.7 (0.0, 2.0)	0.04 (0.0, 0.1)	1.3 (0.0, 3.1)
<i>1 to 3 years of college</i>	0.5 (0.0, 1.3)	0.4 (0.0, 1.2)	0.2 (0.02, 0.4)
<i>4 year degree or higher</i>	0.01 (0.0, 0.04)	0.06 (0.0, 0.2)	0.02 (0.0, 0.05)
Household Income			
<i>Less than \$25,000</i>	0.7 (0.0, 1.8)	0.7 (0.0, 1.8)	0.3 (0.0, 0.5)
<i>\$25,000 to \$49,999</i>	1.0 (0.0, 2.8)	0.02 (0.0, 0.04)	1.9 (0.0, 4.3)
<i>\$50,000 or higher</i>	0.004 (0.0, 0.01)	0	0.004 (0.0, 0.01)
<p>^a Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to cost.</p> <p>^b Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to a lack of transportation.</p> <p>^c Among all adults, the proportion who reported they delayed or did not receive needed substance abuse treatment in the past 12 months due to lack of available programs or professional addiction counselors.</p>			

Table 34A: Hepatitis C Testing by County

	Ever Tested for Hepatitis C ^a	
	%	95% C.I.
Michigan	29.2	27.2, 31.3
Upper Peninsula	18.2	(15.7, 20.6)
Alger	17.5	(11.0, 24.1)
Baraga	26.4	(14.2, 38.6)
Chippewa	25.1	(15.3, 34.9)
Delta	10.1	(6.0, 14.1)
Dickinson	19.4	(12.2, 26.5)
Gogebic	14.9	(9.2, 20.5)
Houghton/Keweenaw	14.8	(9.6, 19.9)
Iron	22.2	(15.7, 28.8)
Luce	21.5	(14.3, 28.6)
Mackinac	30.5	(15.6, 45.4)
Marquette	20.2	(13.2, 27.3)
Menominee	12.3	(6.8, 17.9)
Ontonagon	11.8	(8.4, 15.2)
Schoolcraft	16.9	(10.0, 23.9)

^a Among all adults, the proportion who reported ever being tested for Hepatitis C.

Table 34B: Hepatitis C Testing by Population Group

	Ever Tested for Hepatitis C ^a	
	%	95% C.I.
Upper Peninsula	18.2	(15.7, 20.6)
Age		
18-39	19.0	(12.8, 25.2)
40-65	20.4	(17.5, 23.4)
65+	12.9	(10.7, 15.2)
Gender		
Male	19.0	(15.1, 22.9)
Female	17.4	(14.4, 20.4)
Educational Attainment		
Less than 12th grade	23.0	(9.6, 36.3)
High School Graduate	15.1	(11.4, 18.8)
1-3 years of college	19.1	(15.3, 23.0)
4 year degree or higher	21.4	(17.2, 25.5)
Household Income		
Less than \$25,000	21.5	(15.5, 27.6)
\$25,000 to \$49,999	20.4	(15.6, 25.2)
\$50,000 or higher	15.5	(12.6, 18.4)
^a Among all adults, the proportion who reported ever being tested for Hepatitis C.		

Table 35A: Breast Cancer Screening, Women Age 40+ by County

	Ever Had a Mammogram ^a	Had Mammogram in Past 2 Years ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	92.7 (91.6, 93.6)	74.0 (72.4, 75.5)
Upper Peninsula	95.5 (93.9, 97.0)	80.3 (77.6, 82.9)
Alger	97.3 (94.5, 100.0)	81.4 (74.6, 88.1)
Baraga	95.9 (92.6, 99.3)	76.9 (68.1, 85.6)
Chippewa	96.4 (92.6, 100.0)	81.5 (72.8, 90.2)
Delta	95.3 (91.2, 99.4)	79.0 (71.2, 86.8)
Dickinson	96.3 (93.4, 99.2)	77.8 (68.1, 87.5)
Gogebic	96.2 (92.8, 99.5)	80.6 (72.9, 88.2)
Houghton/Keweenaw	93.9 (89.9, 97.8)	76.5 (69.0, 84.0)
Iron	95.2 (91.6, 98.8)	80.2 (73.9, 86.5)
Luce	97.3 (95.1, 99.5)	77.3 (65.7, 88.9)
Mackinac	97.7 (94.6, 100.0)	85.3 (77.9, 92.6)
Marquette	94.5 (88.6, 100.0)	82.9 (74.9, 90.9)
Menominee	96.0 (92.6, 99.3)	80.2 (72.1, 88.3)
Ontonagon	94.5 (90.9, 98.0)	81.2 (75.8, 86.5)
Schoolcraft	94.7 (88.1, 100.0)	80.8 (72.4, 89.3)

^a Among women aged 40 years and older, the proportion who reported ever having a mammogram.

^b Among women aged 40 years and older, the proportion who reported having a mammogram in the past two years.

Table 35B: Breast Cancer Screening, Women Age 40+ by Population Group		
	Ever Had a Mammogram ^a	Had Mammogram in Past 2 Years ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	95.5 (93.9, 97.0)	80.3 (77.6, 82.9)
Age		
<i>18-39</i>	—	—
<i>40-64</i>	94.2 (91.9, 96.4)	81.3 (77.7, 84.8)
<i>65+</i>	98.1 (97.2, 99.0)	78.3 (74.9, 81.6)
Gender		
<i>Male</i>	—	—
<i>Female</i>	95.4 (93.9, 97.0)	80.3 (77.6, 82.9)
Educational Attainment		
<i>Less than 12th grade</i>	86.8 (79.3, 99.7)	62.4 (46.9, 78.0)
<i>High School Graduate</i>	96.1 (94.3, 97.9)	80.0 (76.3, 83.8)
<i>1-3 years of college</i>	97.0 (95.6, 98.4)	83.8 (80.1, 87.6)
<i>4 year degree or higher</i>	94.4 (91.7, 97.1)	82.6 (78.2, 86.9)
Household Income		
<i>Less than \$25,000</i>	92.0 (87.3, 96.7)	71.3 (65.7, 77.0)
<i>\$25,000 to \$49,999</i>	97.2 (95.5, 98.8)	81.7 (77.3, 86.0)
<i>\$50,000 or higher</i>	96.3 (94.5, 98.1)	84.8 (80.8, 88.8)
<p>^a Among women aged 40 years and older, the proportion who reported ever having a mammogram.</p> <p>^b Among women aged 40 years and older, the proportion who reported having a mammogram in the past two years.</p>		

Table 36A: Cervical Cancer Screening, Women Age 18+ by County

	Ever Had Pap Test ^a	Pap Test Within Past 3 Years ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	88.1 (86.6, 89.6)	72.5 (70.7, 74.3)
Upper Peninsula	96.3 (94.9, 97.7)	75.5 (71.8, 79.2)
Alger	98.5 (96.8, 100.0)	67.6 (54.3, 80.9)
Baraga	85.4 (64.2, 100.0)	51.7 (29.8, 73.6)
Chippewa	93.7 (88.1, 99.3)	63.9 (47.6, 80.2)
Delta	98.4 (96.5, 100.0)	85.7 (78.3, 93.0)
Dickinson	94.4 (87.3, 100.0)	68.5 (55.7, 81.3)
Gogebic	98.3 (96.9, 99.8)	68.7 (57.5, 79.9)
Houghton/Keweenaw	94.9 (90.0, 99.8)	76.3 (67.1, 85.4)
Iron	89.2 (79.2, 99.3)	60.7 (46.9, 74.6)
Luce	94.6 (86.2, 100.0)	71.2 (58.2, 84.1)
Mackinac	95.0 (87.2, 100.0)	76.5 (64.7, 88.3)
Marquette	99.1 (98.0, 100.0)	86.0 (78.7, 93.2)
Menominee	98.9 (97.3, 100.0)	78.3 (68.1, 88.4)
Ontonagon	95.8 (93.5, 98.2)	67.5 (59.4, 75.6)
Schoolcraft	94.8 (90.8, 98.8)	67.0 (55.1, 79.0)

^a Among adult women who reported they had not had a hysterectomy, the proportion who reported ever having a Pap test.

^b Among adult women who reported they had not had a hysterectomy, the proportion who reported having a Pap test within the last three years.

Table 36B: Cervical Cancer Screening, Women Age 18+ by Population Group		
	Ever Had Pap Test ^a	Pap Test Within Past 3 Years ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	96.3 (94.9, 97.7)	75.5 (71.8, 79.2)
Age		
<i>18-39</i>	92.7 (88.7, 96.8)	80.7 (73.4, 88.1)
<i>40-64</i>	99.1 (98.5, 99.6)	80.2 (75.6, 84.8)
<i>65+</i>	95.8 (93.7, 97.9)	53.4 (47.8, 59.0)
Gender		
<i>Male</i>	—	—
<i>Female</i>	96.3 (94.9, 97.7)	75.5 (71.8, 79.2)
Educational Attainment		
<i>Less than 12th grade</i>	89.9 (81.4, 98.4)	49.9 (28.9, 70.9)
<i>High School Graduate</i>	95.6 (93.0, 98.1)	72.7 (67.1, 78.4)
<i>1-3 years of college</i>	97.7 (96.2, 99.2)	79.7 (74.8, 84.7)
<i>4 year degree or higher</i>	99.1 (98.2, 100.0)	87.5 (83.9, 91.1)
Household Income		
<i>Less than \$25,000</i>	90.2 (85.7, 94.8)	63.3 (53.9, 72.7)
<i>\$25,000 to \$49,999</i>	98.1 (96.6, 99.5)	75.8 (70.2, 81.5)
<i>\$50,000 or higher</i>	99.1 (98.3, 99.9)	84.1 (79.8, 88.5)
<p>^a Among adult women who reported they had not had a hysterectomy, the proportion who reported ever having a Pap test.</p> <p>^b Among adult women who reported they had not had a hysterectomy, the proportion who reported having a Pap test within the last three years.</p>		

Table 37A: Prostate Cancer Screening, Men Age 50+ by County

	Ever Discussed Prostate Cancer Screening with Provider ^a	Ever Had PSA Test ^b
	% (95% C.I.)	% (95% C.I.)
Michigan	Not available	68.0 (65.8, 70.0)
Upper Peninsula	68.6 (63.5, 73.6)	72.1 (67.1, 77.2)
Alger	66.0 (51.6, 80.4)	66.3 (51.3, 81.4)
Baraga	68.1 (54.9, 81.3)	63.4 (49.1, 77.8)
Chippewa	80.0 (68.5, 91.5)	67.8 (53.7, 82.0)
Delta	58.1 (39.4, 76.7)	71.1 (51.0, 91.2)
Dickinson	70.7 (54.4, 86.9)	81.6 (66.7, 96.5)
Gogebic	60.9 (46.6, 75.1)	61.4 (47.2, 75.7)
Houghton/Keweenaw	67.9 (56.3, 79.6)	72.0 (60.1, 83.9)
Iron	76.7 (65.6, 87.7)	75.9 (64.4, 87.5)
Luce	65.8 (50.4, 81.3)	69.2 (54.0, 84.4)
Mackinac	67.8 (54.2, 81.3)	68.1 (54.6, 81.6)
Marquette	73.1 (59.0, 87.2)	79.3 (65.6, 93.0)
Menominee	65.6 (52.2, 79.1)	65.2 (50.6, 79.7)
Ontonagon	61.8 (51.8, 71.8)	76.8 (68.1, 85.4)
Schoolcraft	66.4 (52.9, 79.8)	63.2 (48.3, 78.0)

^a Among men aged 50 years and older, the proportion who reported ever discussing a prostate screening test with their health care provider. Statewide data is not reported due to significant differences in the wording of the question.

^b Among men aged 50 years and older, the proportion who reported ever having a PSA (prostate screening antigen) test.

Table 37B: Prostate Cancer Screening, Men Age 50+ by Population Group		
	Ever Discussed Prostate Cancer Screening with Provider ^a	Ever Had PSA Test ^b
	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	68.6 (63.5, 73.6)	72.1 (67.1, 77.2)
Age		
<i>18-49</i>	—	—
<i>50-64</i>	67.3 (59.8, 74.7)	65.6 (58.1, 73.2)
<i>65+</i>	70.7 (65.6, 75.7)	82.5 (78.0, 87.0)
Gender		
<i>Male</i>	68.6 (63.5, 73.6)	72.1 (67.1, 77.2)
<i>Female</i>	—	—
Educational Attainment		
<i>Less than 12th grade</i>	54.0 (31.5, 76.5)	52.8 (30.2, 75.4)
<i>High School Graduate</i>	63.9 (56.6, 71.2)	68.5 (61.2, 75.8)
<i>1-3 years of college</i>	73.7 (65.8, 81.6)	78.2 (70.6, 85.7)
<i>4 year degree or higher</i>	81.5 (74.9, 88.1)	83.7 (78.0, 89.4)
Household Income		
<i>Less than \$25,000</i>	53.0 (44.3, 61.8)	51.2 (42.5, 60.0)
<i>\$25,000 to \$49,999</i>	64.0 (54.6, 73.5)	73.3 (63.7, 83.0)
<i>\$50,000 or higher</i>	79.5 (72.1, 87.0)	80.8 (73.2, 88.4)
<p>^a Among men aged 50 years and older, the proportion who reported ever discussing a prostate screening test with their health care provider.</p> <p>^b Among men aged 50 years and older, the proportion who reported ever having a PSA (prostate screening antigen) test.</p>		

Table 38A: Colorectal Cancer Screening, Age 50+ by County		
	Appropriately Timed Colorectal Cancer Screening ^a	
	%	95% C.I.
Michigan	69.7	(68.3, 71.0)
Upper Peninsula	74.6	(71.7, 77.5)
Alger	68.2	(60.4, 75.9)
Baraga	68.9	(59.8, 78.1)
Chippewa	83.6	(76.0, 91.2)
Delta	69.9	(58.4, 81.3)
Dickinson	72.2	(63.1, 81.5)
Gogebic	63.0	(53.7, 72.3)
Houghton/Keweenaw	75.7	(68.7, 82.8)
Iron	78.9	(72.6, 85.2)
Luce	68.9	(59.2, 78.6)
Mackinac	75.1	(65.9, 84.4)
Marquette	79.2	(71.4, 87.1)
Menominee	77.6	(69.8, 85.5)
Ontonagon	66.7	(60.2, 73.1)
Schoolcraft	68.9	(59.5, 78.2)

^a Among adults aged 50 years and older, the proportion who reported having a blood stool test within the past two years, a sigmoidoscopy in the past five years, or a colonoscopy in the past 10 years. Statewide estimate includes a blood stool test within the past year, a sigmoidoscopy in the past five years, or a colonoscopy in the past 10 years.

Table 38B: Colorectal Cancer Screening, Age 50+ by Population Group

	Appropriately Timed Colorectal Cancer Screening ^a	
	%	95% C.I.
Upper Peninsula	74.6	(71.7, 77.5)
Age		
18-49	—	—
50-65	70.0	(65.8, 74.2)
65+	82.4	(79.7, 85.1)
Gender		
Male	72.7	(67.8, 77.7)
Female	76.3	(73.3, 79.4)
Educational Attainment		
Less than 12th grade	60.5	(45.5, 75.4)
High School Graduate	72.0	(67.8, 76.2)
1-3 years of college	78.7	(74.6, 82.7)
4 year degree or higher	83.1	(78.9, 87.3)
Household Income		
Less than \$25,000	64.6	(59.5, 69.8)
\$25,000 to \$49,999	72.8	(67.1, 78.5)
\$50,000 or higher	81.0	(76.7, 85.2)

^a Among adults aged 50 years and older, the proportion who reported having a blood stool test within the past two years, a sigmoidoscopy in the past five years, or a colonoscopy in the past 10 years.

COMMUNITY HEALTH ISSUES AND PRIORITIES

Introduction

The Patient Protection and Affordable Care Act (ACA) mandates tax-exempt hospitals conduct a community health needs assessment at least every three years and report on findings, including community health issues and priorities for health improvement. Data from such assessments can help hospitals, community health partners, and local health departments understand the needs of communities and underserved populations, and work to address those needs. In addition to gathering prevalence estimates of individual health conditions and behaviors, most models for community health needs assessments also ask survey respondents or other stakeholders to identify health related needs of their communities. Sixteen health issues consistently identified as important by Upper Peninsula residents from a variety of data sources, including from local agency surveys of clients and providers, and several recent-year hospital and local health department led focus group meetings, were chosen for this survey. Respondents to the 2017 Health Survey of Upper Peninsula Adults were asked to rank their perceptions of each of these community health issues using a 4-point Likert-type scale. Respondents were asked to focus on the health of their community, not their individual or family health needs.

Local Survey Methodology

Sample

Details of the sample selection can be found in the previous chapter on page 196. Briefly, 1,700 household addresses from each county in the Upper Peninsula (Keweenaw and Houghton Counties were combined in one population frame) were randomly selected to receive a mailed survey packet. A single adult from each household was asked to complete the survey.

Response Rate

Details of the response rate are on 192. Overall, the response rate per estimated number of deliverable surveys was 23.0 percent. The rates for each county ranged from 18.1 percent (Menominee County) to 34.9 percent (Ontonagon County). Surveys were included in the analysis if they were largely complete and had the necessary demographic data for weighting.

Survey Design

The final page of the 12-page 2017 Health Survey of Upper Peninsula Adults asked respondents about 16 community health issues. The survey design is detailed on page 197. Briefly, packets containing a cover letter, survey and postage-paid pre-addressed return envelope were prepared and mailed to the entire sample of 23,800 addresses in early August 2017. An online version of the survey was available, but the vast majority of respondents (93.4 percent) returned the survey by mail.

Data Analysis

Data analysis was conducted by Kelly Kamm, PhD from the Department of Kinesiology and Integrative Physiology, Michigan Technological University. All analysis was completed in SAS, version 9.4. Survey

data were assessed for completeness and consistency. Conflicting responses were adjudicated with Ray Sharp, Western U.P. Health Department. Survey data were weighted to account for probability of selection within the household (design weight) and for overrepresentation of certain demographic characteristics among survey respondents (post-stratification weight). In order to prevent a specific respondent from contributing excessively to the overall estimate, the design weight was limited to a maximum of five adults per household. To correct for differences between the survey respondents and the population of the Upper Peninsula, post-stratification weighting was used for age, gender, education, and income. Overall Upper Peninsula estimates were also weighted for county, with Keweenaw and Houghton counties combined due to the small population of Keweenaw County and the fact that most health care and social services to Keweenaw County residents are provided in Houghton County. Details of the weighting strategy can be found in the previous chapter on page 197-198. Due to variability in response rates to individual questions, not all estimates are based on the same total sample size.

References

Link M.W., Battaglia M.P., Frankel M.R., Osborn L., Mokdad A.H. (2006). Address-based versus random-digit-dial surveys: Comparison of key health and risk indicators. *American Journal of Epidemiology*, 164(10), 1019-1025.

Methodologic changes in the Behavioral Risk Factors Surveillance System in 2011 and potential effects on prevalence estimates. (2012) *MMWR*, 61(22), 410-413.

Results

Respondents were asked to rank each of sixteen community health issues on a Likert-type scale with four options. The complete set of rankings appears on the pages that follow. The first set of data shows a two-page spread for each community health issue or set of issues. The left page of each two-page spread contains the results for an issue or set of issues for the Upper Peninsula and by county. The right page of each two-page spread contains the results for the same issue or set of issues for the Upper Peninsula region combined, organized by population characteristic. The results listed represent the proportion of the population that identified the issue as “Very important – should be a priority.” For ease of reference, a list of table topics and page numbers is provided below.

Table Number and Topic	Pages
Table 1: Economic Factors	292-293
Table 2: Health Care Access	294-295
Table 3: Transportation to Care	296-297
Table 4: Substance Abuse	298-299
Table 5: Health and Wellness	300-301
Table 6: Elder Services	302-303

The second set of data shows a single page for each county and the Upper Peninsula region. Each page shows all 16 community health issues and the weighted proportions for each of the four response

options: “Not an issue or of very little importance”, “Fairly unimportant”, “Fairly important”, and “Very important – should be a priority.” For ease of reference, a list of table topics and page numbers is provided below.

County	Page
Upper Peninsula	304
Alger County	305
Baraga County	306
Chippewa County	307
Delta County	308
Dickinson County	309
Gogebic County	310
Houghton & Keweenaw Counties	311
Iron County	312
Luce County	313
Mackinac County	314
Marquette County	315
Menominee County	316
Ontonagon County	317
Schoolcraft County	318

A summary of findings begins on the next page, followed by the data tables for each set of indicators analyzed by county and population groups, and then by the summary tables for the U.P. and each county.

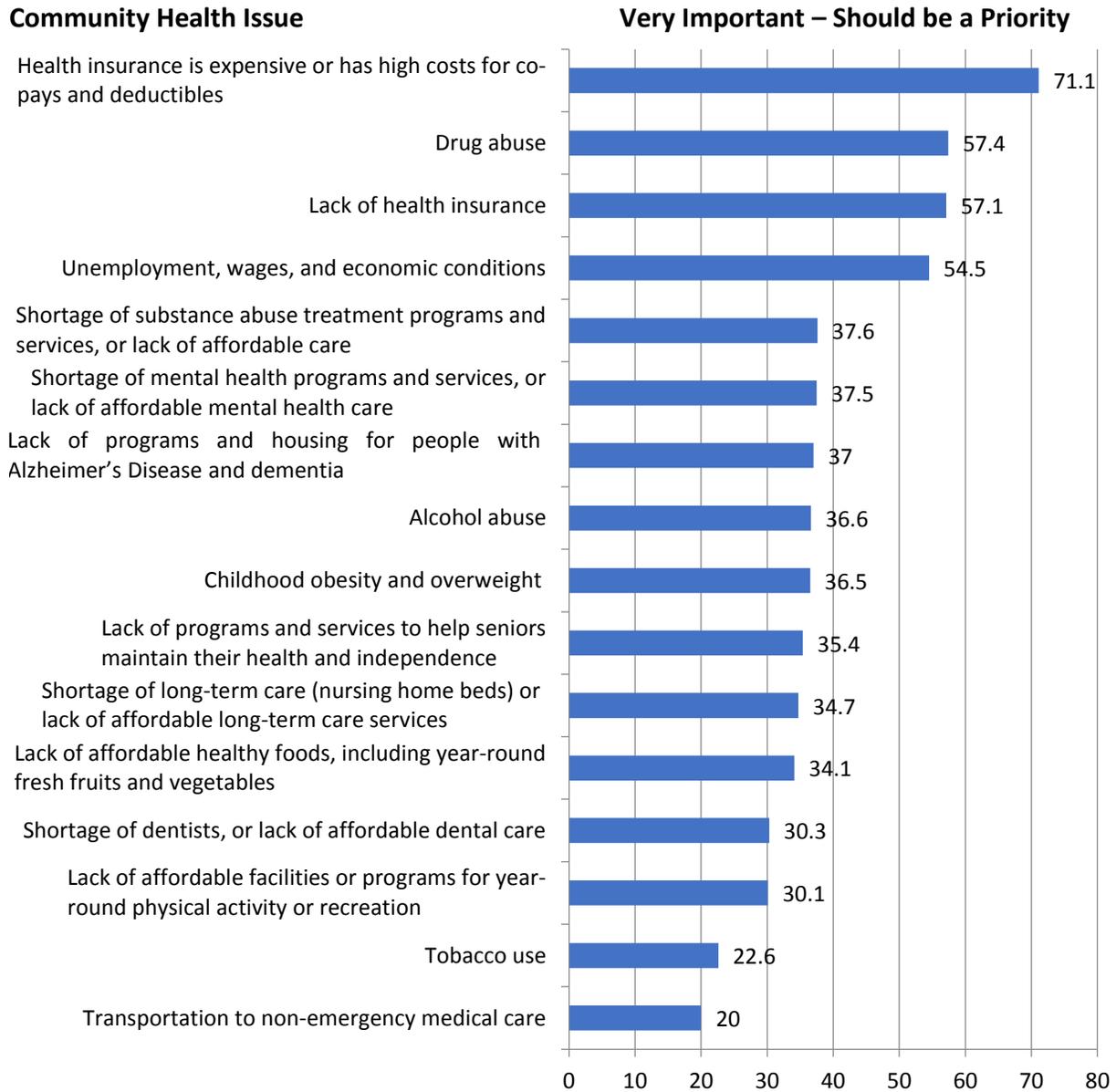
Summary of Findings

Among the 16 community issues, four were clearly ranked highest in priority across all counties – three economic factors, and drug abuse. For the entire Upper Peninsula (weighted estimates), these four issues were the only ones to garner more than 40 percent of support for “very important – should be a priority,” the highest ranking in importance of four choices:

- **Health insurance is expensive or has high costs for co-pays and deductibles:** At 71.1 percent across the region, this issue was ranked the highest priority in all but two U.P. counties, Gogebic County (where unemployment, wages and economic conditions ranked first), and Baraga County (where drug abuse ranked first.) With an additional 22.6 percent support for “fairly important,” an estimated 93.7 percent of adult U.P. residents rate this issue either fairly or very important.
- **Drug abuse:** Second-ranked region wide at 57.4 percent, drug abuse was the most-cited as very important among the three substance abuse issues on the survey. Alcohol abuse was lower ranked in importance, with 36.6 percent calling alcohol a very important community issue. Tobacco use ranked lowest of the three, with 22.6 percent calling it very important. Interestingly, tobacco use is the leading root cause of preventable death in the United States, with nearly 500,000 deaths annually attributed to tobacco use. But drug abuse garnered far greater support as a very important issue, owing to its visibility as a community problem with rising awareness about opioid addiction; and also perhaps because while tobacco is well recognized for contributing to disability, rising health care costs and premature death over decades- drug abuse may be perceived to cause more immediate societal impacts including crime, domestic violence, job-loss, drug-dependent infants, and overdose deaths.
- **Lack of health insurance:** This issue was virtually tied for second in importance along with drug abuse. Although rates of uninsured adults have declined significantly since the inception of ACA Marketplace and Healthy Michigan (Medicaid Expansion) health insurance programs in 2014, this remains an important issue for area residents.
- **Unemployment, wages, and economic conditions:** At 54.5 percent, this issue ranked a clear fourth, but with great variability between counties. While the Chippewa and Marquette rates for very important were just 45.3 and 45.6 percent, respectively, in four other counties, greater than two-thirds ranked this issue very important: Ontonagon County, 74.9 percent; Gogebic County 72.9 percent; Schoolcraft County, 68.5 percent; and Baraga County, 67.7 percent. This variability is to be expected, as unemployment in the Upper Peninsula tends to be lower in counties that are centers for higher education, health care, and other businesses, and higher in more rural or outlying areas.
- Note that across the U.P., all 16 issues received at least 60 percent combined support for the “fairly important” and “very important” answers. At the county or local health district level, any or all of these 16 issues could conceivably emerge as priorities for health improvement efforts.

Issue Ranking – U.P. Wide

The bar graph below illustrates the relative ranking of the 16 community health issues in order according to the perceptions of survey respondents. The numbers correspond to rates of those among the weighted sample who answered “very important – should be a priority” for each community health issue.



The data tables begin on the next even-numbered page, so that paired tables with county rates and rates by population group appear on facing pages. The six pairs of issue tables are then followed by 15 summary tables, with the 16 issues by region and then by each of the 14 county-level samples.

Below is a reproduction of the Community Health Issues and Priorities section of the survey, slightly reduced in size from the original, for your reference:

Section 24: Community Health Issues and Priorities				
<p>You have almost completed the survey. To this point, you have answered questions about your own individual health. Now we will ask you for your opinion on community health issues. For each issue, please select the response that best reflects how important you think the issue is on a 4-point scale, from "No an issue..." to "Very important..." Answer based on your perception of overall community conditions, not necessarily the needs of your family.</p> <p>24.1 In the table below, rate how important each issue is for people in your community—your neighborhood, city, township, county. How serious is each issue in your opinion, and how important is it for consideration in local or regional health improvement planning? (PLEASE CHECK ONE BOX IN EACH ROW)</p>				
Community Health Issue	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important—should be a priority
a. Unemployment, wages, and economic conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Lack of health insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Health insurance is expensive or has high costs for co-pays and deductibles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Shortage of mental health programs and services, or lack of affordable mental health care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Shortage of substance abuse treatment programs and services, or lack of affordable care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Shortage of dentists, or lack of affordable dental care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Transportation to non-emergency medical care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Tobacco use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Alcohol abuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Drug abuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Childhood obesity and overweight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Lack of affordable healthy foods, including year-round fresh fruits and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Lack of affordable facilities or programs for year-around physical activity or recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Lack of programs and services to help seniors maintain their health and independence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Lack of programs and housing for people with Alzheimer's Disease or dementia.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Tables begin on next page.)

Issues Table1A: Economic Factors by County			
	Unemployment, Wages, and Economic Conditions ^a	Lack of Health Insurance ^a	Health Insurance is Expensive or Has High Costs for Co-pays and Deductibles ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	54.5 (51.1, 57.9)	57.1 (53.7, 60.4)	71.1 (67.9, 74.3)
Alger	49.9 (41.5, 58.3)	52.0 (43.5, 60.6)	68.7 (60.7, 76.7)
Baraga	67.7 (56.7, 78.8)	58.9 (48.4, 69.4)	73.9 (64.2, 83.6)
Chippewa	45.3 (34.0, 56.6)	46.7 (35.3, 58.1)	60.2 (47.6, 72.8)
Delta	63.1 (54.4, 71.8)	60.6 (51.2, 70.0)	74.1 (65.0, 83.2)
Dickinson	52.2 (43.3, 61.1)	55.8 (46.9, 64.7)	75.5 (68.3, 82.7)
Gogebic	72.9 (65.6, 80.3)	63.5 (55.6, 71.4)	64.0 (55.8, 72.2)
Houghton/Kew.	55.1 (44.9, 62.3)	64.9 (56.4, 73.4)	80.2 (74.0, 86.4)
Iron	62.2 (53.9, 70.4)	57.1 (48.2, 65.9)	76.2 (69.6, 82.8)
Luce	56.4 (47.2, 65.6)	51.7 (42.6, 60.8)	69.6 (60.7, 78.5)
Mackinac	52.2 (39.6, 64.8)	57.0 (45.0, 68.9)	74.2 (63.5, 84.9)
Marquette	45.6 (36.6, 54.5)	55.0 (45.7, 64.3)	66.4 (57.6, 75.2)
Menominee	53.4 (41.5, 65.2)	55.9 (44.0, 67.7)	74.7 (62.8, 86.5)
Ontonagon	74.9 (69.4, 80.3)	60.1 (53.6, 66.7)	71.0 (65.2, 76.8)
Schoolcraft	68.5 (60.9, 76.2)	66.0 (57.5, 74.5)	78.8 (72.0, 85.7)

^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”

Issues Table 1B: Economic Factors by Population Groups			
	Unemployment, Wages, and Economic Conditions ^a	Lack of Health Insurance ^a	Health Insurance is Expensive or Has High Costs for Co-pays and Deductibles ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	54.5 (51.1, 57.9)	57.1 (53.7, 60.4)	71.1 (67.9, 74.3)
Age			
<i>18-39</i>	44.0 (35.8, 52.2)	46.7 (38.2, 55.1)	61.0 (52.7, 69.4)
<i>40-64</i>	60.7 (56.9, 64.5)	61.7 (57.9, 65.5)	78.3 (75.0, 81.6)
<i>65+</i>	56.9 (53.5, 60.3)	62.5 (59.2, 65.8)	71.6 (68.6, 74.6)
Gender			
<i>Male</i>	49.4 (43.8, 55.0)	52.3 (46.7, 58.0)	68.8 (63.4, 74.1)
<i>Female</i>	59.4 (55.6, 63.2)	61.6 (58.0, 65.3)	73.4 (69.7, 77.0)
Educational Attainment			
<i>Less than 12th grade</i>	54.0 (40.3, 67.6)	64.6 (52.3, 77.0)	68.8 (55.2, 82.3)
<i>High School Graduate</i>	55.6 (49.9, 61.4)	58.7 (52.9, 64.5)	74.3 (69.0, 79.6)
<i>1 to 3 years of college</i>	54.6 (48.8, 60.5)	58.0 (52.2, 63.7)	71.6 (66.0, 77.1)
<i>4 year degree or higher</i>	49.9 (44.7, 55.1)	45.6 (40.4, 50.8)	62.9 (57.6, 68.1)
Household Income			
<i>Less than \$25,000</i>	51.6 (45.0, 58.2)	61.9 (55.3, 68.5)	65.2 (58.2, 72.2)
<i>\$25,000 to \$49,999</i>	57.7 (51.8, 63.7)	63.0 (57.5, 68.4)	76.5 (71.8, 81.2)
<i>\$50,000 or higher</i>	53.1 (47.6, 58.5)	49.8 (44.4, 55.2)	70.8 (65.7, 76.0)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”			

Issues Table 2A: Health Care Access by County			
	Shortage of Mental Health Programs and Services, or Lack of Affordable Mental Health Care ^a	Shortage of Substance Abuse Treatment Programs and Services, or Lack of Affordable Care ^a	Shortage of Dentists, or Lack of Affordable Dental Care ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	37.5 (34.3, 40.6)	37.6 (34.4, 40.8)	30.3 (27.3, 33.3)
Alger	37.7 (29.8, 45.6)	34.3 (26.9, 41.6)	24.9 (18.4, 31.4)
Baraga	32.85 (23.2, 42.4)	36.0 (26.0, 46.1)	33.3 (21.8, 44.8)
Chippewa	33.0 (22.3, 43.8)	29.0 (19.3, 38.8)	24.7 (16.2, 33.3)
Delta	40.2 (31.2, 49.2)	43.6 (34.3, 52.8)	29.6 (20.9, 38.2)
Dickinson	36.8 (28.7, 44.8)	37.4 (28.9, 46.0)	31.6 (23.6, 39.5)
Gogebic	41.8 (33.6, 50.0)	46.4 (38.1, 54.7)	32.7 (24.8, 40.6)
Houghton/Kew.	38.0 (28.7, 47.3)	35.6 (25.2, 45.9)	26.6 (18.5, 34.7)
Iron	39.1 (29.9, 48.2)	44.6 (35.6, 53.6)	36.1 (28.2, 43.9)
Luce	42.5 (33.9, 51.2)	35.5 (27.5, 43.5)	26.9 (19.9, 33.8)
Mackinac	31.6 (21.8, 41.4)	33.7 (23.5, 43.9)	36.8 (23.7, 49.9)
Marquette	38.8 (30.1, 47.6)	37.5 (28.7, 46.3)	31.6 (23.0, 40.2)
Menominee	32.3 (21.6, 43.0)	36.1 (24.9, 47.3)	32.7 (21.8, 43.5)
Ontonagon	39.1 (32.0, 46.1)	39.5 (32.5, 46.6)	32.3 (25.4, 39.2)
Schoolcraft	45.7 (35.4, 56.1)	45.2 (34.8, 55.5)	34.1 (25.4, 42.8)

^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”

Issues Table 2B: Health Care Access by Population Groups			
	Shortage of Mental Health Programs and Services, or Lack of Affordable Mental Health Care ^a	Shortage of Substance Abuse Treatment Programs and Services, or Lack of Affordable Care ^a	Shortage of Dentists, or Lack of Affordable Dental Care ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	37.5 (34.3, 40.6)	37.6 (34.4, 40.8)	30.3 (27.3, 33.3)
Age			
<i>18-39</i>	35.4 (27.6, 43.1)	35.7 (27.7, 43.7)	25.4 (18.2, 32.5)
<i>40-64</i>	39.7 (35.9, 43.5)	38.6 (34.8, 42.4)	32.6 (28.8, 36.4)
<i>65+</i>	35.2 (32.0, 38.4)	37.7 (34.4, 41.0)	32.3 (29.1, 35.4)
Gender			
<i>Male</i>	28.9 (24.0, 33.9)	30.2 (25.0, 35.4)	22.7 (18.2, 27.2)
<i>Female</i>	45.7 (42.0, 49.3)	44.7 (41.0, 48.3)	37.7 (34.0, 41.4)
Educational Attainment			
<i>Less than 12th grade</i>	39.4 (27.0, 51.8)	37.5 (25.7, 49.3)	54.4 (41.3, 67.6)
<i>High School Graduate</i>	33.4 (28.8, 38.0)	35.5 (30.4, 40.6)	30.6 (26.1, 35.2)
<i>1 to 3 years of college</i>	42.3 (36.6, 48.1)	41.7 (35.9, 47.5)	30.2 (25.0, 35.4)
<i>4 year degree or higher</i>	34.8 (30.0, 39.6)	32.4 (27.8, 37.0)	15.0 (11.7, 18.3)
Household Income			
<i>Less than \$25,000</i>	39.0 (32.8, 45.1)	40.5 (34.4, 46.6)	41.9 (35.6, 48.2)
<i>\$25,000 to \$49,999</i>	36.9 (31.3, 42.6)	37.9 (31.8, 44.0)	32.6 (26.8, 38.4)
<i>\$50,000 or higher</i>	36.1 (31.2, 41.0)	35.0 (30.1, 39.9)	21.1 (17.1, 25.0)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”			

Issues Table 3A: Transportation to Care by County		
	Transportation to Non-Emergency Medical Care ^a	
	%	95% C.I.
Upper Peninsula	20.0	(17.4, 22.7)
Alger	20.4	(14.4, 26.5)
Baraga	24.2	(13.6, 34.8)
Chippewa	20.8	(11.4, 30.3)
Delta	18.4	(12.6, 24.3)
Dickinson	20.1	(13.2, 27.0)
Gogebic	22.5	(15.5, 29.5)
Houghton/Keweenaw	18.0	(11.8, 24.2)
Iron	20.5	(14.7, 26.2)
Luce	22.0	(14.8, 29.3)
Mackinac	20.6	(13.5, 27.7)
Marquette	17.6	(10.3, 24.9)
Menominee	25.3	(12.4, 38.2)
Ontonagon	27.5	(20.6, 34.4)
Schoolcraft	20.0	(13.9, 26.0)

^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”

Issues Table 3B: Transportation to Care by Population Groups		
	Transportation to Non-Emergency Medical Care ^a	
	%	95% C.I.
Upper Peninsula	20.0	(17.4, 22.7)
Age		
18-39	17.4	(10.8, 24.0)
40-65	19.8	(16.7, 22.8)
65+	23.2	(20.5, 25.9)
Gender		
Male	17.7	(13.3, 22.1)
Female	22.3	(19.4, 25.2)
Educational Attainment		
Less than 12th grade	34.9	(21.3, 48.6)
High School Graduate	23.8	(19.3, 28.2)
1-3 years of college	16.2	(12.4, 20.0)
4 year degree or higher	9.1	(6.6, 11.7)
Household Income		
Less than \$25,000	33.6	(27.3, 39.8)
\$25,000 to \$49,999	17.1	(12.7, 21.5)
\$50,000 or higher	13.8	(10.3, 17.3)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”		

Issues Table 4A: Substance Abuse by County			
	Tobacco Use ^a	Alcohol Abuse ^a	Drug Abuse ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	22.6 (20.3, 25.0)	36.6 (33.5, 39.6)	57.4 (54.0, 60.8)
Alger	23.7 (17.3, 30.0)	39.4 (31.6, 47.2)	55.2 (46.9, 63.6)
Baraga	39.1 (27.9, 50.2)	49.8 (38.9, 60.8)	79.3 (71.6, 86.9)
Chippewa	29.2 (19.2, 39.2)	40.6 (29.6, 51.6)	49.6 (37.8, 61.3)
Delta	24.5 (16.6, 32.4)	42.5 (33.0, 52.1)	64.2 (54.7, 73.7)
Dickinson	21.7 (15.4, 28.0)	34.4 (26.3, 42.6)	54.6 (45.7, 63.4)
Gogebic	25.7 (18.6, 32.8)	41.6 (33.5, 49.8)	63.0 (55.1, 71.0)
Houghton/Kew.	16.9 (10.5, 23.2)	30.8 (22.8, 38.9)	44.9 (35.3, 54.5)
Iron	28.8 (21.4, 35.2)	38.6 (30.6, 46.6)	68.3 (60.9, 75.7)
Luce	33.1 (24.6, 41.6)	41.9 (33.1, 50.7)	57.8 (48.5, 67.0)
Mackinac	22.1 (14.1, 30.2)	48.5 (36.0, 61.1)	64.1 (53.9, 74.4)
Marquette	18.3 (12.9, 23.8)	29.5 (22.1, 36.9)	56.9 (47.6, 66.2)
Menominee	18.5 (11.9, 25.1)	35.6 (24.1, 47.1)	60.0 (48.7, 71.3)
Ontonagon	24.9 (19.8, 30.0)	35.7 (29.8, 41.6)	60.3 (53.7, 66.8)
Schoolcraft	24.1 (17.3, 31.0)	40.0 (29.6, 50.5)	64.0 (54.7, 73.2)

^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”

Issues Table 4B: Substance Abuse by Population Groups			
	Tobacco Use ^a	Alcohol Abuse ^a	Drug Abuse ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	22.6 (20.3, 25.0)	36.6 (33.5, 39.6)	57.4 (54.0, 60.8)
Age			
<i>18-39</i>	13.9 (8.7, 19.2)	28.1 (21.0, 35.3)	52.7 (44.2, 61.2)
<i>40-64</i>	23.7 (20.7, 26.8)	38.4 (34.6, 42.2)	57.4 (53.4, 61.3)
<i>65+</i>	32.5 (29.3, 35.7)	44.3 (41.0, 47.7)	63.8 (60.5, 67.1)
Gender			
<i>Male</i>	20.1 (16.3, 23.9)	33.0 (28.0, 38.0)	53.3 (47.6, 59.0)
<i>Female</i>	25.1 (22.2, 27.9)	40.0 (36.5, 43.5)	61.3 (57.6, 65.0)
Educational Attainment			
<i>Less than 12th grade</i>	23.5 (14.8, 32.3)	35.2 (23.7, 46.7)	51.4 (38.0, 64.8)
<i>High School Graduate</i>	24.5 (20.4, 28.6)	38.0 (32.8, 43.1)	57.0 (51.2, 62.9)
<i>1 to 3 years of college</i>	21.9 (17.8, 25.9)	37.2 (32.0, 42.5)	61.0 (55.4, 66.7)
<i>4 year degree or higher</i>	18.4 (14.8, 21.9)	31.6 (27.1, 36.0)	52.9 (47.6, 58.2)
Household Income			
<i>Less than \$25,000</i>	30.5 (24.9, 36.2)	39.4 (33.3, 45.5)	57.4 (50.9, 63.9)
<i>\$25,000 to \$49,999</i>	22.8 (18.6, 27.0)	38.9 (33.3, 44.4)	59.3 (53.3, 65.3)
<i>\$50,000 or higher</i>	17.8 (14.7, 20.9)	32.6 (28.0, 37.2)	55.7 (50.2, 61.3)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”			

Issues Table 5A: Health and Wellness by County			
	Childhood Obesity and Overweight ^a	Lack of Affordable Healthy Foods, Including Year-around Fresh Fruits and Vegetables ^a	Lack of Affordable Facilities or Programs for Year-round Physical Activity or Recreation ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	36.5 (33.4, 39.5)	34.1 (30.9, 37.4)	30.1 (27.1, 33.2)
Alger	31.8 (24.7, 38.8)	35.0 (27.0, 42.9)	24.0 (17.1, 30.9)
Baraga	40.1 (29.9, 50.2)	37.5 (26.8, 48.2)	26.2 (17.4, 34.9)
Chippewa	38.5 (27.2, 49.9)	33.4 (22.3, 44.5)	33.7 (23.2, 44.1)
Delta	39.1 (29.8, 48.4)	30.2 (21.4, 39.0)	30.6 (21.1, 40.2)
Dickinson	43.3 (34.3, 52.3)	29.1 (21.4, 36.9)	28.0 (20.3, 35.7)
Gogebic	37.5 (29.5, 45.6)	29.3 (21.8, 36.8)	34.2 (26.1, 42.3)
Houghton/Kew.	28.0 (20.2, 35.7)	34.5 (25.4, 43.6)	27.4 (19.0, 35.9)
Iron	38.6 (30.5, 46.6)	34.3 (26.8, 41.7)	32.7 (24.9, 40.6)
Luce	43.5 (34.7, 52.4)	39.6 (30.8, 48.4)	39.6 (30.8, 48.4)
Mackinac	47.2 (34.5, 59.9)	42.6 (29.6, 55.5)	34.7 (21.4, 48.1)
Marquette	34.4 (26.3, 42.4)	33.1 (24.3, 41.9)	29.1 (20.8, 37.5)
Menominee	31.2 (21.9, 40.6)	39.3 (27.0, 51.6)	25.7 (17.0, 34.3)
Ontonagon	34.4 (28.2, 40.7)	38.3 (32.1, 44.6)	30.8 (24.0, 37.5)
Schoolcraft	45.1 (34.7, 55.4)	47.1 (36.8, 57.4)	41.0 (31.4, 50.6)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”			

Issues Table 5B: Health and Wellness by Population Groups			
	Childhood Obesity and Overweight ^a	Lack of Affordable Healthy Foods, Including Year-round Fresh Fruits and Vegetables ^a	Lack of Affordable Facilities or Programs for Year-round Physical Activity or Recreation ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	36.5 (33.4, 39.5)	34.1 (30.9, 37.4)	30.1 (27.1, 33.2)
Age			
<i>18-39</i>	30.2 (22.8, 37.5)	37.2 (29.1, 45.3)	34.2 (26.5, 41.9)
<i>40-64</i>	40.0 (36.2, 43.9)	34.3 (30.5, 38.1)	29.9 (26.3, 33.5)
<i>65+</i>	37.9 (34.7, 41.2)	28.7 (25.7, 31.7)	24.3 (21.6, 27.0)
Gender			
<i>Male</i>	33.4 (28.3, 38.4)	26.3 (21.1, 31.6)	23.6 (18.7, 28.6)
<i>Female</i>	39.4 (35.9, 43.0)	41.7 (38.0, 45.4)	36.5 (33.0, 40.0)
Educational Attainment			
<i>Less than 12th grade</i>	45.8 (32.5, 59.2)	54.5 (41.3, 67.7)	41.5 (27.6, 55.5)
<i>High School Graduate</i>	37.6 (32.5, 42.7)	36.8 (31.4, 42.2)	28.8 (24.5, 33.1)
<i>1 to 3 years of college</i>	34.2 (29.0, 39.4)	30.5 (25.4, 35.6)	31.7 (26.3, 37.2)
<i>4 year degree or higher</i>	33.0 (28.4, 37.6)	23.1 (18.9, 27.2)	22.6 (18.4, 26.8)
Household Income			
<i>Less than \$25,000</i>	39.0 (32.8, 45.2)	45.3 (38.9, 51.8)	38.7 (32.5, 44.9)
<i>\$25,000 to \$49,999</i>	41.9 (36.0, 47.8)	35.7 (30.0, 41.5)	33.2 (27.2, 39.1)
<i>\$50,000 or higher</i>	31.2 (26.8, 35.6)	25.9 (21.0, 30.7)	23.0 (19.0, 27.1)
^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”			

Issues Table 6A: Elder Services by County			
	Lack of Programs and Services to Help Maintain Their Health and Independence ^a	Shortage of Long-Term Care (Nursing Home Beds) or Lack of Affordable Long-Term Care Services ^a	Lack of Programs and Housing for People with Alzheimer’s Disease or Dementia ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	35.4 (32.3, 38.4)	34.7 (31.7, 37.7)	37.0 (33.9, 40.0)
Alger	36.2 (28.6, 43.7)	37.9 (30.3, 45.5)	42.1 (34.0, 50.3)
Baraga	36.4 (26.9, 45.8)	37.3 (27.7, 46.9)	40.7 (30.7, 50.7)
Chippewa	35.5 (25.0, 45.9)	30.7 (21.3, 40.0)	35.7 (25.7, 45.6)
Delta	38.6 (29.0, 48.1)	34.6 (26.1, 43.2)	33.9 (25.4, 42.4)
Dickinson	35.7 (27.1, 44.3)	36.7 (28.2, 45.3)	36.2 (27.8, 44.6)
Gogebic	38.0 (29.9, 46.0)	36.4 (28.5, 44.3)	43.4 (35.3, 51.6)
Houghton/Kew.	32.9 (24.1, 41.7)	34.1 (25.3, 42.9)	34.2 (25.4, 43.0)
Iron	38.4 (30.4, 46.4)	33.1 (25.3, 40.9)	35.7 (27.7, 43.7)
Luce	33.4 (25.5, 41.3)	34.9 (26.8, 43.0)	43.4 (34.6, 52.2)
Mackinac	39.5 (26.5, 52.5)	31.5 (21.7, 41.4)	43.8 (30.9, 56.7)
Marquette	32.7 (24.7, 40.8)	37.9 (29.2, 46.6)	34.4 (26.1, 42.8)
Menominee	34.1 (24.7, 43.6)	25.1 (17.2, 33.0)	41.2 (29.9, 52.5)
Ontonagon	40.6 (33.6, 47.7)	48.9 (42.0, 55.7)	47.3 (40.4, 54.1)
Schoolcraft	37.0 (28.4, 45.7)	36.4 (27.9, 45.0)	39.4 (30.4, 48.4)

^a The proportion of respondents who indicated that the community health issue was “very important — should be a priority.” The other choices were “fairly important”, “fairly unimportant” and “not an issue, or of very little importance.”

Issues Table 6B: Elder Services by Population Groups			
	Lack of Programs and Services to Help Maintain Their Health and Independence ^a	Shortage of Long-Term Care (Nursing Home Beds) or Lack of Affordable Long-Term Care Services ^a	Lack of Programs and Housing for People with Alzheimer's Disease or Dementia ^a
	% (95% C.I.)	% (95% C.I.)	% (95% C.I.)
Upper Peninsula	35.4 (32.3, 38.4)	34.7 (31.7, 37.7)	37.0 (33.9, 40.0)
Age			
<i>18-39</i>	26.2 (19.3, 33.1)	23.6 (16.8, 30.5)	25.9 (18.7, 33.0)
<i>40-64</i>	39.8 (35.8, 43.7)	38.5 (34.7, 42.3)	39.5 (35.7, 43.2)
<i>65+</i>	39.3 (36.0, 42.5)	42.0 (38.7, 45.3)	46.9 (43.5, 50.2)
Gender			
<i>Male</i>	29.0 (24.2, 33.8)	30.1 (25.3, 34.8)	32.4 (27.5, 37.3)
<i>Female</i>	41.5 (38.0, 45.1)	39.2 (35.7, 42.7)	41.4 (37.8, 44.9)
Educational Attainment			
<i>Less than 12th grade</i>	45.3 (31.9, 58.7)	46.9 (33.6, 60.3)	51.8 (38.3, 65.4)
<i>High School Graduate</i>	37.6 (32.7, 42.6)	38.5 (33.6, 43.5)	41.6 (36.4, 46.8)
<i>1 to 3 years of college</i>	36.4 (31.0, 41.7)	33.4 (28.2, 38.5)	33.8 (28.7, 38.8)
<i>4 year degree or higher</i>	20.1 (16.5, 23.8)	19.5 (15.9, 23.2)	22.4 (18.6, 26.1)
Household Income			
<i>Less than \$25,000</i>	45.3 (39.1, 51.6)	42.1 (35.9, 48.3)	43.7 (37.4, 50.0)
<i>\$25,000 to \$49,999</i>	40.6 (34.7, 46.5)	39.7 (34.0, 45.3)	42.8 (37.1, 48.6)
<i>\$50,000 or higher</i>	25.6 (21.5, 29.7)	26.3 (22.1, 30.5)	28.5 (24.2, 32.7)
^a The proportion of respondents who indicated that the community health issue was "very important — should be a priority." The other choices were "fairly important", "fairly unimportant" and "not an issue, or of very little importance."			

Community Health Issues and Priorities – Upper Peninsula

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of the Upper Peninsula gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	3.9	4.2	37.5	54.5
Lack of health insurance	4.7	5.3	33.0	57.1
Health insurance is expensive or has high costs for co-pays and deductibles	3.1	3.2	22.6	71.1
Shortage of mental health programs and services, or lack of affordable mental health care	6.6	13.9	42.1	37.5
Shortage of substance abuse treatment programs and services, or lack of affordable care	6.6	14.5	41.4	37.6
Shortage of dentists, or lack of affordable dental care	11.7	20.3	37.7	30.3
Transportation to non-emergency medical care	12.8	27.1	40.0	20.0
Tobacco use	15.2	24.0	38.2	22.6
Alcohol abuse	9.9	13.4	40.2	36.6
Drug abuse	7.8	6.6	28.2	57.4
Childhood obesity and overweight	7.2	16.8	39.5	36.5
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	11.1	18.6	36.1	34.1
Lack of affordable facilities or programs for year-round physical activity or recreation	13.3	20.4	36.2	30.1
Lack of programs and services to help seniors maintain their health and independence	7.9	16.4	40.4	35.4
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	8.8	17.6	38.9	34.7
Lack of programs and housing for people with Alzheimer’s Disease and dementia	7.1	15.9	40.1	37.0

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Alger County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Alger County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	3.2	5.8	41.1	49.9
Lack of health insurance	8.5	6.7	32.7	52.0
Health insurance is expensive or has high costs for co-pays and deductibles	2.1	3.3	25.9	68.7
Shortage of mental health programs and services, or lack of affordable mental health care	7.7	17.1	37.5	37.7
Shortage of substance abuse treatment programs and services, or lack of affordable care	7.1	17.6	41.1	34.3
Shortage of dentists, or lack of affordable dental care	14.9	23.4	36.8	24.9
Transportation to non-emergency medical care	17.1	27.1	35.4	20.4
Tobacco use	12.6	24.6	39.2	23.7
Alcohol abuse	10.3	12.9	37.3	39.4
Drug abuse	5.6	8.5	30.6	55.2
Childhood obesity and overweight	4.8	16.6	46.8	31.8
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	8.0	13.3	43.7	35.0
Lack of affordable facilities or programs for year-round physical activity or recreation	10.7	25.9	39.4	24.0
Lack of programs and services to help seniors maintain their health and independence	6.6	16.6	40.6	36.2
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	5.5	20.5	36.1	37.9
Lack of programs and housing for people with Alzheimer’s Disease and dementia	4.7	18.2	35.0	42.1

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Baraga County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Baraga County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	6.2	0.6	25.5	67.7
Lack of health insurance	7.9	4.0	29.3	58.9
Health insurance is expensive or has high costs for co-pays and deductibles	8.1	0.5	17.5	73.9
Shortage of mental health programs and services, or lack of affordable mental health care	9.3	13.7	44.2	32.8
Shortage of substance abuse treatment programs and services, or lack of affordable care	7.2	10.1	46.7	36.0
Shortage of dentists, or lack of affordable dental care	11.8	24.2	30.8	33.3
Transportation to non-emergency medical care	10.4	27.9	37.5	24.2
Tobacco use	10.3	18.8	31.8	39.1
Alcohol abuse	3.7	12.5	33.9	49.8
Drug abuse	3.6	3.8	13.3	79.3
Childhood obesity and overweight	3.5	17.7	38.7	40.1
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	9.2	12.7	40.6	37.5
Lack of affordable facilities or programs for year-round physical activity or recreation	4.8	17.5	51.6	26.1
Lack of programs and services to help seniors maintain their health and independence	4.6	18.0	41.0	36.4
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	8.7	8.2	45.8	37.3
Lack of programs and housing for people with Alzheimer’s Disease and dementia	5.8	13.9	39.5	40.7

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Chippewa County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Chippewa County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	6.1	6.5	42.1	45.3
Lack of health insurance	12.8	7.4	33.1	46.7
Health insurance is expensive or has high costs for co-pays and deductibles	10.0	4.3	25.4	60.2
Shortage of mental health programs and services, or lack of affordable mental health care	9.2	14.7	43.2	33.0
Shortage of substance abuse treatment programs and services, or lack of affordable care	10.5	13.2	47.2	29.0
Shortage of dentists, or lack of affordable dental care	17.9	23.7	33.7	24.7
Transportation to non-emergency medical care	15.6	28.0	35.6	20.8
Tobacco use	12.8	24.5	33.4	29.2
Alcohol abuse	10.3	19.8	29.3	40.6
Drug abuse	10.3	14.4	25.7	49.6
Childhood obesity and overweight	11.1	20.1	30.2	38.5
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	17.0	21.4	28.2	33.4
Lack of affordable facilities or programs for year-round physical activity or recreation	20.3	23.2	22.9	33.7
Lack of programs and services to help seniors maintain their health and independence	16.7	18.0	29.8	35.5
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	12.5	23.0	33.8	30.7
Lack of programs and housing for people with Alzheimer’s Disease and dementia	12.7	14.7	37.0	35.7

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Delta County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Delta County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	2.0	3.2	31.7	63.1
Lack of health insurance	1.7	5.5	32.2	60.6
Health insurance is expensive or has high costs for co-pays and deductibles	1.7	1.0	23.2	74.1
Shortage of mental health programs and services, or lack of affordable mental health care	4.4	12.1	43.3	40.2
Shortage of substance abuse treatment programs and services, or lack of affordable care	6.9	9.7	40.8	43.6
Shortage of dentists, or lack of affordable dental care	14.8	15.2	40.5	29.6
Transportation to non-emergency medical care	13.4	31.2	36.9	18.4
Tobacco use	19.7	21.1	34.7	24.5
Alcohol abuse	11.9	12.3	33.3	42.5
Drug abuse	9.6	5.0	21.2	64.2
Childhood obesity and overweight	9.5	12.1	39.3	39.1
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	9.9	18.3	41.6	30.2
Lack of affordable facilities or programs for year-round physical activity or recreation	12.9	16.7	39.8	30.6
Lack of programs and services to help seniors maintain their health and independence	7.2	14.9	39.4	38.6
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	6.4	21.2	37.8	34.6
Lack of programs and housing for people with Alzheimer’s Disease and dementia	6.7	20.1	39.4	33.9

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Dickinson County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Dickinson County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	3.9	7.6	36.3	52.2
Lack of health insurance	5.7	4.5	33.9	55.8
Health insurance is expensive or has high costs for co-pays and deductibles	5.9	4.7	14.0	75.5
Shortage of mental health programs and services, or lack of affordable mental health care	6.7	17.7	38.8	36.8
Shortage of substance abuse treatment programs and services, or lack of affordable care	9.3	16.4	36.8	37.4
Shortage of dentists, or lack of affordable dental care	11.8	20.1	36.5	31.6
Transportation to non-emergency medical care	15.8	22.1	41.9	20.1
Tobacco use	17.8	18.0	42.5	21.7
Alcohol abuse	11.0	11.2	43.5	34.4
Drug abuse	8.4	5.3	31.8	54.6
Childhood obesity and overweight	4.6	14.8	37.3	43.3
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	13.3	20.8	36.8	29.1
Lack of affordable facilities or programs for year-round physical activity or recreation	13.3	25.0	33.8	28.0
Lack of programs and services to help seniors maintain their health and independence	5.9	21.8	36.5	35.7
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	11.8	17.8	33.6	36.7
Lack of programs and housing for people with Alzheimer’s Disease and dementia	7.5	18.7	37.5	36.2

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Gogebic County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Gogebic County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	5.2	1.1	20.7	72.9
Lack of health insurance	4.1	7.3	25.1	63.5
Health insurance is expensive or has high costs for co-pays and deductibles	1.5	4.6	29.8	64.0
Shortage of mental health programs and services, or lack of affordable mental health care	14.7	10.5	33.0	41.8
Shortage of substance abuse treatment programs and services, or lack of affordable care	11.1	10.7	31.8	46.4
Shortage of dentists, or lack of affordable dental care	13.1	16.9	37.3	32.7
Transportation to non-emergency medical care	15.3	19.8	42.4	22.5
Tobacco use	17.1	19.2	38.1	25.7
Alcohol abuse	10.4	11.1	36.8	41.6
Drug abuse	8.4	5.0	23.6	63.0
Childhood obesity and overweight	5.5	10.0	47.0	37.5
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	11.9	18.6	40.2	29.3
Lack of affordable facilities or programs for year-round physical activity or recreation	10.8	15.2	39.8	34.2
Lack of programs and services to help seniors maintain their health and independence	11.2	13.6	37.3	38.0
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	12.4	17.1	34.1	36.4
Lack of programs and housing for people with Alzheimer’s Disease and dementia	8.0	10.8	37.8	43.4

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Houghton/Keweenaw Counties

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Houghton/Keweenaw counties gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	6.7	2.2	36.0	55.1
Lack of health insurance	5.3	2.5	27.3	64.9
Health insurance is expensive or has high costs for co-pays and deductibles	1.3	0.9	17.6	80.2
Shortage of mental health programs and services, or lack of affordable mental health care	6.8	8.9	46.3	38.0
Shortage of substance abuse treatment programs and services, or lack of affordable care	6.4	16.9	41.1	35.6
Shortage of dentists, or lack of affordable dental care	7.6	27.4	38.3	26.6
Transportation to non-emergency medical care	10.4	31.2	40.4	18.0
Tobacco use	14.5	35.6	33.0	16.9
Alcohol abuse	9.5	12.5	47.2	30.8
Drug abuse	8.9	7.8	38.3	44.9
Childhood obesity and overweight	7.8	27.5	36.8	28.0
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	12.5	20.1	32.9	34.5
Lack of affordable facilities or programs for year-round physical activity or recreation	17.8	26.4	28.4	27.4
Lack of programs and services to help seniors maintain their health and independence	7.5	15.0	44.6	32.9
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	6.4	24.0	35.5	34.1
Lack of programs and housing for people with Alzheimer’s Disease and dementia	6.3	21.1	38.4	34.2

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Iron County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Iron County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	2.7	3.3	31.8	62.2
Lack of health insurance	5.9	3.9	33.1	57.1
Health insurance is expensive or has high costs for co-pays and deductibles	3.7	1.8	18.3	76.2
Shortage of mental health programs and services, or lack of affordable mental health care	8.3	13.9	38.7	39.1
Shortage of substance abuse treatment programs and services, or lack of affordable care	8.2	10.9	36.2	44.6
Shortage of dentists, or lack of affordable dental care	11.8	11.9	40.2	36.1
Transportation to non-emergency medical care	14.6	22.2	42.8	20.5
Tobacco use	13.9	21.3	36.0	28.8
Alcohol abuse	9.6	12.0	39.7	38.6
Drug abuse	7.9	7.4	16.4	68.3
Childhood obesity and overweight	4.2	14.1	43.1	38.6
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	9.7	16.5	39.6	34.3
Lack of affordable facilities or programs for year-round physical activity or recreation	10.6	18.4	38.3	32.7
Lack of programs and services to help seniors maintain their health and independence	5.1	14.7	41.9	38.4
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	13.0	19.5	34.4	33.1
Lack of programs and housing for people with Alzheimer’s Disease and dementia	7.4	17.4	39.5	35.7

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Luce County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Luce County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	4.2	6.0	33.4	56.4
Lack of health insurance	4.0	6.8	37.5	51.7
Health insurance is expensive or has high costs for co-pays and deductibles	3.8	2.0	24.5	69.6
Shortage of mental health programs and services, or lack of affordable mental health care	8.2	11.0	38.2	42.5
Shortage of substance abuse treatment programs and services, or lack of affordable care	8.9	11.3	44.3	35.5
Shortage of dentists, or lack of affordable dental care	15.3	19.6	38.2	26.9
Transportation to non-emergency medical care	13.0	26.7	38.2	22.0
Tobacco use	14.7	19.7	32.5	33.1
Alcohol abuse	9.6	17.3	31.2	41.9
Drug abuse	6.5	7.3	28.4	57.8
Childhood obesity and overweight	5.8	19.9	30.7	43.5
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	11.0	18.4	30.9	39.6
Lack of affordable facilities or programs for year-round physical activity or recreation	9.7	21.3	29.3	39.6
Lack of programs and services to help seniors maintain their health and independence	6.3	15.3	44.9	33.4
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	7.5	15.6	42.0	34.9
Lack of programs and housing for people with Alzheimer’s Disease and dementia	7.5	12.9	36.2	43.4

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Mackinac County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Mackinac County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	2.4	9.3	36.2	52.2
Lack of health insurance	2.0	6.1	34.9	57.0
Health insurance is expensive or has high costs for co-pays and deductibles	0.5	6.8	18.5	74.2
Shortage of mental health programs and services, or lack of affordable mental health care	11.0	13.9	43.4	31.6
Shortage of substance abuse treatment programs and services, or lack of affordable care	12.0	11.6	42.7	33.7
Shortage of dentists, or lack of affordable dental care	8.8	22.6	31.8	36.8
Transportation to non-emergency medical care	10.6	36.9	32.0	20.6
Tobacco use	10.6	24.8	42.4	22.1
Alcohol abuse	7.3	9.6	34.5	48.5
Drug abuse	4.6	5.9	25.4	64.1
Childhood obesity and overweight	5.0	9.3	38.6	47.2
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	6.6	13.1	37.8	42.6
Lack of affordable facilities or programs for year-round physical activity or recreation	8.5	17.2	39.5	34.7
Lack of programs and services to help seniors maintain their health and independence	3.8	14.9	41.7	39.5
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	12.7	15.7	40.1	31.5
Lack of programs and housing for people with Alzheimer’s Disease and dementia	9.4	11.7	35.1	43.8

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Marquette County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Marquette County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	2.3	3.9	48.2	45.6
Lack of health insurance	2.0	4.2	38.8	55.0
Health insurance is expensive or has high costs for co-pays and deductibles	1.4	3.3	28.9	66.4
Shortage of mental health programs and services, or lack of affordable mental health care	2.7	14.7	43.8	38.8
Shortage of substance abuse treatment programs and services, or lack of affordable care	1.7	18.0	42.8	37.5
Shortage of dentists, or lack of affordable dental care	7.7	20.5	40.2	31.6
Transportation to non-emergency medical care	11.0	29.2	42.2	17.6
Tobacco use	13.4	24.2	44.1	18.3
Alcohol abuse	9.8	10.7	50.0	29.5
Drug abuse	6.9	4.4	31.8	56.9
Childhood obesity and overweight	7.7	16.1	41.8	34.4
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	10.4	20.0	36.5	33.1
Lack of affordable facilities or programs for year-round physical activity or recreation	13.8	19.8	37.2	29.1
Lack of programs and services to help seniors maintain their health and independence	6.4	15.4	45.4	32.7
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	7.4	12.6	42.1	37.9
Lack of programs and housing for people with Alzheimer’s Disease and dementia	6.0	11.2	48.4	34.4

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Menominee County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Menominee County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	4.4	4.3	37.9	53.4
Lack of health insurance	2.7	9.1	32.3	55.9
Health insurance is expensive or has high costs for co-pays and deductibles	0.7	6.4	18.3	74.7
Shortage of mental health programs and services, or lack of affordable mental health care	6.8	20.4	40.5	32.3
Shortage of substance abuse treatment programs and services, or lack of affordable care	4.5	15.9	43.5	36.1
Shortage of dentists, or lack of affordable dental care	13.4	17.7	36.2	32.7
Transportation to non-emergency medical care	10.4	19.1	45.2	25.3
Tobacco use	20.1	24.1	37.3	18.5
Alcohol abuse	7.3	21.5	35.5	35.6
Drug abuse	4.6	5.4	30.0	60.0
Childhood obesity and overweight	3.5	18.9	46.4	31.2
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	8.3	17.2	35.3	39.3
Lack of affordable facilities or programs for year-round physical activity or recreation	8.2	16.4	49.8	25.7
Lack of programs and services to help seniors maintain their health and independence	5.9	20.8	39.2	34.1
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	6.9	14.5	53.5	25.1
Lack of programs and housing for people with Alzheimer’s Disease and dementia	4.1	19.4	35.3	41.2

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Ontonagon County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Ontonagon County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	3.2	1.6	20.3	74.9
Lack of health insurance	3.1	4.2	32.6	60.1
Health insurance is expensive or has high costs for co-pays and deductibles	2.0	1.7	25.2	71.0
Shortage of mental health programs and services, or lack of affordable mental health care	10.9	11.3	38.7	39.1
Shortage of substance abuse treatment programs and services, or lack of affordable care	10.1	12.4	37.9	39.5
Shortage of dentists, or lack of affordable dental care	13.9	14.6	39.3	32.3
Transportation to non-emergency medical care	15.5	17.7	39.4	27.5
Tobacco use	20.9	21.1	33.0	24.9
Alcohol abuse	19.4	13.4	31.5	35.7
Drug abuse	12.8	7.2	19.8	60.3
Childhood obesity and overweight	10.2	12.6	42.8	34.4
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	11.2	14.9	35.6	38.3
Lack of affordable facilities or programs for year-round physical activity or recreation	12.7	16.9	39.6	30.8
Lack of programs and services to help seniors maintain their health and independence	6.3	15.7	37.4	40.6
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	7.0	12.9	31.2	48.9
Lack of programs and housing for people with Alzheimer’s Disease and dementia	5.6	12.6	34.5	47.3

*Percentages may not add to 100.0 due to rounding.

Community Health Issues and Priorities – Schoolcraft County

The percentages in the table below are weighted estimates from the 2017 Health Survey of Upper Peninsula Adults, in which residents of Schoolcraft County gave their opinions on the relative importance of 16 community health issues.*

Community Health Issues	Not an issue, or of very little importance	Fairly unimportant	Fairly important	Very important – should be a priority
Unemployment, wages, and economic conditions	2.2	2.6	26.7	68.5
Lack of health insurance	5.2	4.7	24.2	66.0
Health insurance is expensive or has high costs for co-pays and deductibles	2.5	4.0	14.6	78.8
Shortage of mental health programs and services, or lack of affordable mental health care	4.8	9.4	40.0	45.7
Shortage of substance abuse treatment programs and services, or lack of affordable care	9.7	11.7	33.4	45.2
Shortage of dentists, or lack of affordable dental care	13.3	13.3	39.3	34.1
Transportation to non-emergency medical care	15.5	21.5	43.1	20.0
Tobacco use	10.5	18.3	47.2	24.1
Alcohol abuse	6.6	10.7	42.6	40.0
Drug abuse	5.3	4.5	26.2	64.0
Childhood obesity and overweight	7.8	8.9	38.2	45.1
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	5.2	13.7	34.0	47.1
Lack of affordable facilities or programs for year-round physical activity or recreation	6.4	15.2	37.4	41.0
Lack of programs and services to help seniors maintain their health and independence	10.0	10.2	42.8	37.0
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	10.2	13.0	40.4	36.4
Lack of programs and housing for people with Alzheimer’s Disease and dementia	4.7	14.1	41.8	39.4

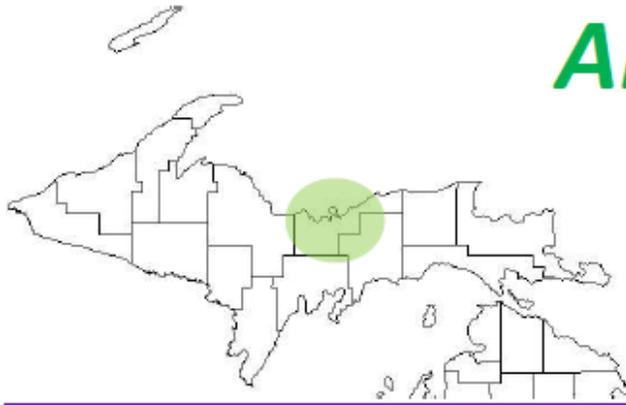
*Percentages may not add to 100.0 due to rounding.

COUNTY HEALTH DATA DASHBOARDS

The following 30 pages feature fifteen 2-page County Dashboards, handy references that can be printed in color, two-sided, for use by citizens and planners. They appear alphabetically by county name, beginning on page 321. Each front page has basic demographic and economic data and selected health survey data. Each back page contains a table of priorities as ranked by the county’s residents, and a spotlight on the health needs of a growing senior population.

Full-sized 8.5 X 11 inch versions for each Upper Peninsula county, for higher quality viewing and printing, are accessible at www.wupdhd.org/upchna.

County Dashboard	Pages
Alger County	321-322
Baraga County	323-324
Chippewa County	325-326
Delta County	327-328
Dickinson County	329-330
Gogebic County	331-332
Houghton County	333-334
Iron County	335-336
Keweenaw County	337-338
Luce County	339-340
Mackinac County	341-342
Marquette County	343-344
Menominee County	345-346
Ontonagon County	347-348
Schoolcraft County	349-350



Alger County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Alger County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-3.9% (9,862 to 9,476)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	18.4%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	14.3%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	16.1%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	40.0%	43.5%
Births to Residents (2016) ⁴	59	113,374
Deaths of Residents (2016) ⁴	113	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	732.6	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Alger County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	16.3%	18.0%
Unable to Access Healthcare Due to Cost	7.3%	12.8%
No Routine Checkup in Past 12 Months	29.2%	26.9%
No Dental Care Past 12 Months	35.5%	29.9%
Obese (Body Mass Index 30.0 or Greater)	41.5%	32.5%
Current Cigarette Smoker	14.6%	20.4%
Former Smoker	39.4%	25.8%
5+ Daily Servings of Fruits and Vegetables	7.7%	14.4%
Ever Diagnosed With Diabetes	13.0%	11.2%
Ever Diagnosed With Heart Disease	10.9%	5.1%
Ever Diagnosed With Cancer	13.0%	12.8%
Ever Diagnosed With Depressive Disorder	27.7%	22.0%
Took Medication for Mood Past 12 Months	25.0%	NA
Heavy Alcohol Drinker	14.8%	6.9%
Binge Alcohol Drinker	15.6%	19.0%
Used Marijuana Past 30 days	8.5%	NA
Ever Used Prescription Drugs to Get High	1.7%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	67.5%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	68.2%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

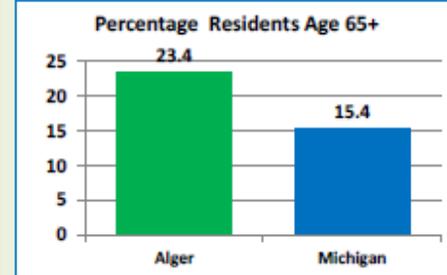
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

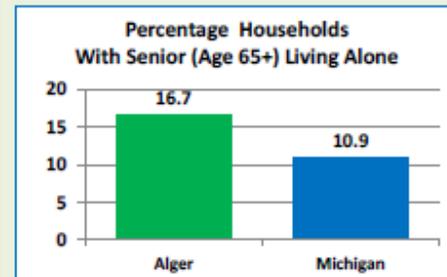
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Alger County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	68.7%
Drug abuse	55.2%
Lack of health insurance	52.0%
Unemployment, wages and economic conditions	49.9%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	42.1%
Alcohol abuse	39.4%
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	37.9%
Shortage of mental health programs and services, or lack of affordable mental health care	37.7%
Lack of programs and services to help seniors maintain their health and independence	36.2%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	35.0%

Senior Spotlight³



Alger County has a much higher proportion of seniors than the state and nation, at nearly one-fourth. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Baraga County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Baraga County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-0.6% (8,746 to 8,690)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	13.1%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	15.6%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	24.9%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	62.5%	43.5%
Births to Residents (2016) ⁴	62	113,374
Deaths of Residents (2016) ⁴	109	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	934.0	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Baraga County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	18.6%	18.0%
Unable to Access Healthcare Due to Cost	14.2%	12.8%
No Routine Checkup in Past 12 Months	34.0%	26.9%
No Dental Care Past 12 Months	23.6%	29.9%
Obese (Body Mass Index 30.0 or Greater)	43.5%	32.5%
Current Cigarette Smoker	17.3%	20.4%
Former Smoker	42.0%	25.8%
5+ Daily Servings of Fruits and Vegetables	6.9%	14.4%
Ever Diagnosed With Diabetes	12.8%	11.2%
Ever Diagnosed With Heart Disease	8.2%	5.1%
Ever Diagnosed With Cancer	14.4%	12.8%
Ever Diagnosed With Depressive Disorder	27.5%	22.0%
Took Medication for Mood Past 12 Months	18.7%	NA
Heavy Alcohol Drinker	18.3%	6.9%
Binge Alcohol Drinker	19.9%	19.0%
Used Marijuana Past 30 days	17.8%	NA
Ever Used Prescription Drugs to Get High	4.4%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	75.4%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	68.9%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

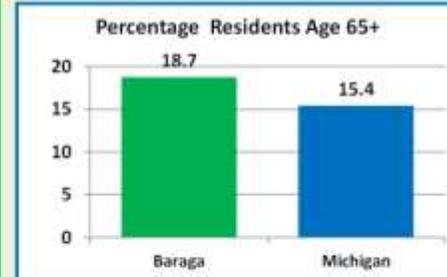
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

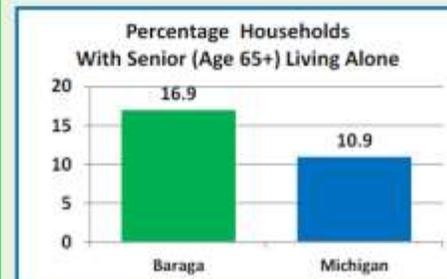
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Baraga County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Drug Abuse	79.3%
Health Insurance is expensive or has high costs for co-pays and deductibles	73.9%
Unemployment, wages and economic conditions	67.7%
Lack of health insurance	58.9%
Alcohol abuse	49.8%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	40.7%
Childhood obesity and overweight	40.1%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	37.5%
Shortage of long-term care (nursing beds) or lack of affordable long-term care and services	37.3%
Lack of programs and services to help seniors maintain their health and independence	36.4%

Senior Spotlight³



Baraga County has a larger proportion of seniors than the state and nation, especially when excluding the prison population included in census figures. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



More than 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Chippewa County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Chippewa County	Michigan
Percentage Population Change Year 2000 to 2015 ³	+0.1% (38,543 to 38,586)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	19.1%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	18.9%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	28.6%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	54.8%	43.5%
Births to Residents (2016) ⁴	331	113,374
Deaths of Residents (2016) ⁴	337	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	739.4	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Chippewa County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	21.7%	18.0%
Unable to Access Healthcare Due to Cost	8.2%	12.8%
No Routine Checkup in Past 12 Months	30.6%	26.9%
No Dental Care Past 12 Months	30.6%	29.9%
Obese (Body Mass Index 30.0 or Greater)	43.7%	32.5%
Current Cigarette Smoker	24.4%	20.4%
Former Smoker	26.5%	25.8%
5+ Daily Servings of Fruits and Vegetables	17.2%	14.4%
Ever Diagnosed With Diabetes	13.7%	11.2%
Ever Diagnosed With Heart Disease	10.4%	5.1%
Ever Diagnosed With Cancer	11.4%	12.8%
Ever Diagnosed With Depressive Disorder	30.0%	22.0%
Took Medication for Mood Past 12 Months	24.2%	NA
Heavy Alcohol Drinker	16.1%	6.9%
Binge Alcohol Drinker	13.5%	19.0%
Used Marijuana Past 30 days	8.5%	NA
Ever Used Prescription Drugs to Get High	5.0%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	81.5%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	83.6%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

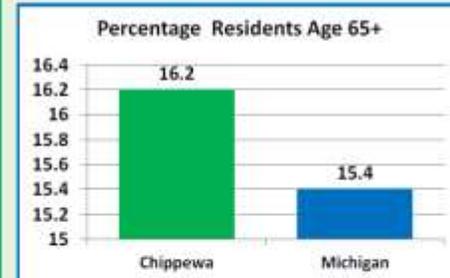
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

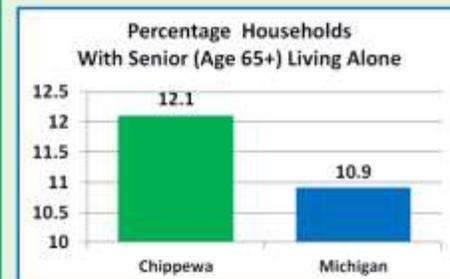
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Chippewa County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	60.2%
Drug abuse	49.6%
Lack of health insurance	46.7%
Unemployment, wages and economic conditions	45.3%
Alcohol abuse	40.6%
Childhood obesity and overweight	38.5%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	35.7%
Lack of programs and services to help seniors maintain their health and independence	35.5%
Lack of affordable facilities or programs for year-round physical activity or recreation	33.7%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	33.4%

Senior Spotlight³



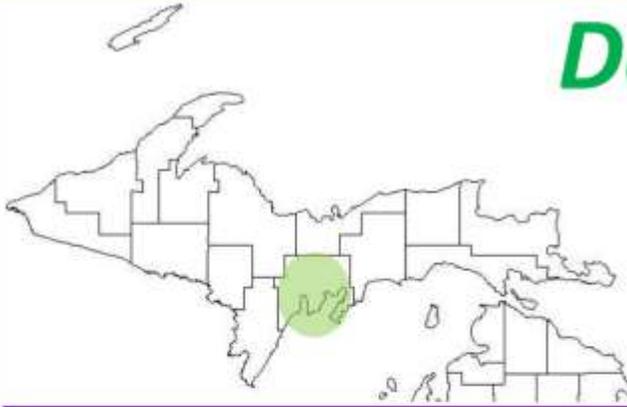
Chippewa County has a larger proportion of seniors than the state and nation, at nearly 20 percent when excluding prisoners and college students from data. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-8 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Delta County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Delta County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-4.7% (38,520 to 36,712)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	18.9%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	17.2%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	24.5%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	53.3%	43.5%
Births to Residents (2016) ⁴	338	113,374
Deaths of Residents (2016) ⁴	468	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	768.0	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Delta County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	13.5%	18.0%
Unable to Access Healthcare Due to Cost	13.9%	12.8%
No Routine Checkup in Past 12 Months	19.8%	26.9%
No Dental Care Past 12 Months	38.4%	29.9%
Obese (Body Mass Index 30.0 or Greater)	41.7%	32.5%
Current Cigarette Smoker	10.0%	20.4%
Former Smoker	32.8%	25.8%
5+ Daily Servings of Fruits and Vegetables	5.2%	14.4%
Ever Diagnosed With Diabetes	15.7%	11.2%
Ever Diagnosed With Heart Disease	12.4%	5.1%
Ever Diagnosed With Cancer	14.8%	12.8%
Ever Diagnosed With Depressive Disorder	24.6%	22.0%
Took Medication for Mood Past 12 Months	31.5%	NA
Heavy Alcohol Drinker	10.4%	6.9%
Binge Alcohol Drinker	10.6%	19.0%
Used Marijuana Past 30 days	6.1%	NA
Ever Used Prescription Drugs to Get High	0.5%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	69.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	69.9%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

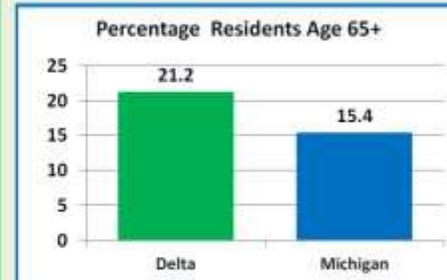
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

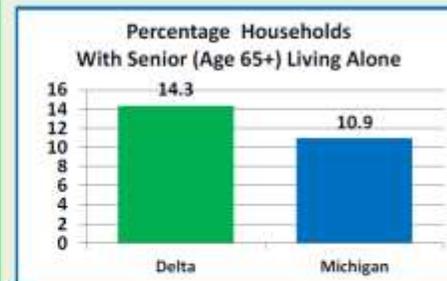
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Delta County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	74.1%
Drug abuse	64.2%
Unemployment, wages and economic conditions	63.1%
Lack of health insurance	60.6%
Shortage of substance abuse treatment programs and services, or lack of affordable care	43.6%
Alcohol abuse	42.5%
Shortage of mental health programs and services, or lack of affordable mental health care	40.2%
Childhood obesity and overweight	39.1%
Lack of programs and services to help seniors maintain their health and independence	38.6%
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	34.6%

Senior Spotlight³



Delta County has a much larger proportion of seniors than the state and nation, at greater than 21 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-7 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.

Dickinson County



2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Dickinson County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-5.3% (27,472 to 26,012)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	22.4%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	13.8%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	14.7%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	44.5%	43.5%
Births to Residents (2016) ⁴	287	113,374
Deaths of Residents (2016) ⁴	329	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	769.1	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Dickinson County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	16.3%	18.0%
Unable to Access Healthcare Due to Cost	13.3%	12.8%
No Routine Checkup in Past 12 Months	17.0%	26.9%
No Dental Care Past 12 Months	31.2%	29.9%
Obese (Body Mass Index 30.0 or Greater)	31.8%	32.5%
Current Cigarette Smoker	12.8%	20.4%
Former Smoker	32.6%	25.8%
5+ Daily Servings of Fruits and Vegetables	5.1%	14.4%
Ever Diagnosed With Diabetes	8.8%	11.2%
Ever Diagnosed With Heart Disease	9.0%	5.1%
Ever Diagnosed With Cancer	13.2%	12.8%
Ever Diagnosed With Depressive Disorder	26.6%	22.0%
Took Medication for Mood Past 12 Months	21.9%	NA
Heavy Alcohol Drinker	9.1%	6.9%
Binge Alcohol Drinker	11.4%	19.0%
Used Marijuana Past 30 days	6.0%	NA
Ever Used Prescription Drugs to Get High	0.2%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	82.5%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	72.2%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

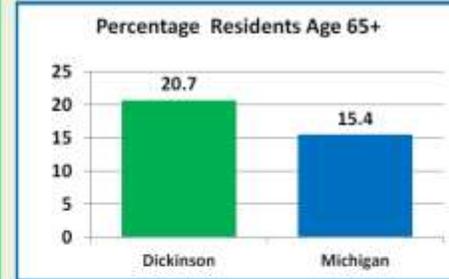
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

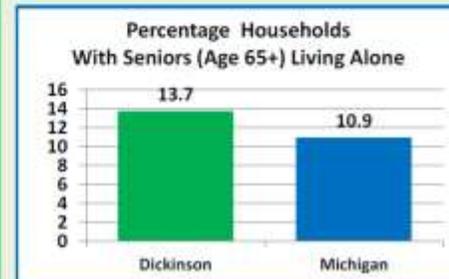
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Dickinson County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	75.5%
Lack of health insurance	55.8%
Drug Abuse	54.6%
Unemployment, wages and economic conditions	52.2%
Childhood obesity and overweight	43.3%
Shortage of substance abuse treatment programs and services, or lack of affordable care	37.4%
Shortage of mental health programs and services, or lack of affordable mental health care	36.8%
Shortage of long-term care (nursing home beds) or lack of affordable long-term care services	36.7%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	36.2%
Lack of programs and services to help seniors maintain their health and independence	35.7%

Senior Spotlight³



Dickinson County has a much higher proportion of seniors than the state and nation, at nearly 21 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-7 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Gogebic County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Gogebic County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-8.9% (17,370 to 15,824)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	18.3%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	20.2%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	34.0%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	62.6%	43.5%
Births to Residents (2016) ⁴	128	113,374
Deaths of Residents (2016) ⁴	198	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	797.3	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Gogebic County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	13.8%	18.0%
Unable to Access Healthcare Due to Cost	13.3%	12.8%
No Routine Checkup in Past 12 Months	32.9%	26.9%
No Dental Care Past 12 Months	29.6%	29.9%
Obese (Body Mass Index 30.0 or Greater)	42.1%	32.5%
Current Cigarette Smoker	20.1%	20.4%
Former Smoker	37.4%	25.8%
5+ Daily Servings of Fruits and Vegetables	14.0%	14.4%
Ever Diagnosed With Diabetes	15.6%	11.2%
Ever Diagnosed With Heart Disease	12.8%	5.1%
Ever Diagnosed With Cancer	12.3%	12.8%
Ever Diagnosed With Depressive Disorder	23.3%	22.0%
Took Medication for Mood Past 12 Months	23.7%	NA
Heavy Alcohol Drinker	15.2%	6.9%
Binge Alcohol Drinker	9.2%	19.0%
Used Marijuana Past 30 days	7.0%	NA
Ever Used Prescription Drugs to Get High	2.7%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	71.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	63.0%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

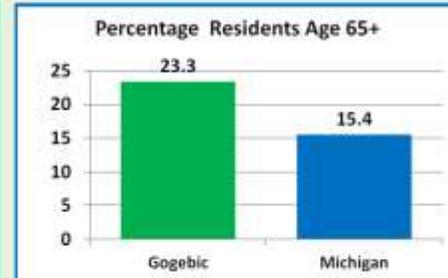
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

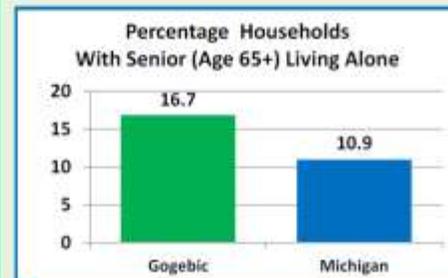
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Gogebic County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Unemployment, wages and economic conditions	72.9%
Health insurance is expensive or has high costs for co-pays and deductibles	64.0%
Lack of health insurance	63.5%
Drug Abuse	63.0%
Shortage of substance abuse treatment programs and services, or lack of affordable care	46.4%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	43.4%
Shortage of mental health programs and services, or lack of affordable mental health care	41.8%
Alcohol Abuse	41.6%
Lack of programs and services to help seniors maintain their health and independence	38.0%
Childhood obesity and overweight	37.5%

Senior Spotlight³



Gogebic County has a much higher proportion of seniors than the state and nation, and would be higher still excluding the prison population. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



More than 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Houghton County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Houghton County	Michigan
Percentage Population Change Year 2000 to 2015 ³	1.8% (36,016 to 36,660)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	31.1%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	21.4%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	18.0%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	34.4%	43.5%
Births to Residents (2016) ⁴	360	113,374
Deaths of Residents (2016) ⁴	354	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	775.6	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Houghton and Keweenaw counties (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	14.5%	18.0%
Unable to Access Healthcare Due to Cost	19.0%	12.8%
No Routine Checkup in Past 12 Months	21.4%	26.9%
No Dental Care Past 12 Months	32.9%	29.9%
Obese (Body Mass Index 30.0 or Greater)	29.6%	32.5%
Current Cigarette Smoker	11.5%	20.4%
Former Smoker	28.8%	25.8%
5+ Daily Servings of Fruits and Vegetables	10.7%	14.4%
Ever Diagnosed With Diabetes	7.9%	11.2%
Ever Diagnosed With Heart Disease	8.8%	5.1%
Ever Diagnosed With Cancer	11.2%	12.8%
Ever Diagnosed With Depressive Disorder	27.6%	22.0%
Took Medication for Mood Past 12 Months	24.9%	NA
Heavy Alcohol Drinker	12.5%	6.9%
Binge Alcohol Drinker	11.4%	19.0%
Used Marijuana Past 30 days	4.7%	NA
Ever Used Prescription Drugs to Get High	1.8%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	78.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	75.7%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

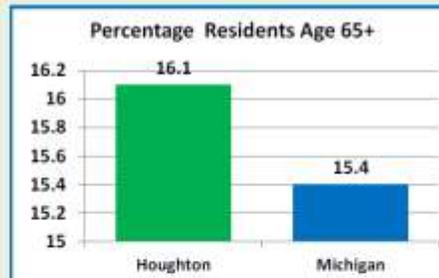
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

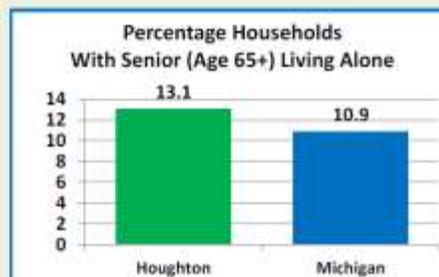
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Houghton and Keweenaw counties. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	80.2%
Lack of health insurance	64.9%
Unemployment, wages and economic conditions	55.1%
Drug abuse	44.9%
Shortage of mental health programs and services, or lack of affordable mental health care	38.0%
Shortage of substance abuse treatment programs and services, or lack of affordable care	35.6%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	34.5%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	34.2%
Shortage of long-term care (nursing beds) or lack of affordable long-term care and services	34.1%
Lack of programs and services to help seniors maintain their health and independence	32.9%

Senior Spotlight³



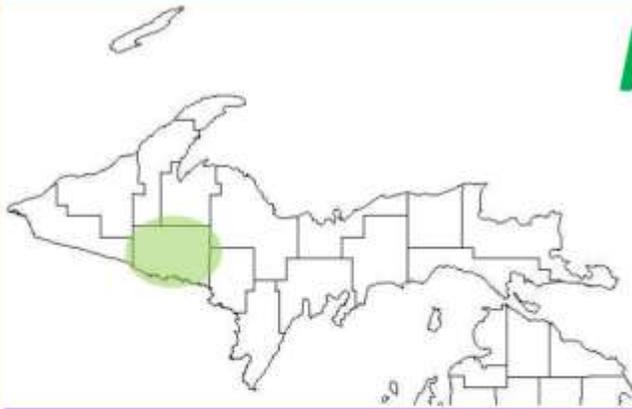
Houghton County has a larger proportion of seniors than the state and nation, especially when excluding college students. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



More than 1-in-8 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Iron County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wuphd.org/upchna²

Fast Facts

Indicator	Iron County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-12.4% (13,138 to 11,507)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	19.3%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	15.6%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	24.8%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	63.0%	43.5%
Births to Residents (2016) ⁴	101	113,374
Deaths of Residents (2016) ⁴	202	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	879.6	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Iron County (definitions at wuphd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	23.3%	18.0%
Unable to Access Healthcare Due to Cost	21.8%	12.8%
No Routine Checkup in Past 12 Months	28.8%	26.9%
No Dental Care Past 12 Months	41.7%	29.9%
Obese (Body Mass Index 30.0 or Greater)	40.3%	32.5%
Current Cigarette Smoker	19.0	20.4%
Former Smoker	37.3	25.8%
5+ Daily Servings of Fruits and Vegetables	8.0	14.4%
Ever Diagnosed With Diabetes	12.5%	11.2%
Ever Diagnosed With Heart Disease	14.4%	5.1%
Ever Diagnosed With Cancer	19.0%	12.8%
Ever Diagnosed With Depressive Disorder	20.7%	22.0%
Took Medication for Mood Past 12 Months	18.7%	NA
Heavy Alcohol Drinker	19.2%	6.9%
Binge Alcohol Drinker	20.5%	19.0%
Used Marijuana Past 30 days	11.8%	NA
Ever Used Prescription Drugs to Get High	6.1%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	74.8%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	78.9%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

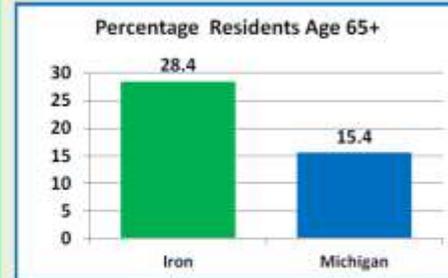
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

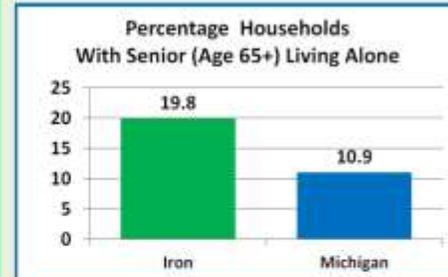
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Iron County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	76.2%
Drug abuse	68.3%
Unemployment, wages and economic conditions	62.2%
Lack of health insurance	57.1%
Shortage of substance abuse treatment programs and services, or lack of affordable care	44.6%
Shortage of mental health programs and services, or lack of affordable mental health care	39.1%
Childhood obesity and overweight	38.6%
Lack of programs and services to help seniors maintain their health and independence	38.4%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	35.7%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	34.3%

Senior Spotlight³



Iron County has nearly twice the proportion of seniors than the state and nation, approaching 30 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-5 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Keweenaw County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Keweenaw County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-4.5% (2,301 to 2,198)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree or Higher (2011-15) ³	22.8%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	15.3%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	26.3%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	43.8%	43.5%
Births to Residents (2016) ⁴	21	113,374
Deaths of Residents (2016) ⁴	27	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	615.0	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Houghton and Keweenaw counties (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	14.5%	18.0%
Unable to Access Healthcare Due to Cost	19.0%	12.8%
No Routine Checkup in Past 12 Months	21.4%	26.9%
No Dental Care Past 12 Months	32.9%	29.9%
Obese (Body Mass Index 30.0 or Greater)	29.6%	32.5%
Current Cigarette Smoker	11.5%	20.4%
Former Smoker	28.8%	25.8%
5+ Daily Servings of Fruits and Vegetables	10.7%	14.4%
Ever Diagnosed With Diabetes	7.9%	11.2%
Ever Diagnosed With Heart Disease	8.8%	5.1%
Ever Diagnosed With Cancer	11.2%	12.8%
Ever Diagnosed With Depressive Disorder	27.6%	22.0%
Took Medication for Mood Past 12 Months	24.9%	NA
Heavy Alcohol Drinker	12.5%	6.9%
Binge Alcohol Drinker	11.4%	19.0%
Used Marijuana Past 30 days	4.7%	NA
Ever Used Prescription Drugs to Get High	1.8%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	78.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	75.7%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

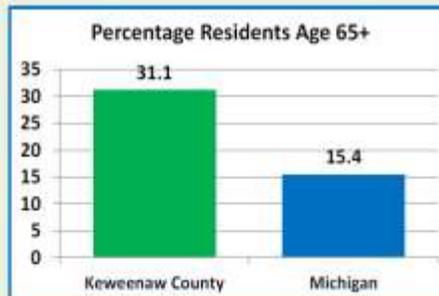
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

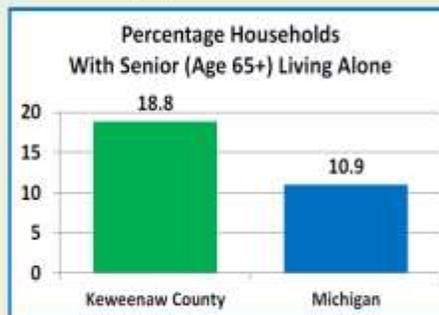
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Houghton and Keweenaw counties. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	80.2%
Lack of health insurance	64.9%
Unemployment, wages and economic conditions	55.1%
Drug abuse	44.9%
Shortage of mental health programs and services, or lack of affordable mental health care	38.0%
Shortage of substance abuse treatment programs and services, or lack of affordable care	35.6%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	34.5%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	34.2%
Shortage of long-term care (nursing beds) or lack of affordable long-term care and services	34.1%
Lack of programs and services to help seniors maintain their health and independence	32.9%

Senior Spotlight³



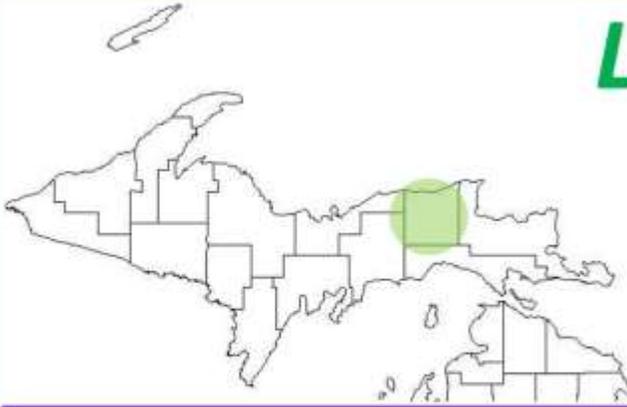
Keweenaw County has more than twice the proportion of seniors than the state and nation. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



Almost 1-in-5 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Luce County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Luce County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-7.8% (7,024 to 6,477)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	12.4%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	19.5%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	36.1%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	68.8%	43.5%
Births to Residents (2016) ⁴	43	113,374
Deaths of Residents (2016) ⁴	91	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	964.9	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Luce County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	22.3%	18.0%
Unable to Access Healthcare Due to Cost	10.8%	12.8%
No Routine Checkup in Past 12 Months	21.0%	26.9%
No Dental Care Past 12 Months	32.9%	29.9%
Obese (Body Mass Index 30.0 or Greater)	53.4%	32.5%
Current Cigarette Smoker	22.0%	20.4%
Former Smoker	38.0%	25.8%
5+ Daily Servings of Fruits and Vegetables	10.1%	14.4%
Ever Diagnosed With Diabetes	14.3%	11.2%
Ever Diagnosed With Heart Disease	12.3%	5.1%
Ever Diagnosed With Cancer	12.1%	12.8%
Ever Diagnosed With Depressive Disorder	24.4%	22.0%
Took Medication for Mood Past 12 Months	25.7%	NA
Heavy Alcohol Drinker	14.4%	6.9%
Binge Alcohol Drinker	19.7%	19.0%
Used Marijuana Past 30 days	5.6%	NA
Ever Used Prescription Drugs to Get High	1.2%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	76.3%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	68.9%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

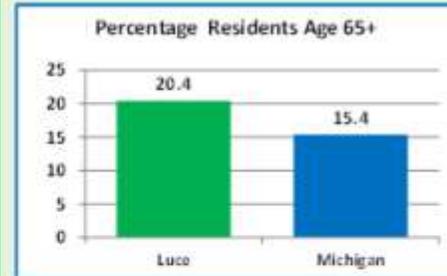
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

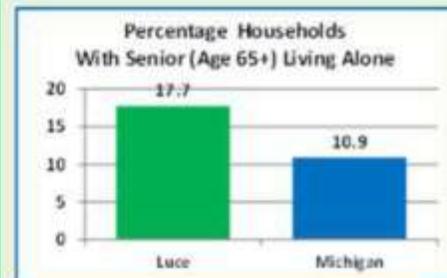
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Luce County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	69.6%
Drug abuse	57.8%
Unemployment, wages and economic conditions	56.4%
Lack of health insurance	51.7%
Childhood obesity and overweight	43.5%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	43.4%
Shortage of mental health programs and services, or lack of affordable mental health care	42.5%
Alcohol abuse	41.9%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	39.6%
Lack of affordable facilities or programs for year-round physical activity or recreation	(tie 9 th -10 th) 39.6%

Senior Spotlight³



Luce County has a much larger proportion of seniors than the state and nation, and it would be even larger if the data excluded prisoners. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Mackinac County

2018 Upper Peninsula
Community Health Needs Assessment
(CHNA) County Dashboards¹

More information at
www.wuphd.org/upchna²

Fast Facts

Indicator	Mackinac County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-7.9% (11,943 to 11,044)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	18.3%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	15.9%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	25.5%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	51.2%	43.5%
Births to Residents (2016) ⁴	86	113,374
Deaths of Residents (2016) ⁴	140	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	794.1	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Mackinac County (definitions at wuphd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	12.2%	18.0%
Unable to Access Healthcare Due to Cost	21.3%	12.8%
No Routine Checkup in Past 12 Months	31.2%	26.9%
No Dental Care Past 12 Months	25.6%	29.9%
Obese (Body Mass Index 30.0 or Greater)	35.2%	32.5%
Current Cigarette Smoker	18.0%	20.4%
Former Smoker	41.3%	25.8%
5+ Daily Servings of Fruits and Vegetables	11.4%	14.4%
Ever Diagnosed With Diabetes	6.2%	11.2%
Ever Diagnosed With Heart Disease	8.9%	5.1%
Ever Diagnosed With Cancer	17.6%	12.8%
Ever Diagnosed With Depressive Disorder	27.1%	22.0%
Took Medication for Mood Past 12 Months	23.3%	NA
Heavy Alcohol Drinker	13.6%	6.9%
Binge Alcohol Drinker	14.5%	19.0%
Used Marijuana Past 30 days	7.0%	NA
Ever Used Prescription Drugs to Get High	6.8%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	78.4%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	75.1%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

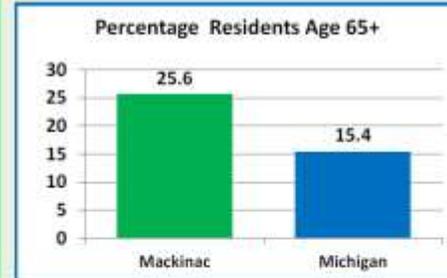
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

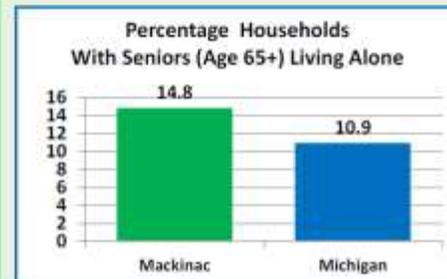
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Mackinac County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	74.2%
Drug abuse	64.1%
Lack of health insurance	57.0%
Unemployment, wages and economic conditions	52.2%
Alcohol abuse	48.5%
Childhood obesity and overweight	47.2%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	43.8%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	42.6%
Lack of programs and services to help seniors maintain their health and independence	39.5%
Shortage of dentists, or lack of affordable dental care	36.8%

Senior Spotlight³



Mackinac County has nearly twice the proportion of seniors than the state and nation, approaching 26 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-7 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Marquette County

2018 Upper Peninsula Community Health Needs Assessment (CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Marquette County	Michigan
Percentage Population Change Year 2000 to 2015 ³	4.6% (64,634 to 67,582)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	28.8%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	17.0%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	17.7%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	43.8%	43.5%
Births to Residents (2016) ⁴	668	113,374
Deaths of Residents (2016) ⁴	689	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	772.6	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Marquette County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	15.5%	18.0%
Unable to Access Healthcare Due to Cost	19.9%	12.8%
No Routine Checkup in Past 12 Months	28.5%	26.9%
No Dental Care Past 12 Months	28.2%	29.9%
Obese (Body Mass Index 30.0 or Greater)	32.6%	32.5%
Current Cigarette Smoker	19.7%	20.4%
Former Smoker	31.3%	25.8%
5+ Daily Servings of Fruits and Vegetables	14.5%	14.4%
Ever Diagnosed With Diabetes	8.4%	11.2%
Ever Diagnosed With Heart Disease	7.3%	5.1%
Ever Diagnosed With Cancer	10.8%	12.8%
Ever Diagnosed With Depressive Disorder	27.2%	22.0%
Took Medication for Mood Past 12 Months	25.2%	NA
Heavy Alcohol Drinker	14.5%	6.9%
Binge Alcohol Drinker	11.9%	19.0%
Used Marijuana Past 30 days	9.3%	NA
Ever Used Prescription Drugs to Get High	5.8%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	82.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	79.2%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

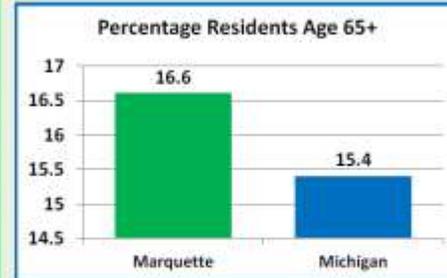
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

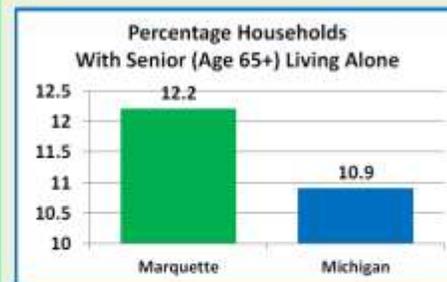
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Marquette County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	66.4%
Drug abuse	56.9%
Lack of health insurance	55.0%
Unemployment, wages and economic conditions	45.6%
Shortage of mental health programs and services, or lack of affordable mental health care	38.8%
Shortage of long-term care (nursing beds) or lack of affordable long-term care and services	37.9%
Shortage of substance abuse treatment programs and services, or lack of affordable care	37.5%
Childhood obesity and overweight	34.4%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	34.4% (tie 8 th -9 th)
Lack of programs and services to help seniors maintain their health and independence	32.9%

Senior Spotlight³



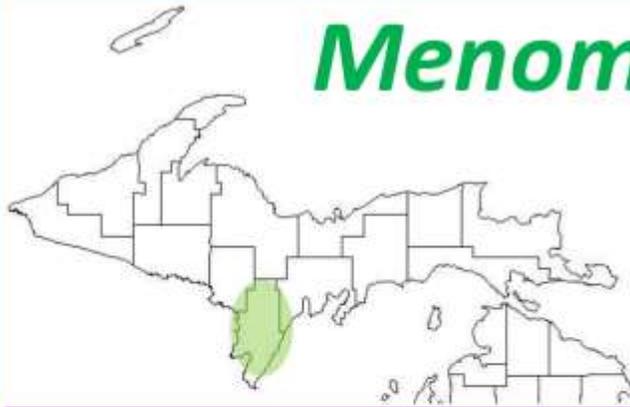
Marquette County has a larger proportion of seniors than the state and nation, especially when excluding college students. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



Almost 1-in-8 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Menominee County

2018 Upper Peninsula
Community Health Needs Assessment
(CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Menominee County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-6.4% (25,326 to 23,717)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	15.1%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	16.2%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	30.4%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	52.2%	43.5%
Births to Residents (2016) ⁴	199	113,374
Deaths of Residents (2016) ⁴	270	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	644.6	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Menominee County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	12.7%	18.0%
Unable to Access Healthcare Due to Cost	19.0%	12.8%
No Routine Checkup in Past 12 Months	27.5%	26.9%
No Dental Care Past 12 Months	28.0%	29.9%
Obese (Body Mass Index 30.0 or Greater)	35.8%	32.5%
Current Cigarette Smoker	27.0%	20.4%
Former Smoker	30.6%	25.8%
5+ Daily Servings of Fruits and Vegetables	6.5%	14.4%
Ever Diagnosed With Diabetes	10.1%	11.2%
Ever Diagnosed With Heart Disease	7.8%	5.1%
Ever Diagnosed With Cancer	15.2%	12.8%
Ever Diagnosed With Depressive Disorder	17.2%	22.0%
Took Medication for Mood Past 12 Months	16.8%	NA
Heavy Alcohol Drinker	18.3%	6.9%
Binge Alcohol Drinker	16.0%	19.0%
Used Marijuana Past 30 days	6.7%	NA
Ever Used Prescription Drugs to Get High	2.5%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	78.5%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	77.6%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

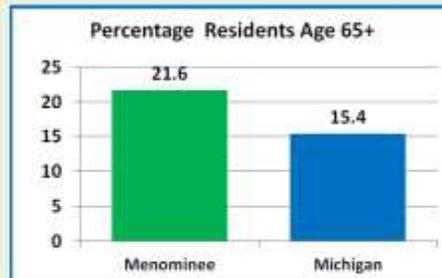
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

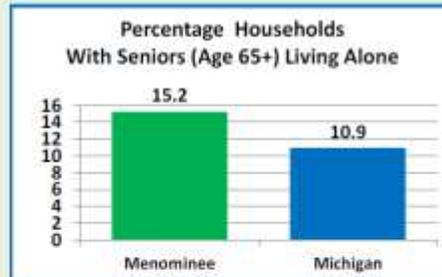
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Menominee County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health Insurance is expensive or has high costs for co-pays and deductibles	74.7%
Drug abuse	60.0%
Lack of health insurance	55.9%
Unemployment, wages and economic conditions	53.4%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	41.2%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	39.3%
Shortage of substance abuse treatment programs and services, or lack of affordable care	36.1%
Alcohol abuse	35.6%
Lack of programs and services to help seniors maintain their health and independence	34.1%
Shortage of dentists, or lack of affordable dental care	32.7%

Senior Spotlight³



Menominee County has a much higher proportion of seniors than the state and nation, at nearly 22 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



Nearly 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Ontonagon County

2018 Upper Peninsula
Community Health Needs Assessment
(CHNA) County Dashboards¹

More information at
www.wuphd.org/upchna²

Fast Facts

Indicator	Ontonagon County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-19.4% (7,818 to 6,298)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	15.1%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	15.5%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	21.5%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	56.3%	43.5%
Births to Residents (2016) ⁴	34	113,374
Deaths of Residents (2016) ⁴	121	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	973.2	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Ontonagon County (definitions at wuphd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	15.6%	18.0%
Unable to Access Healthcare Due to Cost	12.3%	12.8%
No Routine Checkup in Past 12 Months	32.6%	26.9%
No Dental Care Past 12 Months	34.7%	29.9%
Obese (Body Mass Index 30.0 or Greater)	39.2%	32.5%
Current Cigarette Smoker	20.3%	20.4%
Former Smoker	35.6%	25.8%
5+ Daily Servings of Fruits and Vegetables	7.4%	14.4%
Ever Diagnosed With Diabetes	15.8%	11.2%
Ever Diagnosed With Heart Disease	12.1%	5.1%
Ever Diagnosed With Cancer	21.5%	12.8%
Ever Diagnosed With Depressive Disorder	17.9%	22.0%
Took Medication for Mood Past 12 Months	19.8%	NA
Heavy Alcohol Drinker	20.6%	6.9%
Binge Alcohol Drinker	13.8%	19.0%
Used Marijuana Past 30 days	6.8%	NA
Ever Used Prescription Drugs to Get High	1.5%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	73.2%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	66.7%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

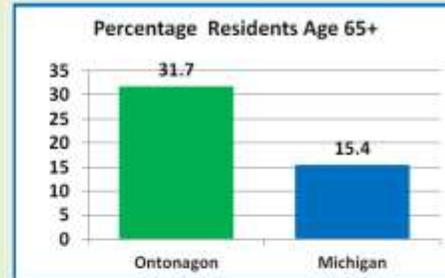
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

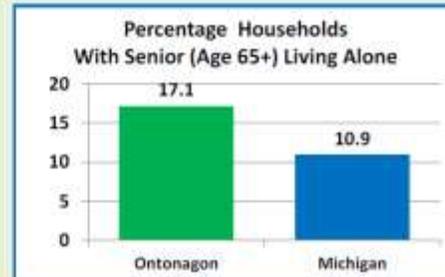
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Ontonagon County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Unemployment, wages and economic conditions	74.9%
Health insurance is expensive or has high costs for co-pays and deductibles	71.0%
Drug Abuse	60.3%
Lack of health insurance	60.1%
Shortage of long-term care (nursing beds) or lack of affordable long-term care and services	48.9%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	47.3%
Lack of programs and services to help seniors maintain their health and independence	40.6%
Shortage of substance abuse treatment programs and services, or lack of affordable care	39.5%
Shortage of mental health programs and services, or lack of affordable mental health care	39.1%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	38.3%

Senior Spotlight³



Ontonagon County has more than double the proportion of seniors than the state and nation, at 31.7 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



More than 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

- (1) Data in this County Dashboard come from the 2018 Upper Peninsula Community Health Needs Assessment (CHNA), led by the region’s 6 local health departments in collaboration with 26 partners including hospitals, clinics, behavioral health agencies and other funders.
- (2) The full CHNA can be viewed and downloaded at the Western U.P. Health Department web site, at www.wuphd.org/upchna.
- (3) U.S. Census and American Community Survey counts and estimates.
- (4) Vital statistics collected by the Michigan Department of Health and Human Services.
- (5) 23,800 randomly sampled U.P. household addresses received 12-page health surveys in August 2017, 1,700 per county with Houghton and Keweenaw counties combined as one group. More than 4,800 surveys were completed, between 282 and 524 per county. Results were weighted and reported by county, age, gender, income and education. Full results are in the CHNA at www.wuphd.org/upchna.
- (6) Among adults age 50 and older, the proportion who reported having a blood stool test within the past 2 years, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years.
- (7) In the same health survey discussed in footnote (5) above, respondents ranked 16 community health issues on a 4-point scale: “not an issue”, “fairly unimportant”, “fairly important” and “very important”. The percentages of county residents choosing “very important” are shown in the table above left on this page.



Schoolcraft County

2018 Upper Peninsula
Community Health Needs Assessment
(CHNA) County Dashboards¹

More information at
www.wupdhd.org/upchna²

Fast Facts

Indicator	Schoolcraft County	Michigan
Percentage Population Change Year 2000 to 2015 ³	-6.9% (8,903 to 8,288)	-0.4%
Percentage Residents Age 26+ With Bachelor's Degree/Higher (2011-15) ³	13.3%	26.9%
Percentage All Residents Living Under Poverty Line (2011-15) ³	21.4%	16.7%
Percentage of Children Under 18 Living in Poverty (2011-15) ³	34.7%	23.5%
Percentage of Births to Residents Paid by Medicaid (2015) ⁴	61.8%	43.5%
Births to Residents (2016) ⁴	69	113,374
Deaths of Residents (2016) ⁴	113	96,529
Age-Adjusted Mortality Rate per 100,000 (2016) ⁴	757.3	788.4

Adult Health Survey Results⁵

In the table below are weighted estimates for selected health indicators, from randomly sampled residents of Schoolcraft County (definitions at wupdhd.org/upchna):

Health Indicator	Local	State
General Health Status Only Fair or Poor	25.0%	18.0%
Unable to Access Healthcare Due to Cost	9.4%	12.8%
No Routine Checkup in Past 12 Months	18.3%	26.9%
No Dental Care Past 12 Months	44.1%	29.9%
Obese (Body Mass Index 30.0 or Greater)	42.0%	32.5%
Current Cigarette Smoker	20.4%	20.4%
Former Smoker	37.2%	25.8%
5+ Daily Servings of Fruits and Vegetables	9.1%	14.4%
Ever Diagnosed With Diabetes	11.4%	11.2%
Ever Diagnosed With Heart Disease	7.8%	5.1%
Ever Diagnosed With Cancer	20.5%	12.8%
Ever Diagnosed With Depressive Disorder	23.2%	22.0%
Took Medication for Mood Past 12 Months	18.0%	NA
Heavy Alcohol Drinker	8.0%	6.9%
Binge Alcohol Drinker	12.7%	19.0%
Used Marijuana Past 30 days	9.2%	NA
Ever Used Prescription Drugs to Get High	1.8%	4.7%
Had Flu Shot in Past 12 Months, Age 65+	66.9%	56.1%
Colorectal Cancer Screening ⁶ , Age 50+	68.9%	69.7%

Health Disparities at a Glance⁵

Health status, access and behaviors vary by income, education, and other social determinants. The table shows differences among all U.P. residents, by household income group, for selected health indicators.

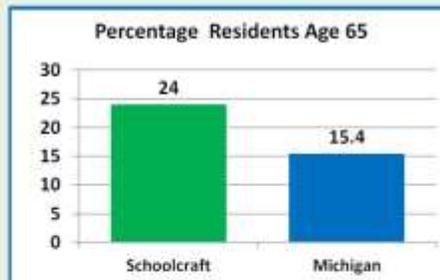
Health Indicator By Household Income	Less Than \$25,000	\$50,000+
Health Fair or Poor	29.9%	5.1%
Uninsured (18-64)	10.6%	4.9%
Unable to Access Care Due to Cost	19.2%	11.3%
No Dental in Past Year	55.1%	18.1%
Current Smoker	31.9%	10.5%
No Physical Activity	22.7%	10.4%
Diabetes Diagnosis	15.6%	6.5%
Heart Disease	12.0%	6.4%
Chronic Lung Disease	14.0%	3.0%
Current Asthma	14.1%	10.5%
Limited By Arthritis	44.4%	21.4%
Depressive Disorder	37.6%	19.7%
Marijuana Past Month	15.2%	4.5%
Prescription Abuse	4.4%	2.3%
Drove After Drinking	10.0%	5.5%

Community Issues and Priorities⁷

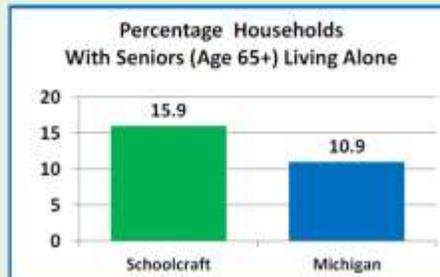
The table below lists the community health issues most frequently rated as “very important” by survey respondents from Schoolcraft County. Respondents chose from a list of 16 possible issues presented for ranking in the 2017 Regional Adult Health Survey.

Community Health Issue	Very Important
Health insurance is expensive or has high costs for co-pays and deductibles	78.8%
Unemployment, wages and economic conditions	68.5%
Lack of health insurance	66.0%
Drug abuse	64.0%
Lack of affordable healthy foods, including year-round fresh fruits and vegetables	47.1%
Shortage of mental health programs and services, or lack of affordable mental health care	45.7%
Shortage of substance abuse treatment programs and services, or lack of affordable care	45.2%
Lack of affordable facilities or programs for year-round physical activity or recreation	41.0%
Alcohol abuse	40.0%
Lack of housing and programs for people with Alzheimer’s Disease and dementia	39.4%

Senior Spotlight³



Schoolcraft County has a much larger proportion of seniors than the state and nation, at 24 percent. Health needs of older residents include chronic disease management, dementia care, and quality nursing home and assisted living options.



About 1-in-6 households in the county is occupied by a senior living alone. How will communities plan to meet their medical, social, housing, and transportation needs?

Data Sources/Footnotes

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