2016

Community Health Needs Assessment
Schoolcraft Memorial Hospital

Manistique and Schoolcraft County, Michigan

Conducted by Western Upper Peninsula Health Department

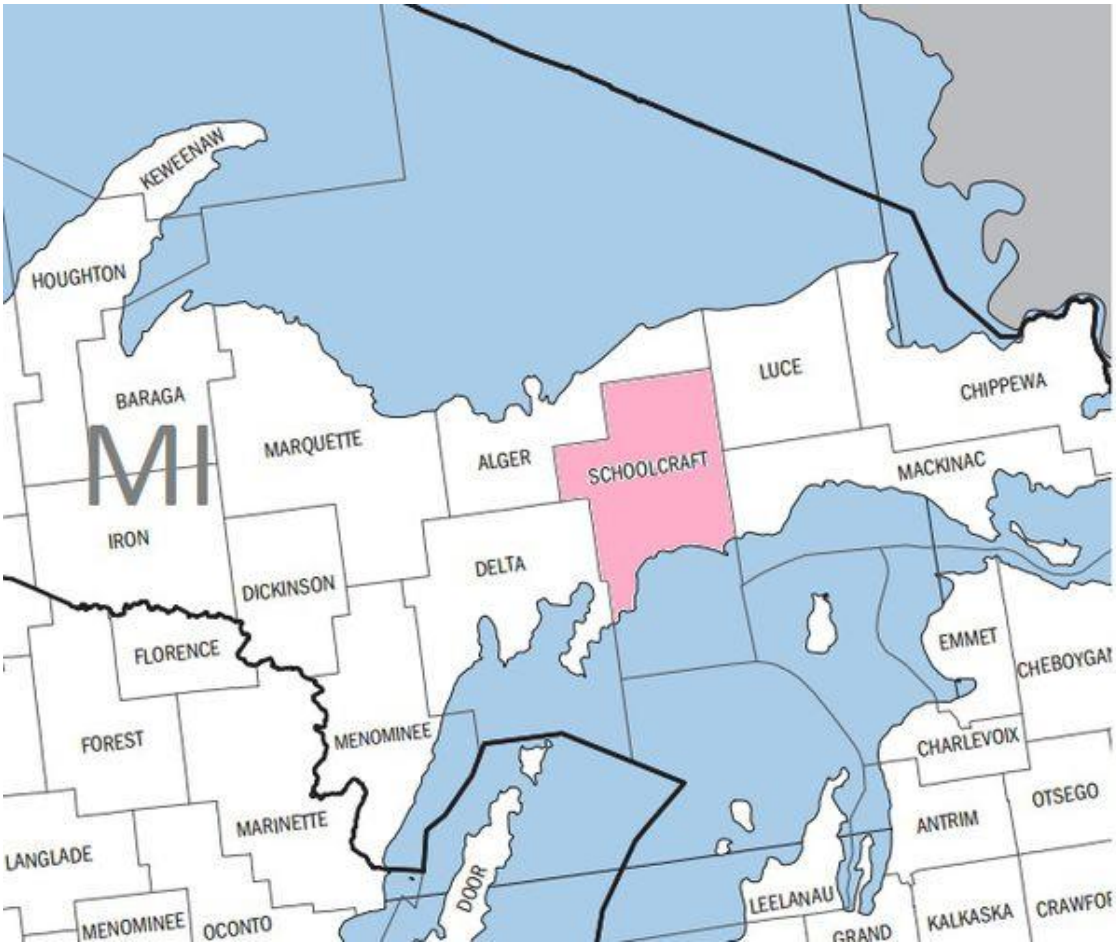
in Collaboration with

Schoolcraft Memorial Hospital and Rural Health Clinic

and Community Partners

SCHOOLCRAFT MEMORIAL HOSPITAL

Western Upper Peninsula Health Department



"Si Quaeris Peninsulam Amoenam Circumspice"

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Executive Summary

Schoolcraft Memorial Hospital (SMH) and Rural Health Clinic in Manistique provides health care services to residents of Schoolcraft County, Michigan, a rural county in the eastern Upper Peninsula region with about 8,200 residents. The county population is declining as young adults leave the area, so that the proportion of residents age 65 and older is increasing and currently stands at more than 23 percent, compared with 15 percent statewide. Nearly 16 percent of households are inhabited by a single householder age 65 or older. Local median household income is about two-thirds of the Michigan median. The county's annual unemployment rate fell to 10.4 percent in 2015 from a relative high of 14.6 percent in 2009, but some 20 percent of all residents and 32 percent of children live at or below the poverty level

In 2014, there were 64 births to Schoolcraft County residents, and 120 deaths. About 65 percent of pregnant women received first trimester care, lower than the state average. Over the past 25 years, smoking rates by pregnant women averaged greater than 30 percent, with rates between 43 and 46 percent in the years 2010, 2011 and 2013. As in many other communities, chlamydia is the most common lab confirmed infectious disease seen among sexually active young adults, while hepatitis C, a chronic liver disease, is found among older adults. The leading causes of death in Schoolcraft County are cardiovascular disease and cancer, while other diseases of aging including diabetes and Alzheimer's disease are projected to become more prevalent given the region's demographics and behavioral risk factors.

The regional rate of uninsured adults age 18-64 was estimated at 15 percent in 2012-14 but is likely around half that figure in 2016 due to the Affordable Care Act. About 1,460 Schoolcraft County residents were enrolled in the Healthy Michigan Plan, the state's Medicaid expansion program, in late 2016, or about 30 percent of 18-64 year olds in the county. Access to care is still cited as a problem by community stakeholders, for primary and specialty medical care, oral health care, and especially for mental health services. Community members also ranked substance abuse prevention, education to teens and young adults on parenting and nutrition, and planning for the health and social needs of a growing population of seniors, as community health improvement priorities.

Following focus groups with hospital and community representatives, SMH identified several initiatives responsive to priority health needs, including developing the hospital as a community learning center, partnering with a new coalition promoting child wellbeing, developing telehealth programs for mental health and medical services, and improving medical transport and food assistance programs for seniors.

Introduction

Project Background and Acknowledgements

The following report contains findings from a community health needs assessment conducted in 2016 by Western Upper Peninsula Health Department (WUPHD) in partnership with Schoolcraft Memorial Hospital (SMH) in Manistique, Michigan, with assistance from community members who attended focus groups. The assessment primarily covers the health of residents of Schoolcraft County but also includes data from neighboring counties in the Luce-Mackinac-Alger-Schoolcraft public health district for comparison or where single-county data are not available.

The purpose of this assessment is to provide a picture of the health status and needs of Schoolcraft County's 8,200 residents and of residents of the neighboring counties the SMH catchment area overlaps. Data for the assessment report were gathered from a wide array of published sources included the U.S. Census Bureau, American Community Survey, Michigan Department of Health and Human Services, Federal Reserve Bank of St. Louis, Michigan Department of Education's Michigan Profile for Healthy Youth (MiPHY) Survey, the federal Health Resources and Services Administration (HRSA), and other government and private agencies.

The report was authored and edited by Ray Sharp, Director of Community Health Promotion and Education at Western U.P. Health Department in Hancock, with considerable assistance from health data analyst Kim Reeve, who aggregated and analyzed data, created data tables and graphs, and wrote the Focus Groups chapter. Sharp wishes to thank Chief Executive Officer Bob Crumb and his staff for their thoughtful and enthusiastic participation in focus groups; LMAS District Health Department Health Officer Nick Derusha and his staff for their help and encouragement; and MDHHS Regional Epidemiologist Scott Schreiber for providing reports with communicable disease data. Special thanks go to SMH Marketing Coordinator Sara Giles for help with communications and planning throughout the project.

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 trends and used to determine priorities for hospital strategic planning and the broader community health improvement process. 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 Schoolcraft County and the Eastern Upper Peninsula region.

How to Use This Report

Report Organization

The report begins with an Executive Summary and this introductory chapter. Chapters with data from secondary sources follow, beginning with statistics describing the demographics (population counts, characteristics and trends) of the region, followed by a chapter focused on populations considered more vulnerable to poor health outcomes, such as people living in poverty, and indicators of access to care. From there the report follows the chronology of life, beginning with measures of maternal and infant wellbeing, followed by health data on adolescents. Rates of infectious diseases from recent years come next, followed by chronic disease and mortality statistics. The health data section concludes with regional data from the Michigan Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is used to estimate the prevalence of various health behaviors, medical conditions, and preventive health care practices among U.S. adults. The report concludes with a summary of feedback from community focus groups hosted by SMH and facilitated by Ray Sharp in November 2016, from notes recorded by Kim Reeve.

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. Snapshots in time are used for indicators that are constantly changing as people age into and out of a given interval, as with the percent of children age 19-35 months who are fully immunized.

Understanding Health Statistics

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 this 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 cigarette smoking calculated from the Michigan Behavioral Risk Factor Survey. Sampling error is unavoidable and arises from estimating a population characteristic by looking at a sample of the population rather than 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 result 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 that derive from a larger sample. For example, suppose a survey given to a random sample of Michigan adults indicated that 23.3% ± 1.3% of those adults were current smokers (95 percent confidence interval indicated). This means that there would be a 95 percent chance that between 22.0% and 24.6% of Michigan adults are current smokers. There would be a 5 percent chance that the actual adult smoking rate is lower than 22.0% or higher than 24.6%.

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.

Infrequent Events and Their Effect on Rates

A 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 would double the observed rate, as do four events versus two. In general, less than 20 events in a numerator tend 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 Assessment

Most data cited in this report are for Schoolcraft County. The term LMAS shall refer to population of Luce, Alger, Mackinac and Schoolcraft counties, and U.P. shall refer to the entire Upper Peninsula region.

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.

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 of 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, as health disparities (differences in behaviors, rates of disease, health outcomes, and access to and quality of care) are 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 population of Schoolcraft County is about 8,200. The population of the county has been declining in recent years. 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 migrations of people. As young adults leave an area in search of work, the remaining population becomes relatively older, and birth rates decline. In Schoolcraft County, 23 percent of the population is age 65 or older, compared with 15 percent statewide. The skewing of age distribution toward the older cohorts has profound implications on the needs for health care and elder services.

Local Focus

- Schoolcraft County and the LMAS health district have larger proportions of senior citizens and relatively fewer young people, similar to Japan and some Western European nations, and 10-20 years ahead of what demographers predict for the United States as the Baby Boomers enter old age. The U.S. Census Bureau estimates 20 percent of Americans will be age 65-plus by 2030; a benchmark the region served by SMH has already surpassed.

- Birth rates are on the decline across the country. This trend is made more prominent locally by adults of child-bearing age leaving the area. Schoolcraft County has about 120 deaths and 60 births per year, and, as with many U.P. counties, young adults are leaving the area, partly offset by older adults returning in retirement.

- The large majority of Schoolcraft County residents identify as White, Non-Hispanic. Native Americans form the largest racial or ethnic minority group.

- Focus group participants reported that some local seniors are food-insecure, and that many seniors, especially those living in rural areas, need help with transportation assistance and other aspects of daily living. Social isolation and depression among the growing elder population is also cited as a concern.

Potential Future Implications

- An aging population will increase the prevalence of many chronic diseases.

- Increased need for health services for the elderly is anticipated, including assisted living and long-term care facilities, and home health, hospice, dementia care and other services.

- Decreased funding for schools and youth programs may result from declining populations of young people.

Census Data

Population counts and characteristics are commonly, but not exclusively, based on the decennial census counts of everyone residing in the United States, including both citizens and non-citizens. This 2016 Health Needs Assessment falls between the 2010 U.S. Census and the next census which will take place in 2020. Therefore, we derive most population data in this report not from the 2010 Census, but rather from the American Community Survey (ACS) conducted in an ongoing basis by the Census Bureau, quoting from 2014 or 2015 estimates, as noted.

On the following 10 pages (pp. 14-23), 2014 ACS data from three reports, Demographic Indicators, Economic Indicators, and Household Indicators, are reproduced. Among the data presented:

- An estimated 23.1 of Schoolcraft County residents, or 1,916 out of 8,288, are age 65-plus.
- While most residents are White, about 6 percent are Native American, mostly affiliated with Chippewa tribes. About 821 residents, or 9.9 percent, identify Native American as their single race or in combination with another. It can be stated that Indigenous communities in North America, on a statistical population health basis, have higher rates of heart disease, diabetes, tobacco use, alcohol and drug abuse, and suicide.
- Slightly less than 1 percent, about 75 people, identify as Hispanic.
- The median household income in 2014 was an estimated $34,118, meaning that among all households, about half earned more than that figure. The Michigan median income is about $50,000.
- In 2014, an estimated 17.8 percent of adults age 18-64 had no health insurance, but with the main provisions of the Affordable Care Act implemented in January and April 2014, it is estimated elsewhere in this report that the local uninsured rate has declined to between 5 and 10 percent, as more than 1,450 adults are enrolled in the Healthy Michigan Plan (Medicaid Expansion), and others purchased ACA Marketplace plans or were able to stay on their parents' policies though age 25.
- An estimated 544 households (15.9 percent of all occupied households) have a single occupant over the age of 65.

American Community Survey, 2014 estimates (Demographics)

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
SEX AND AGE				
Total population	8,288	*****	8,288	(X)
Male	4,102	+/-33	49.5%	+/-0.4
Female	4,186	+/-33	50.5%	+/-0.4
Under 5 years	366	+/-12	4.4%	+/-0.1
5 to 9 years	474	+/-59	5.7%	+/-0.7
10 to 14 years	400	+/-64	4.8%	+/-0.8
15 to 19 years	481	+/-41	5.8%	+/-0.5
20 to 24 years	383	+/-47	4.6%	+/-0.6
25 to 34 years	642	+/-63	7.7%	+/-0.8
35 to 44 years	902	+/-37	10.9%	+/-0.4
45 to 54 years	1,210	+/-36	14.6%	+/-0.4
55 to 59 years	704	+/-63	8.5%	+/-0.8
60 to 64 years	810	+/-63	9.8%	+/-0.8
65 to 74 years	1,046	+/-23	12.6%	+/-0.3
75 to 84 years	647	+/-59	7.8%	+/-0.7
85 years and over	223	+/-50	2.7%	+/-0.6
Median age (years)	50.0	+/-0.3	(X)	(X)
18 years and over	6,736	+/-35	81.3%	+/-0.4
21 years and over	6,501	+/-61	78.4%	+/-0.7
62 years and over	2,376	+/-85	28.7%	+/-1.0
65 years and over	1,916	+/-33	23.1%	+/-0.4
18 years and over	6,736	+/-35	6,736	(X)
Male	3,297	+/-30	48.9%	+/-0.3
Female	3,439	+/-23	51.1%	+/-0.3
65 years and over	1,916	+/-33	1,916	(X)
Male	914	+/-18	47.7%	+/-0.8
Female	1,002	+/-26	52.3%	+/-0.8
RACE				
Total population	8,288	*****	8,288	(X)
One race	7,875	+/-92	95.0%	+/-1.1
Two or more races	413	+/-92	5.0%	+/-1.1
One race	7,875	+/-92	95.0%	+/-1.1
White	7,204	+/-19	86.9%	+/-0.2
Black or African American	41	+/-21	0.5%	+/-0.3
American Indian and Alaska Native	493	+/-104	5.9%	+/-1.3
Cherokee tribal grouping	13	+/-12	0.2%	+/-0.2
Chippewa tribal grouping	396	+/-101	4.8%	+/-1.2
Navajo tribal grouping	0	+/-14	0.0%	+/-0.3
Sioux tribal grouping	17	+/-20	0.2%	+/-0.2
Asian	122	+/-79	1.5%	+/-1.0
Asian Indian	92	+/-80	1.1%	+/-1.0
Chinese	6	+/-9	0.1%	+/-0.1
Filipino	7	+/-10	0.1%	+/-0.1

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Japanese	7	+/-9	0.1%	+/-0.1
Korean	9	+/-14	0.1%	+/-0.2
Vietnamese	0	+/-14	0.0%	+/-0.3
Other Asian	1	+/-2	0.0%	+/-0.1
Native Hawaiian and Other Pacific Islander	0	+/-14	0.0%	+/-0.3
Native Hawaiian	0	+/-14	0.0%	+/-0.3
Guamanian or Chamorro	0	+/-14	0.0%	+/-0.3
Samoan	0	+/-14	0.0%	+/-0.3
Other Pacific Islander	0	+/-14	0.0%	+/-0.3
Some other race	15	+/-14	0.2%	+/-0.2
Two or more races	413	+/-92	5.0%	+/-1.1
White and Black or African American	34	+/-21	0.4%	+/-0.3
White and American Indian and Alaska Native	321	+/-87	3.9%	+/-1.0
White and Asian	40	+/-30	0.5%	+/-0.4
Black or African American and American Indian and Alaska Native	7	+/-10	0.1%	+/-0.1
Race alone or in combination with one or more other races				
Total population	8,288	*****	8,288	(X)
White	7,610	+/-93	91.8%	+/-1.1
Black or African American	82	+/-10	1.0%	+/-0.1
American Indian and Alaska Native	821	+/-82	9.9%	+/-1.0
Asian	162	+/-81	2.0%	+/-1.0
Native Hawaiian and Other Pacific Islander	0	+/-14	0.0%	+/-0.3
Some other race	26	+/-23	0.3%	+/-0.3
HISPANIC OR LATINO AND RACE				
Total population	8,288	*****	8,288	(X)
Hispanic or Latino (of any race)	75	*****	0.9%	*****
Mexican	68	+/-10	0.8%	+/-0.1
Puerto Rican	1	+/-4	0.0%	+/-0.1
Cuban	0	+/-14	0.0%	+/-0.3
Other Hispanic or Latino	6	+/-9	0.1%	+/-0.1
Not Hispanic or Latino	8,213	*****	99.1%	*****
White alone	7,150	+/-3	86.3%	+/-0.1
Black or African American alone	41	+/-21	0.5%	+/-0.3
American Indian and Alaska Native alone	489	+/-105	5.9%	+/-1.3
Asian alone	122	+/-79	1.5%	+/-1.0
Native Hawaiian and Other Pacific Islander alone	0	+/-14	0.0%	+/-0.3
Some other race alone	7	+/-10	0.1%	+/-0.1
Two or more races	404	+/-92	4.9%	+/-1.1
Two races including Some other race	2	+/-3	0.0%	+/-0.1
Two races excluding Some other race, and Three or more races	402	+/-92	4.9%	+/-1.1
Total housing units	6,325	+/-41	(X)	(X)
CITIZEN, VOTING AGE POPULATION				
Citizen, 18 and over population	6,687	+/-25	6,687	(X)
Male	3,276	+/-17	49.0%	+/-0.3
Female	3,411	+/-28	51.0%	+/-0.3

American Community Survey, 2014 estimates (Economic Indicators)

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS				
Population 16 years and over	6,976	+/-48	6,976	(X)
In labor force	3,321	+/-202	47.6%	+/-2.9
Civilian labor force	3,321	+/-202	47.6%	+/-2.9
Employed	2,803	+/-188	40.2%	+/-2.7
Unemployed	518	+/-123	7.4%	+/-1.8
Armed Forces	0	+/-14	0.0%	+/-0.3
Not in labor force	3,655	+/-209	52.4%	+/-2.9
Civilian labor force	3,321	+/-202	3,321	(X)
Unemployment Rate	(X)	(X)	15.6%	+/-3.4
Females 16 years and over	3,559	+/-30	3,559	(X)
In labor force	1,714	+/-109	48.2%	+/-3.1
Civilian labor force	1,714	+/-109	48.2%	+/-3.1
Employed	1,502	+/-113	42.2%	+/-3.2
Own children of the householder under 6 years	490	+/-57	490	(X)
All parents in family in labor force	331	+/-65	67.6%	+/-9.8
Own children of the householder 6 to 17 years	955	+/-78	955	(X)
All parents in family in labor force	682	+/-88	71.4%	+/-8.4
COMMUTING TO WORK				
Workers 16 years and over	2,762	+/-186	2,762	(X)
Car, truck, or van -- drove alone	2,139	+/-174	77.4%	+/-3.3
Car, truck, or van -- carpooled	289	+/-68	10.5%	+/-2.3
Public transportation (excluding taxicab)	31	+/-35	1.1%	+/-1.3
Walked	152	+/-65	5.5%	+/-2.4
Other means	21	+/-25	0.8%	+/-0.9
Worked at home	130	+/-45	4.7%	+/-1.6
Mean travel time to work (minutes)	17.8	+/-1.5	(X)	(X)
OCCUPATION				
Civilian employed population 16 years and over	2,803	+/-188	2,803	(X)
Management, business, science, and arts occupations	722	+/-97	25.8%	+/-3.3
Service occupations	706	+/-116	25.2%	+/-3.5
Sales and office occupations	620	+/-112	22.1%	+/-3.6
Natural resources, construction, and maintenance occupations	393	+/-77	14.0%	+/-2.5
Production, transportation, and material moving occupations	362	+/-74	12.9%	+/-2.6
INDUSTRY				
Civilian employed population 16 years and over	2,803	+/-188	2,803	(X)
Agriculture, forestry, fishing and hunting, and mining	151	+/-51	5.4%	+/-1.7
Construction	214	+/-52	7.6%	+/-1.7
Manufacturing	244	+/-64	8.7%	+/-2.2
Wholesale trade	13	+/-15	0.5%	+/-0.5
Retail trade	271	+/-68	9.7%	+/-2.5

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Transportation and warehousing, and utilities	134	+/-57	4.8%	+/-2.0
Information	15	+/-13	0.5%	+/-0.4
Finance and insurance, and real estate and rental and leasing	180	+/-58	6.4%	+/-1.9
Professional, scientific, and management, and administrative and waste management services	84	+/-33	3.0%	+/-1.2
Educational services, and health care and social assistance	745	+/-105	26.6%	+/-3.5
Arts, entertainment, and recreation, and accommodation and food services	432	+/-88	15.4%	+/-2.8
Other services, except public administration	152	+/-56	5.4%	+/-2.0
Public administration	168	+/-50	6.0%	+/-1.8
CLASS OF WORKER				
Civilian employed population 16 years and over	2,803	+/-188	2,803	(X)
Private wage and salary workers	2,151	+/-164	76.7%	+/-2.9
Government workers	507	+/-79	18.1%	+/-2.5
Self-employed in own not incorporated business workers	143	+/-39	5.1%	+/-1.3
Unpaid family workers	2	+/-3	0.1%	+/-0.1
INCOME AND BENEFITS (IN 2015 INFLATION-ADJUSTED DOLLARS)				
Total households	3,419	+/-151	3,419	(X)
Less than $10,000	361	+/-77	10.6%	+/-2.2
$10,000 to $14,999	287	+/-64	8.4%	+/-1.8
$15,000 to $24,999	586	+/-78	17.1%	+/-2.2
$25,000 to $34,999	509	+/-82	14.9%	+/-2.3
$35,000 to $49,999	500	+/-78	14.6%	+/-2.0
$50,000 to $74,999	514	+/-76	15.0%	+/-2.2
$75,000 to $99,999	363	+/-50	10.6%	+/-1.5
$100,000 to $149,999	233	+/-54	6.8%	+/-1.5
$150,000 to $199,999	25	+/-13	0.7%	+/-0.4
$200,000 or more	41	+/-25	1.2%	+/-0.7
Median household income (dollars)	34,118	+/-2,977	(X)	(X)
Mean household income (dollars)	46,697	+/-2,831	(X)	(X)
With earnings	1,985	+/-141	58.1%	+/-2.6
Mean earnings (dollars)	48,681	+/-4,549	(X)	(X)
With Social Security	1,520	+/-96	44.5%	+/-2.8
Mean Social Security income (dollars)	16,965	+/-855	(X)	(X)
With retirement income	1,078	+/-87	31.5%	+/-2.4
Mean retirement income (dollars)	21,674	+/-1,945	(X)	(X)
With Supplemental Security Income	266	+/-57	7.8%	+/-1.6
Mean Supplemental Security Income (dollars)	9,528	+/-1,060	(X)	(X)
With cash public assistance income	168	+/-56	4.9%	+/-1.6
Mean cash public assistance income (dollars)	1,894	+/-918	(X)	(X)
With Food Stamp/SNAP benefits in the past 12 months	539	+/-74	15.8%	+/-2.0
Families	2,130	+/-126	2,130	(X)
Less than $10,000	127	+/-38	6.0%	+/-1.8
$10,000 to $14,999	100	+/-41	4.7%	+/-1.9
$15,000 to $24,999	246	+/-55	11.5%	+/-2.5
$25,000 to $34,999	260	+/-56	12.2%	+/-2.5

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
$35,000 to $49,999	408	+/-74	19.2%	+/-3.0
$50,000 to $74,999	399	+/-57	18.7%	+/-2.5
$75,000 to $99,999	333	+/-50	15.6%	+/-2.2
$100,000 to $149,999	194	+/-49	9.1%	+/-2.2
$150,000 to $199,999	25	+/-13	1.2%	+/-0.6
$200,000 or more	38	+/-24	1.8%	+/-1.2
Median family income (dollars)	47,816	+/-3,145	(X)	(X)
Mean family income (dollars)	57,695	+/-4,099	(X)	(X)
Per capita income (dollars)	20,580	+/-1,280	(X)	(X)
Nonfamily households	1,289	+/-141	1,289	(X)
Median nonfamily income (dollars)	19,838	+/-2,164	(X)	(X)
Mean nonfamily income (dollars)	27,553	+/-2,611	(X)	(X)
Median earnings for workers (dollars)	22,435	+/-1,924	(X)	(X)
Median earnings for male full-time, year-round workers (dollars)	42,250	+/-5,482	(X)	(X)
Median earnings for female full-time, year-round workers (dollars)	29,046	+/-2,038	(X)	(X)
HEALTH INSURANCE COVERAGE				
Civilian noninstitutionalized population	8,179	+/-66	8,179	(X)
With health insurance coverage	7,215	+/-179	88.2%	+/-2.0
With private health insurance	4,908	+/-226	60.0%	+/-2.6
With public coverage	4,064	+/-231	49.7%	+/-2.7
No health insurance coverage	964	+/-163	11.8%	+/-2.0
Civilian noninstitutionalized population under 18 years	1,552	+/-35	1,552	(X)
No health insurance coverage	153	+/-89	9.9%	+/-5.7
Civilian noninstitutionalized population 18 to 64 years	4,787	+/-37	4,787	(X)
In labor force:	3,123	+/-190	3,123	(X)
Employed:	2,637	+/-181	2,637	(X)
With health insurance coverage	2,167	+/-167	82.2%	+/-3.4
With private health insurance	1,858	+/-157	70.5%	+/-3.9
With public coverage	408	+/-85	15.5%	+/-3.0
No health insurance coverage	470	+/-97	17.8%	+/-3.4
Unemployed:	486	+/-115	486	(X)
With health insurance coverage	335	+/-89	68.9%	+/-11.6
With private health insurance	207	+/-66	42.6%	+/-10.7
With public coverage	147	+/-61	30.2%	+/-10.7
No health insurance coverage	151	+/-72	31.1%	+/-11.6
Not in labor force:	1,664	+/-187	1,664	(X)
With health insurance coverage	1,474	+/-182	88.6%	+/-3.3
With private health insurance	787	+/-79	47.3%	+/-5.1
With public coverage	872	+/-174	52.4%	+/-6.0
No health insurance coverage	190	+/-55	11.4%	+/-3.3
PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL				
All families	(X)	(X)	15.2%	+/-2.8
With related children of the householder under 18 years	(X)	(X)	33.4%	+/-7.5

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
With related children of the householder under 5 years only	(X)	(X)	24.5%	+/-21.9
Married couple families	(X)	(X)	9.0%	+/-2.6
With related children of the householder under 18 years	(X)	(X)	19.6%	+/-8.1
With related children of the householder under 5 years only	(X)	(X)	0.0%	+/-30.7
Families with female householder, no husband present	(X)	(X)	46.5%	+/-13.6
With related children of the householder under 18 years	(X)	(X)	60.2%	+/-14.8
With related children of the householder under 5 years only	(X)	(X)	30.0%	+/-53.2
All people	(X)	(X)	21.4%	+/-3.2
Under 18 years	(X)	(X)	34.7%	+/-7.4
Related children of the householder under 18 years	(X)	(X)	34.7%	+/-7.4
Related children of the householder under 5 years	(X)	(X)	40.8%	+/-13.0
Related children of the householder 5 to 17 years	(X)	(X)	32.9%	+/-8.5
18 years and over	(X)	(X)	18.4%	+/-3.1
18 to 64 years	(X)	(X)	21.1%	+/-3.8
65 years and over	(X)	(X)	11.4%	+/-3.6
People in families	(X)	(X)	17.9%	+/-3.1
Unrelated individuals 15 years and over				

American Community Survey, 2014 estimates (Household Indicators)

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
HOUSEHOLDS BY TYPE				
Total households	3,419	+/-151	3,419	(X)
Family households (families)	2,130	+/-126	62.3%	+/-3.3
With own children of the householder under 18 years	611	+/-75	17.9%	+/-2.0
Married-couple family	1,731	+/-100	50.6%	+/-2.9
With own children of the householder under 18 years	370	+/-65	10.8%	+/-1.8
Male householder, no wife present, family	124	+/-54	3.6%	+/-1.5
With own children of the householder under 18 years	75	+/-36	2.2%	+/-1.0
Female householder, no husband present, family	275	+/-60	8.0%	+/-1.7
With own children of the householder under 18 years	166	+/-43	4.9%	+/-1.2
Nonfamily households	1,289	+/-141	37.7%	+/-3.3
Householder living alone	1,127	+/-134	33.0%	+/-3.3
65 years and over	544	+/-77	15.9%	+/-2.1
Households with one or more people under 18 years	676	+/-80	19.8%	+/-2.1
Households with one or more people 65 years and over	1,278	+/-69	37.4%	+/-1.9
Average household size	2.38	+/-0.11	(X)	(X)
Average family size	2.99	+/-0.16	(X)	(X)
RELATIONSHIP				

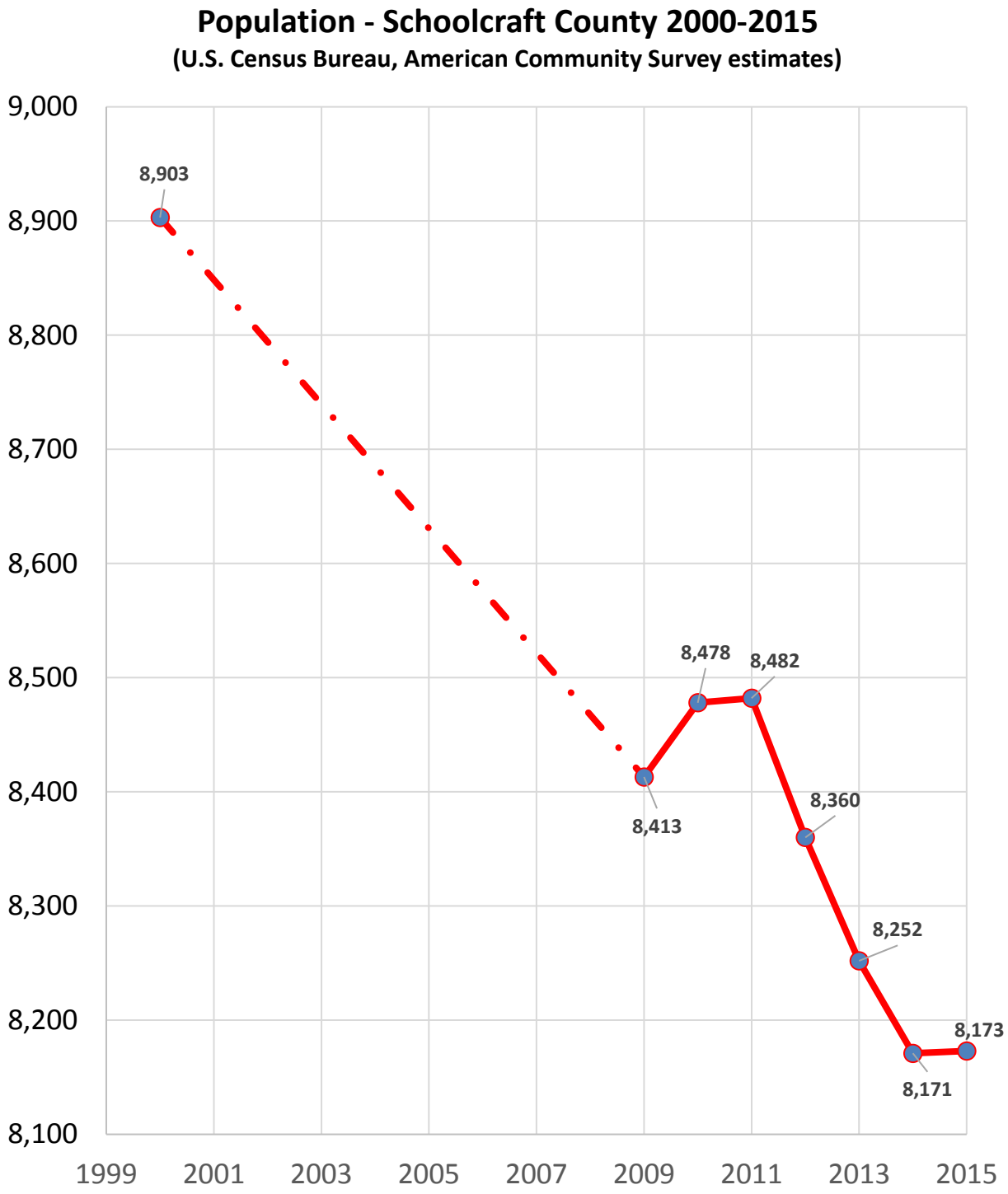
Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Population in households	8,141	+/-82	8,141	(X)
Householder	3,419	+/-151	42.0%	+/-1.9
Spouse	1,740	+/-107	21.4%	+/-1.3
Child	2,105	+/-161	25.9%	+/-1.9
Other relatives	392	+/-113	4.8%	+/-1.4
Nonrelatives	485	+/-145	6.0%	+/-1.8
Unmarried partner	198	+/-56	2.4%	+/-0.7
MARITAL STATUS				
Males 15 years and over	3,465	+/-33	3,465	(X)
Never married	941	+/-123	27.2%	+/-3.5
Now married, except separated	1,865	+/-124	53.8%	+/-3.5
Separated	78	+/-44	2.3%	+/-1.3
Widowed	121	+/-36	3.5%	+/-1.1
Divorced	460	+/-82	13.3%	+/-2.4
Females 15 years and over	3,583	+/-26	3,583	(X)
Never married	763	+/-94	21.3%	+/-2.6
Now married, except separated	1,804	+/-116	50.3%	+/-3.3
Separated	58	+/-34	1.6%	+/-0.9
Widowed	449	+/-55	12.5%	+/-1.5
Divorced	509	+/-101	14.2%	+/-2.8
FERTILITY				
Number of women 15 to 50 years old who had a birth in the past 12 months	72	+/-38	72	(X)
Unmarried women (widowed, divorced, and never married)	55	+/-34	76.4%	+/-18.6
Per 1,000 unmarried women	64	+/-40	(X)	(X)
Per 1,000 women 15 to 50 years old	46	+/-25	(X)	(X)
Per 1,000 women 15 to 19 years old	0	+/-95	(X)	(X)
Per 1,000 women 20 to 34 years old	126	+/-71	(X)	(X)
Per 1,000 women 35 to 50 years old	9	+/-11	(X)	(X)
GRANDPARENTS				
Number of grandparents living with own grandchildren under 18 years	112	+/-49	112	(X)
Grandparents responsible for grandchildren	51	+/-28	45.5%	+/-26.8
Years responsible for grandchildren				
Less than 1 year	0	+/-14	0.0%	+/-18.1
1 or 2 years	24	+/-17	21.4%	+/-16.9
3 or 4 years	19	+/-20	17.0%	+/-17.9
5 or more years	8	+/-7	7.1%	+/-6.5
Number of grandparents responsible for own grandchildren under 18 years	51	+/-28	51	(X)
Who are female	30	+/-18	58.8%	+/-13.4
Who are married	38	+/-25	74.5%	+/-22.9
SCHOOL ENROLLMENT				
Population 3 years and over enrolled in school	1,508	+/-92	1,508	(X)
Nursery school, preschool	106	+/-36	7.0%	+/-2.3
Kindergarten	206	+/-54	13.7%	+/-3.6
Elementary school (grades 1-8)	605	+/-72	40.1%	+/-4.5

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
High school (grades 9-12)	378	+/-53	25.1%	+/-3.3
College or graduate school	213	+/-57	14.1%	+/-3.4
EDUCATIONAL ATTAINMENT				
Population 25 years and over	6,184	+/-38	6,184	(X)
Less than 9th grade	293	+/-145	4.7%	+/-2.3
9th to 12th grade, no diploma	489	+/-85	7.9%	+/-1.4
High school graduate (includes equivalency)	2,897	+/-202	46.8%	+/-3.3
Some college, no degree	1,290	+/-156	20.9%	+/-2.5
Associate's degree	397	+/-70	6.4%	+/-1.1
Bachelor's degree	573	+/-89	9.3%	+/-1.4
Graduate or professional degree	245	+/-47	4.0%	+/-0.8
Percent high school graduate or higher	(X)	(X)	87.4%	+/-2.8
Percent bachelor's degree or higher	(X)	(X)	13.2%	+/-1.6
VETERAN STATUS				
Civilian population 18 years and over	6,736	+/-35	6,736	(X)
Civilian veterans	852	+/-94	12.6%	+/-1.4
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION				
Total Civilian Noninstitutionalized Population	8,179	+/-66	8,179	(X)
With a disability	1,717	+/-176	21.0%	+/-2.1
Under 18 years	1,552	+/-35	1,552	(X)
With a disability	63	+/-24	4.1%	+/-1.5
18 to 64 years	4,787	+/-37	4,787	(X)
With a disability	942	+/-144	19.7%	+/-3.0
65 years and over	1,840	+/-70	1,840	(X)
With a disability	712	+/-93	38.7%	+/-4.4
RESIDENCE 1 YEAR AGO				
Population 1 year and over	8,241	+/-26	8,241	(X)
Same house	7,102	+/-201	86.2%	+/-2.4
Different house in the U.S.	1,134	+/-200	13.8%	+/-2.4
Same county	778	+/-184	9.4%	+/-2.2
Different county	356	+/-118	4.3%	+/-1.4
Same state	268	+/-97	3.3%	+/-1.2
Different state	88	+/-60	1.1%	+/-0.7
Abroad	5	+/-5	0.1%	+/-0.1
PLACE OF BIRTH				
Total population	8,288	*****	8,288	(X)
Native	8,123	+/-79	98.0%	+/-1.0
Born in United States	8,078	+/-81	97.5%	+/-1.0
State of residence	6,927	+/-160	83.6%	+/-1.9
Different state	1,151	+/-138	13.9%	+/-1.7
Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)	45	+/-27	0.5%	+/-0.3
Foreign born	165	+/-79	2.0%	+/-1.0

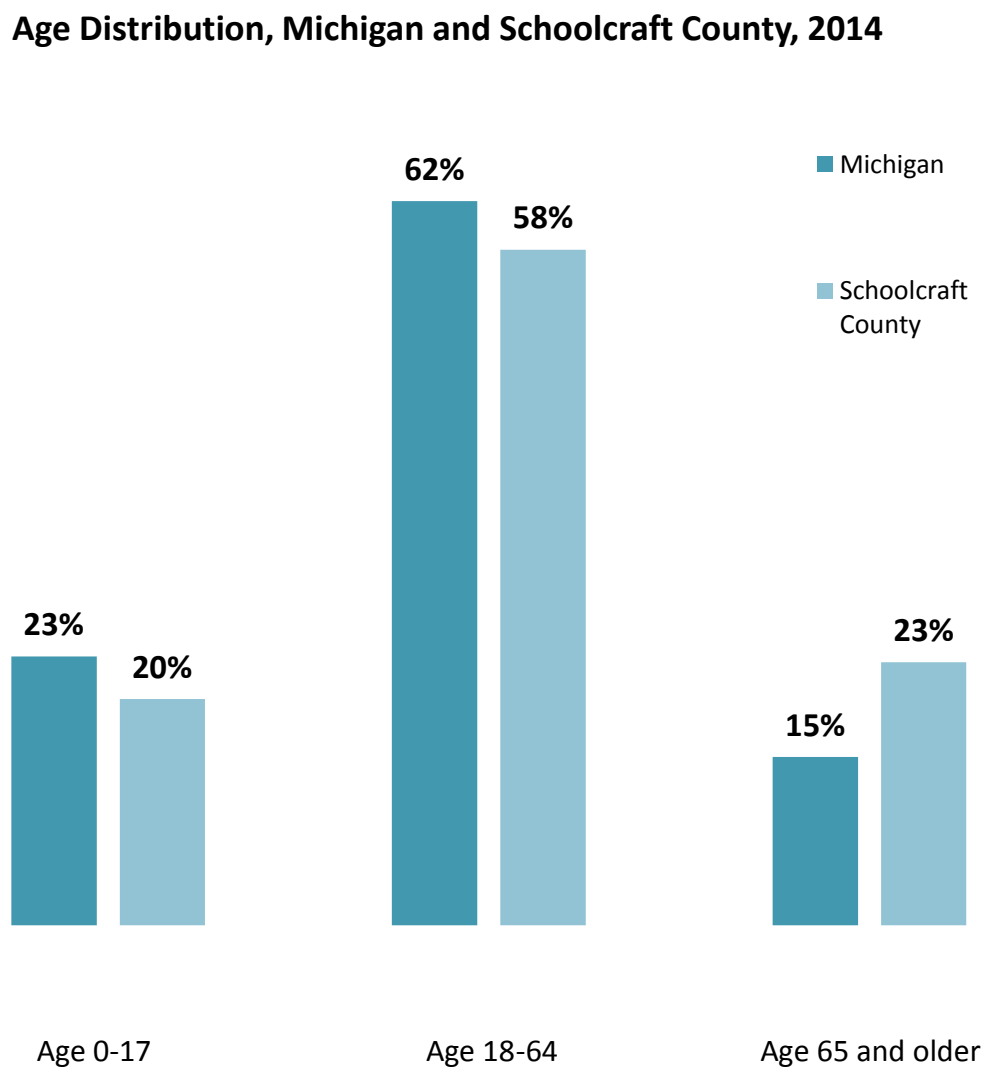
Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
U.S. CITIZENSHIP STATUS				
Foreign-born population	165	+/-79	165	(X)
Naturalized U.S. citizen	116	+/-74	70.3%	+/-20.1
Not a U.S. citizen	49	+/-33	29.7%	+/-20.1
YEAR OF ENTRY				
Population born outside the United States	210	+/-81	210	(X)
Native	45	+/-27	45	(X)
Entered 2010 or later	3	+/-4	6.7%	+/-9.3
Entered before 2010	42	+/-25	93.3%	+/-9.3
Foreign born	165	+/-79	165	(X)
Entered 2010 or later	0	+/-14	0.0%	+/-12.7
Entered before 2010	165	+/-79	100.0%	+/-12.7
WORLD REGION OF BIRTH OF FOREIGN BORN				
Foreign-born population, excluding population born at sea	165	+/-79	165	(X)
Europe	51	+/-44	30.9%	+/-19.3
Asia	77	+/-50	46.7%	+/-21.2
Africa	15	+/-16	9.1%	+/-9.5
Oceania	0	+/-14	0.0%	+/-12.7
Latin America	22	+/-24	13.3%	+/-14.5
Northern America	0	+/-14	0.0%	+/-12.7
LANGUAGE SPOKEN AT HOME				
Population 5 years and over	7,922	+/-12	7,922	(X)
English only	7,648	+/-103	96.5%	+/-1.3
Language other than English	274	+/-104	3.5%	+/-1.3
Speak English less than "very well"	92	+/-53	1.2%	+/-0.7
Spanish	51	+/-39	0.6%	+/-0.5
Speak English less than "very well"	17	+/-17	0.2%	+/-0.2
Other Indo-European languages	175	+/-95	2.2%	+/-1.2
Speak English less than "very well"	68	+/-51	0.9%	+/-0.6
Asian and Pacific Islander languages	14	+/-11	0.2%	+/-0.1
Speak English less than "very well"	5	+/-7	0.1%	+/-0.1
Other languages	34	+/-27	0.4%	+/-0.3
Speak English less than "very well"	2	+/-3	0.0%	+/-0.1
ANCESTRY				
Total population	8,288	*****	8,288	(X)
American	458	+/-105	5.5%	+/-1.3
Arab	15	+/-17	0.2%	+/-0.2
Czech	99	+/-47	1.2%	+/-0.6
Danish	59	+/-26	0.7%	+/-0.3
Dutch	247	+/-106	3.0%	+/-1.3
English	816	+/-163	9.8%	+/-2.0
French (except Basque)	668	+/-116	8.1%	+/-1.4
French Canadian	529	+/-101	6.4%	+/-1.2
German	1,646	+/-196	19.9%	+/-2.4
Greek	12	+/-11	0.1%	+/-0.1
Hungarian	48	+/-30	0.6%	+/-0.4
Irish	736	+/-123	8.9%	+/-1.5

Subject	Schoolcraft County, Michigan			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Italian	173	+/-83	2.1%	+/-1.0
Lithuanian	15	+/-14	0.2%	+/-0.2
Norwegian	195	+/-74	2.4%	+/-0.9
Polish	431	+/-121	5.2%	+/-1.5
Portuguese	6	+/-5	0.1%	+/-0.1
Russian	10	+/-12	0.1%	+/-0.1
Scotch-Irish	45	+/-25	0.5%	+/-0.3
Scottish	222	+/-68	2.7%	+/-0.8
Slovak	2	+/-3	0.0%	+/-0.1
Subsaharan African	13	+/-17	0.2%	+/-0.2
Swedish	493	+/-94	5.9%	+/-1.1
Swiss	42	+/-44	0.5%	+/-0.5
Ukrainian	12	+/-13	0.1%	+/-0.2
Welsh	76	+/-58	0.9%	+/-0.7
West Indian (excluding Hispanic origin groups)	0	+/-14	0.0%	+/-0.3
COMPUTERS AND INTERNET USE				
Total households	(X)	(X)	(X)	(X)
With a computer	(X)	(X)	(X)	(X)
With a broadband Internet subscription				

Population Trend



Population of Seniors



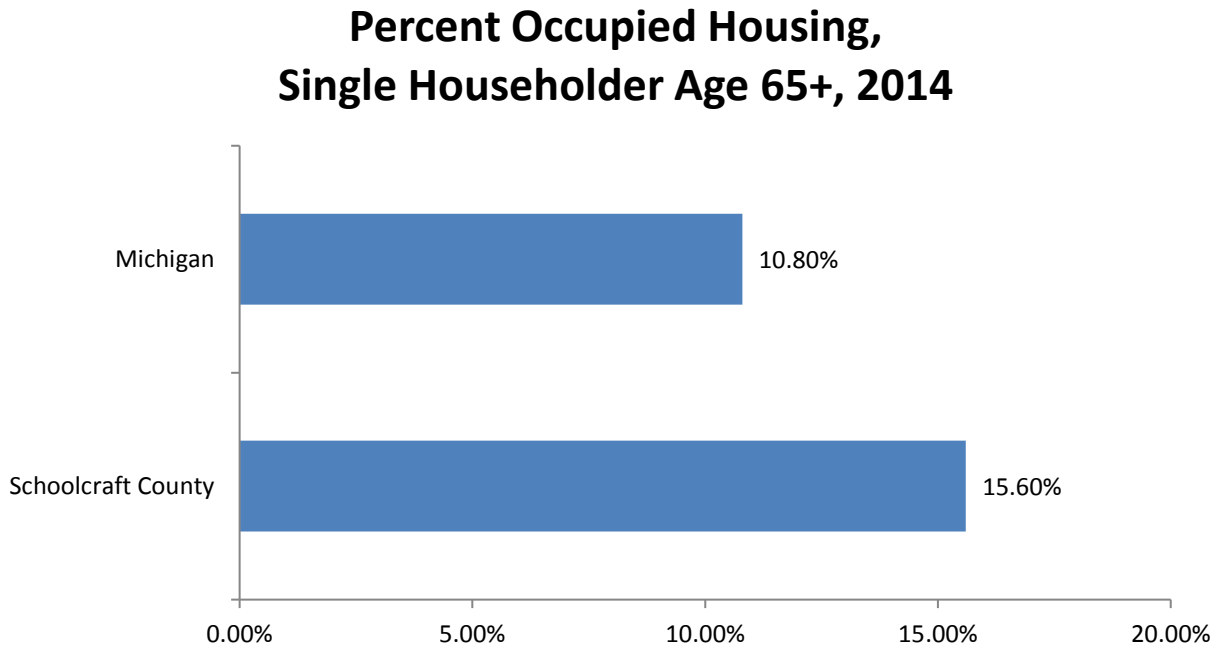
An estimated 23 percent of Schoolcraft County residents are age 65-plus, compared with about 15 percent in the state and nation. By rough estimate, one-in-three Schoolcraft County residents will be age 65 or older by 2030 (by comparison, Alcona County, at 34 percent, and Ontonagon County, at 32 percent, currently have the largest proportions of seniors in Michigan).

This trend has important implications for planning. What will the chronic disease burden look like in a decade? What types of medical specialties will be needed? How many people will suffer from progressive and debilitating conditions like Alzheimer's disease, and what will their housing and daily care needs be? What other services, including transportation, meals and programs to relieve social isolation, will be needed? And will there be sufficient numbers of young people as workers and volunteers to maintain vibrant communities?

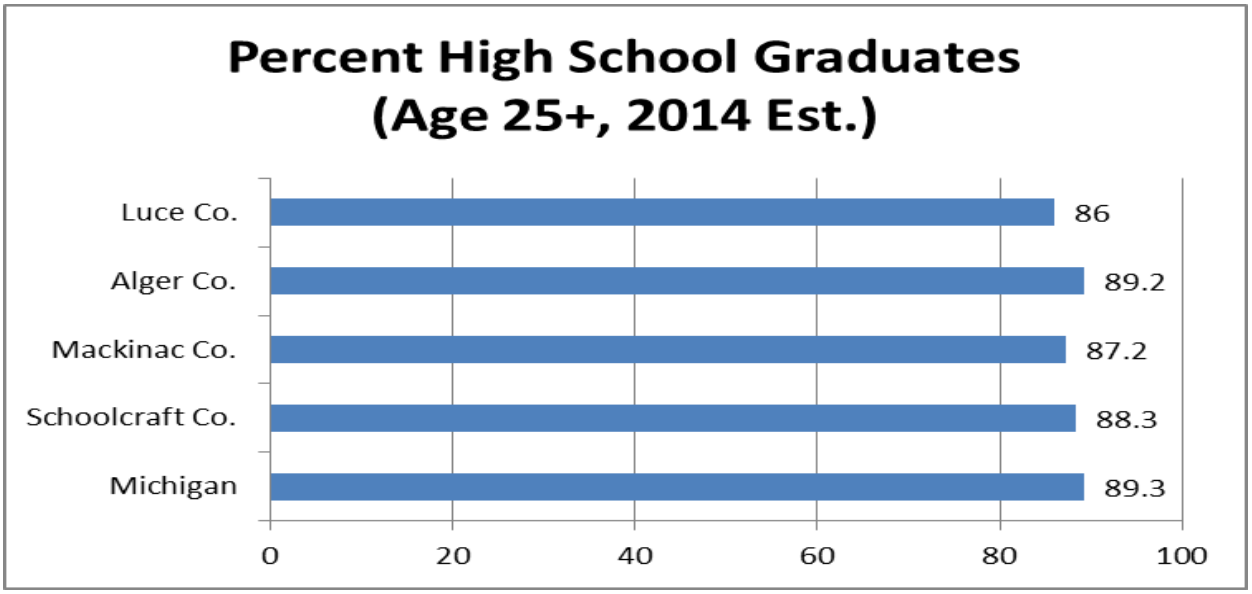
Seniors Living Alone: The following graph shows the percentage of occupied housing units for which the householder is age 65 or older and living alone, according to American Community Survey estimates. The householder refers to the person in whose name the housing unit is owned or rented. A housing unit 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 ten or more unrelated persons live.

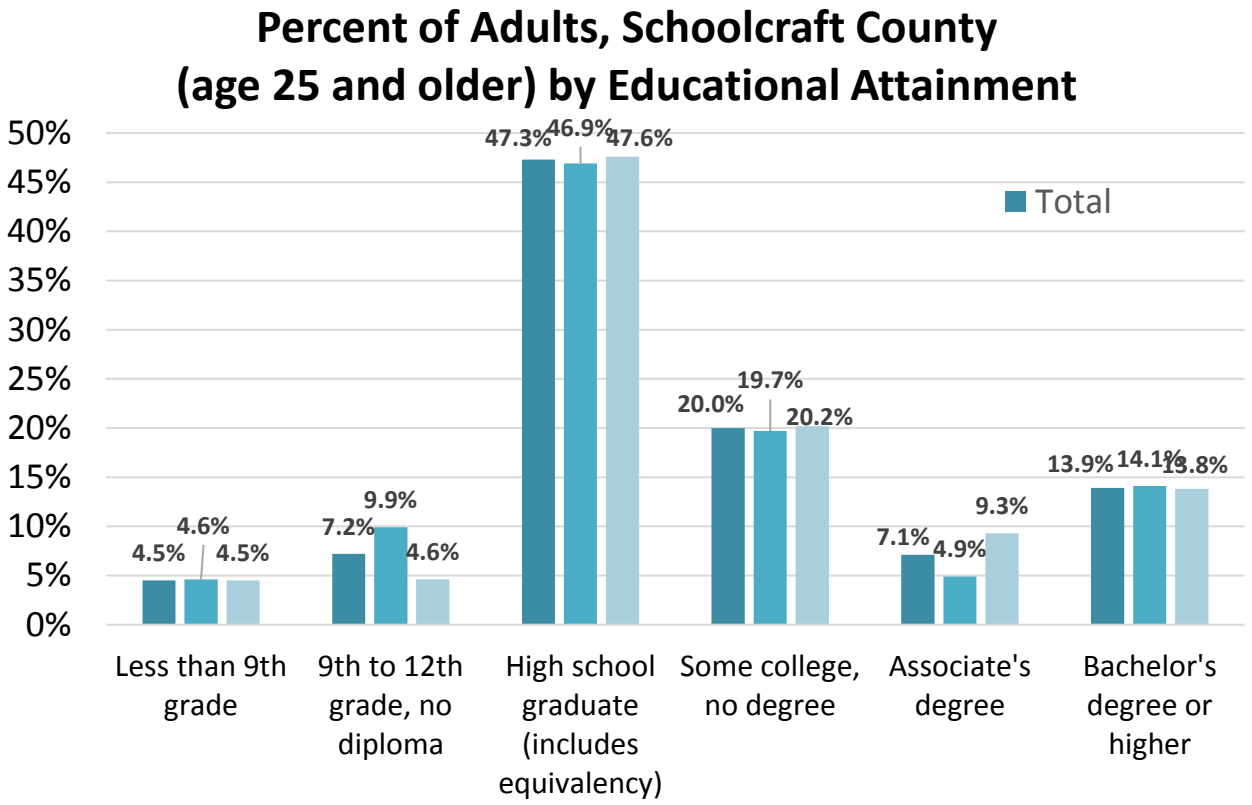
Schoolcraft County's percentage of occupied housing with a single occupant, an estimated 15.6 percent in 2014, is one-and-a-half times the Michigan rate shown for comparison. The fact that nearly one in six Schoolcraft County households is occupied by a senior citizen living alone, oftentimes in outlying, rural areas miles from services like shopping and health care (while acknowledging that many seniors who live independently are healthy, self-sufficient and highly capable of managing their daily lives) gives rise to concerns about how older and more frail seniors are faring.

Many seniors, especially seniors living alone, in rural areas, and/or without close relatives nearby to help, may have one or more needs including meal deliveries or meals at congregate sites; transportation assistance for routine errands and medical visits; assistance with household chores including firewood stacking and snow removal from driveways, walks and roofs; and the relief of social isolation at senior centers, through home visiting programs or in intergenerational settings.



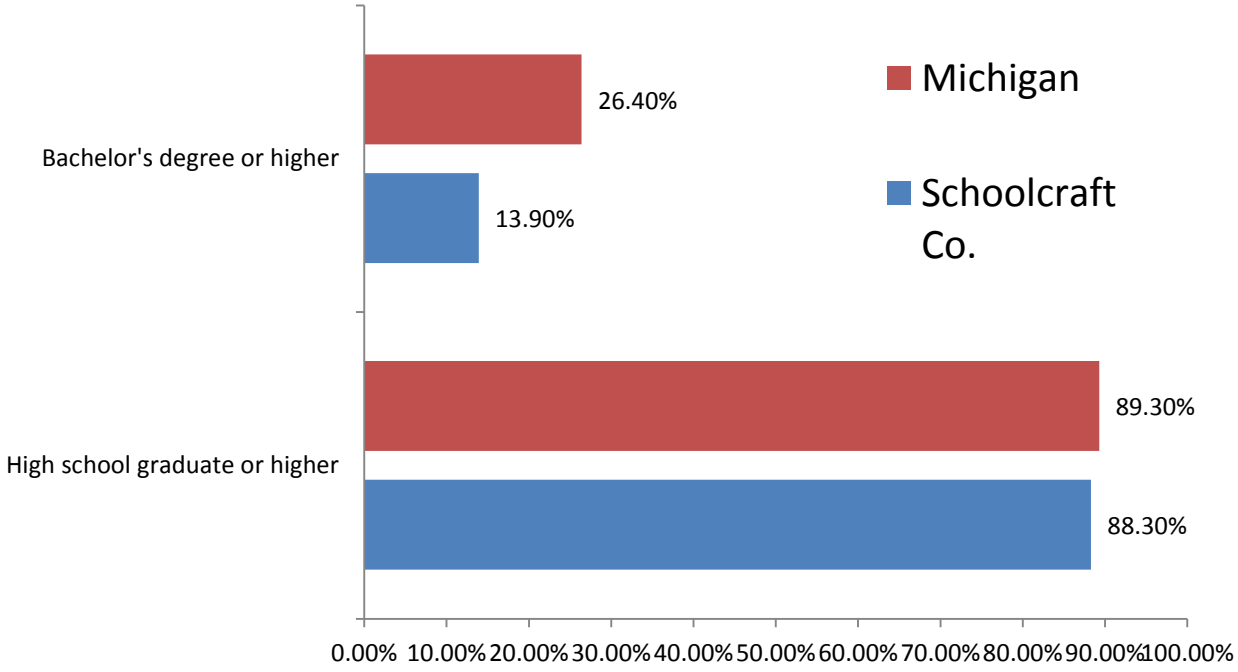
Educational Attainment: The Schoolcraft County high school graduation rate is similar to rates in surrounding counties and statewide. Luce County's rate is thought to be lower primarily due to the inclusion of state prisoners in Census data. About one in seven local adults attained a 4-year college degree.





College Completion: A relatively low percentage of Schoolcraft County residents have attained a bachelor's degree or higher compared with rates for Michigan and many neighboring counties. While most traditional jobs in the rural Upper Peninsula did not require higher education, a college degree is requisite in many fields in the 21st Century economy. Young people presumably leave the area for higher education and find work elsewhere, and when prospective employers choose to locate to regions with a higher percentage of college graduates, the trend becomes self-reinforcing, as the local economy does not create new jobs with good pay and benefits causing more young people move away seeking economic opportunity.

Percent of Adults, Schoolcraft County and Michigan (age 25 and older) by High School and College Completion



Vulnerable Populations and Access to Care

Vulnerable populations, in terms of community health, are groups of people who are at greater risk of disease, disability and difficulty accessing services, based on socioeconomic status or other social determinants of health. As defined by the World Health Organization (WHO), social determinants of health are "the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics." Summarizing the same 2008 WHO report on health disparities, the Centers for Disease Control and Prevention (CDC) defines social determinants as:

> …the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world.

Even in the United States, poverty is a statistically significant factor when health disparities are analyzed. Multiple studies in this country and other industrialized nations find that long-term living in poverty more than doubles the risk of chronic disease, disability and premature death. While a poor individual may live to 100 and a wealthy one may die young, in large population studies, those with the least wealth and educational attainment live less healthy and shorter lives. In recent Upper Peninsula health needs assessments and surveys conducted in other counties, disparities based on income, wealth and social standing persisted and were strongly evident.

According to government labor statistics, the United States experienced its longest period of high unemployment since the Great Depression beginning in late 2008, but the last couple of years have seen a return to jobless rates more typical of pre-Recession levels. For many U.P. communities, economic contraction and unemployment are nothing new; they have been the story, more or less, for decades. The region was especially hard hit, though, by the recent recession. Unemployment rates in Michigan and Schoolcraft County increased by 50 percent between 2007 and 2009, to a 2009 annual average of 14.6 percent locally. The good news is that the local unemployment rate reverted to norm last year; the bad news is that around 10 percent seems to be the normal or baseline rate for Schoolcraft County when the state and nation are approaching "full employment," i.e. below 5 percent. In addition, frustrated job-seekers have left the active workforce and are not counted in official statistics, some are working part-time when full-time work is desired, and others, judging by population figures, have left the region seeking economic opportunity elsewhere.

Other economic data confirm that many Schoolcraft County residents live in or near poverty. Even with some incremental improvements in the last few years, median household incomes are two-thirds of state and national levels. Greater than 20 percent of all residents, and 32 percent of children, live at or below the federal poverty line.

While it is important to understand that correlation does not prove causation, population health studies demonstrate that living in poverty poses a significant health risk factor. Most behavioral risk factor survey data show that low-income residents have poorer health status, lower rates of insurance coverage and utilization of preventive health care services, and higher rates of poor health habits, disease and disability. Low income individuals and families should be considered an important target for health education and promotion, and communities and providers should prioritize expanded access to care if they seek to reduce disparities.

Access to comprehensive health, mental health and dental services is important for the achievement of health equity and to increase the quality of life for all members of the community. "Access" means that an individual can gain entry into the health care system, find a health care location to obtain services and identify a health care provider with whom the patient can develop a trusting relationship. Barriers to access include:

- Provider shortages
- High cost
- Lack of insurance
- Transportation
- Language and cultural differences between the individual and the provider or system
- Patient perception of importance

A lack of access may lead to unmet health needs, delays in obtaining appropriate care, inability to get preventive services and preventable hospitalizations. Disparities in access affect individuals and the communities in which they live, often preventing people from reaching their potential and lowering their quality of life. Equity of access may be measured in terms of the availability, utilization and outcomes of services.

Clearly, one of the most significant barriers to access has been a lack of health insurance coverage for millions of U.S. residents, many of them low income and without other means to pay for health care. In March of 2010, President Obama signed into law the Patient Protection and Affordable Care Act (ACA). The major provisions of this law went into effect in 2014, although some components began earlier. The ACA emerged, as President Obama commented upon its signing, from "the core principle that everybody should have some basic security when it comes to their health care."

Since the passage of the Affordable Care Act six years ago, more than 20 million uninsured people have gained health coverage. Those gains come primarily from the insurance marketplace, young adults who can stay on their parents' plans until they turn 26, and Medicaid expansions (per Federal Health and Human Services agency). The ACA also eliminated the exclusion of coverage for individuals with pre-existing conditions. Certainly the ACA is making inroads on one of the barriers above, lack of insurance. Over the coming years, researchers will be looking at how this increase in access impacts health outcomes for the population overall and for those at highest risk.

Two main federal health programs, Medicaid and Medicare, cover poor and low-income children and all seniors, respectively. Historically, the largest group in the United States without health insurance has been adults ages 18-64. This group may not have employer sponsored health care plans because they work in low-wage jobs without benefits, work for small employers, are self-employed, or are in fact unemployed, and have not been able to afford health insurance.

Here are some facts about that group, from a study by the National Center for Health Statistics:

- In the first 3 months of 2012, 47.3 million persons of all ages (15.4%) were uninsured at the time of interview, 59.7 million (19.4%) had been uninsured for at least part of the year prior to interview, and 34.6 million (11.3%) had been uninsured for more than a year.
- Unemployed adults had poorer mental and physical health than employed adults; this pattern is found for insured and uninsured adults.
- Unemployed adults were less likely to receive needed medical care due to cost than the employed in each insurance category.
- The unemployed were less likely to receive needed prescriptions due to cost than the employed in all insurance categories.
- Uninsured adults were less likely to receive needed medical care and prescription drugs due to cost than those with public or private insurance, regardless of employment status.

According to regional data from the Michigan Behavioral Risk Factor Survey from interviews conducted in 2012-14, an estimated 15 percent of U.P. residents 18-64 years of age reported no health insurance coverage and 20 percent of all adults in the LMAS district reported that they had not accessed healthcare in the past 12 months due to cost. Based on Schoolcraft County Healthy Michigan Plan enrollment and ACA Marketplace data, the rate of uninsured

adults age 18-64 in Schoolcraft County likely dropped to between 5 and 8 percent by the end of 2016, but access to dental and mental health services is an ongoing concern due to health professional shortages and systemic barriers in financing for oral and mental health services.

Local Focus

- Median household incomes are one-third lower in Schoolcraft County than statewide.
- An estimated 32 percent of children live at or below the poverty level.
- Local rates of uninsured adults have declined dramatically from an estimated 15 percent to perhaps 5-8 percent in the last two years since the implementation of the insurance mandate of the Affordable Care Act, largely due to Healthy Michigan Plan enrollment, although many people who have insurance are under-insured, i.e. have high copays or deductibles which make obtaining health services difficult or impossible.
- Health insurance coverage directly correlates with employment as most adults currently access health insurance through employer-funded plans. Increasing access to Medicaid insurance for poor adults may change this correlate.
- Low-income adults are less likely to access routine physical exams and preventive screenings. An estimated 20 percent of LMAS adults had to forego needed health care in 2014 because cost was a barrier, and 45 percent received no dental care in the past year.
- Schoolcraft County is a federally designated Health Professional Shortage Area for primary care, oral health and mental health.

Potential Future Implications

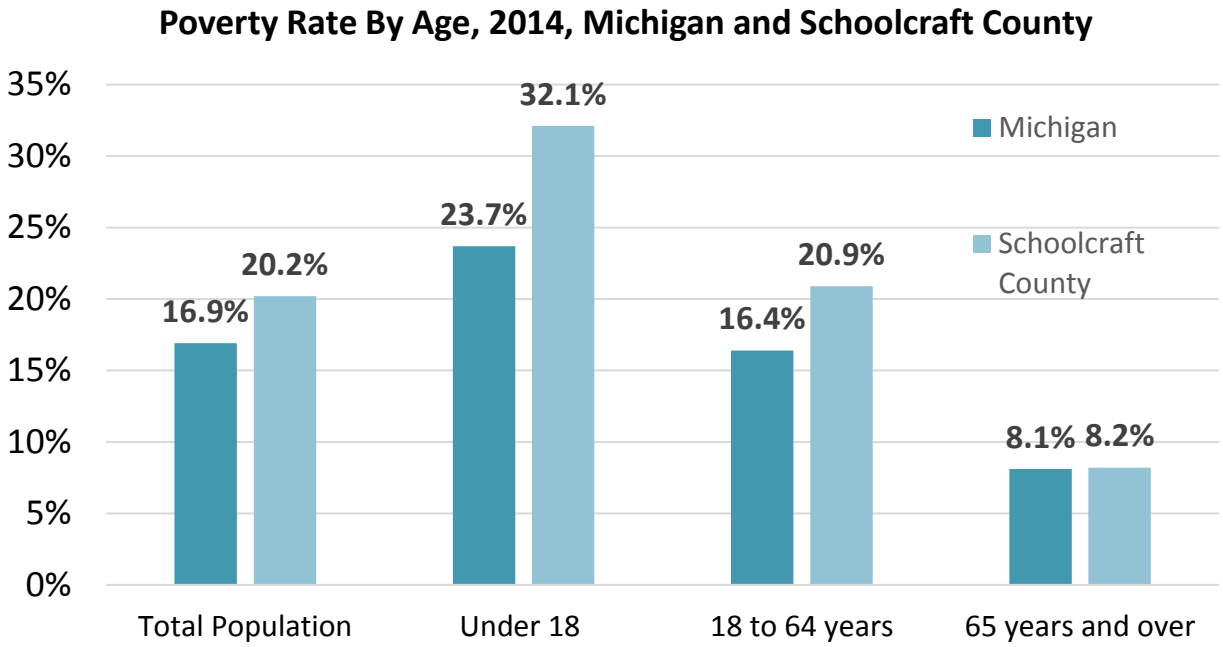
- Low-income individuals and families are more likely to have poor health outcomes, so they are an important population for prevention and outreach. Many Schoolcraft County residents are vulnerable from a health standpoint because of their income status.

- The federal Affordable Care Act has expanded access to health insurance and preventive services, but what long-term impact this may have on the health outcomes of vulnerable populations is not yet known.

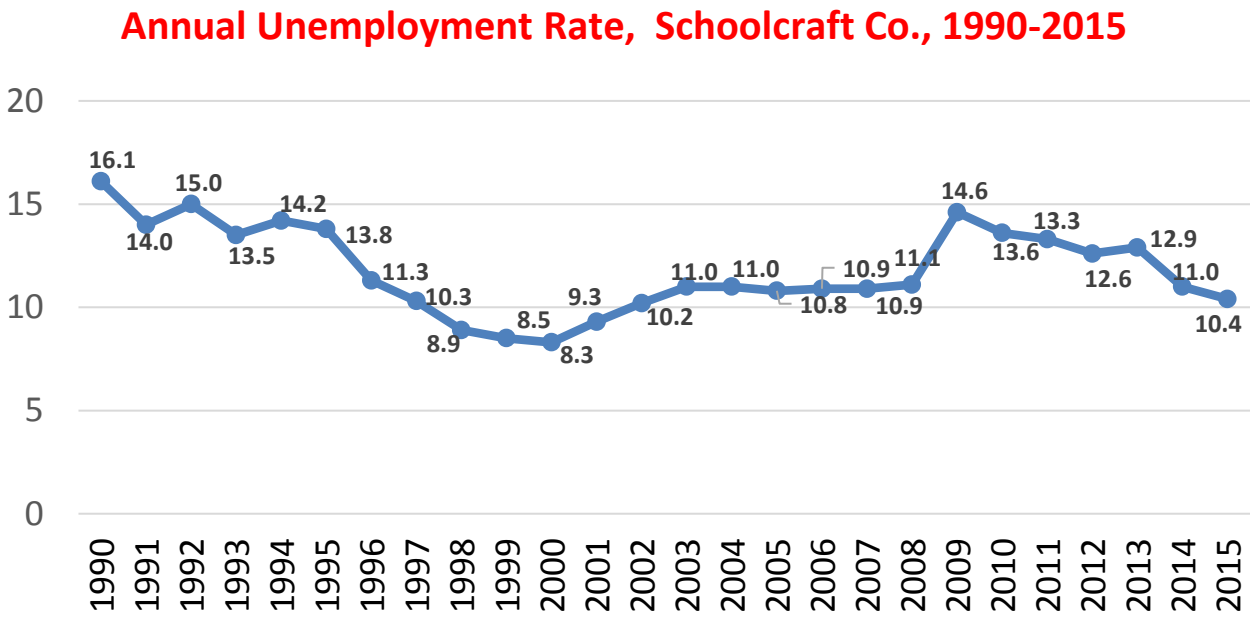
- Health disparities are related to economic status, independent of insurance coverage; therefore, expansion of health insurance is not expected to fully eliminate disparities of health outcomes as long as wide income inequalities persist.

- Poor oral health has been linked to other health concerns such as cardiovascular disease, and poorer birth outcomes for affected pregnant women. In addition, routine dental care provides an opportunity to screen for findings suggestive of head and neck cancers, diabetes and other disease processes. Lack of access to or utilization of these services may have a broad impact on the health status of local residents.

Poverty: From 2014 American Community Survey estimates, 20 percent of Schoolcraft County residents, and 32 percent of children age 0-18, live in households at or below the federal poverty line. Poverty and poor health are strongly correlated on a population basis.

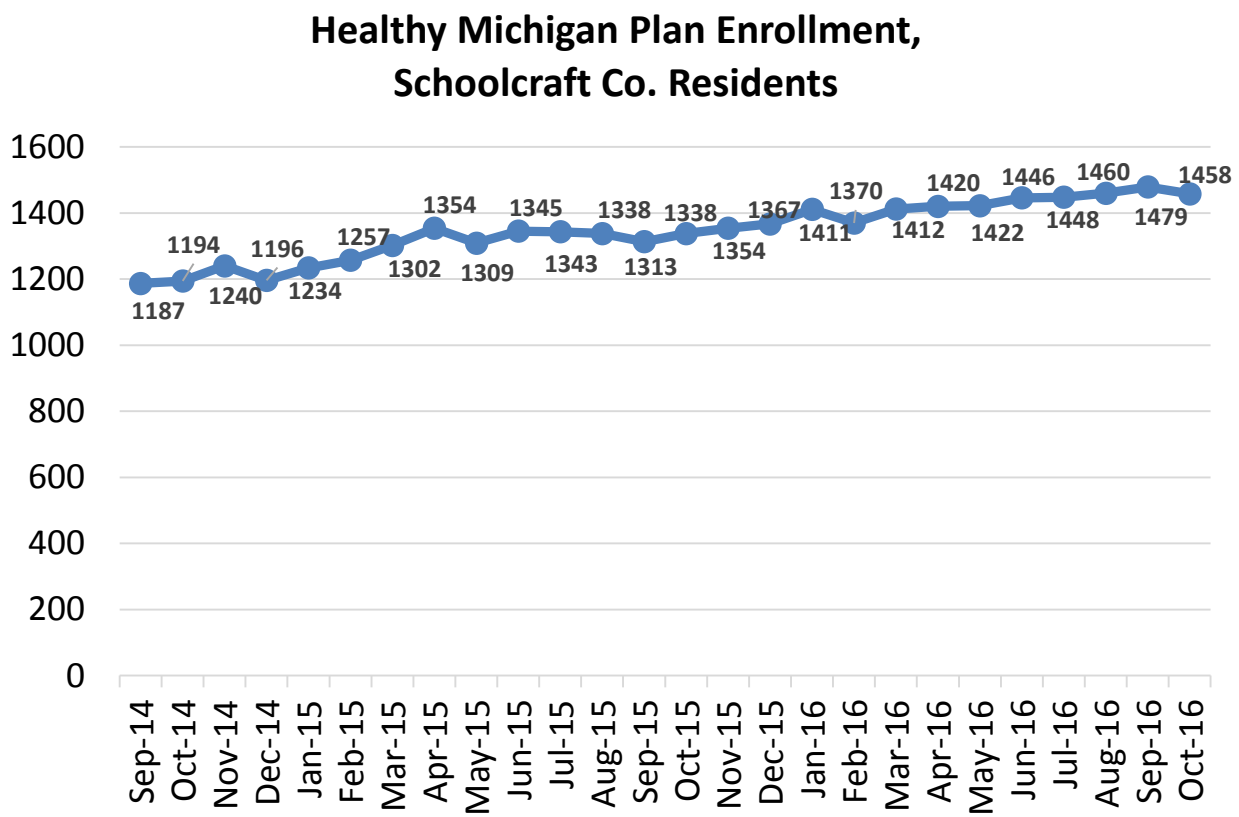


Unemployment: The official unemployment rate for Schoolcraft County has trended downward since its high point during the last recession in 2009-2011. Still, the local rate is twice the rate in Michigan and the U.S. Unemployment is a factor in health access as many families have employer-sponsored health insurance.



Healthy Michigan Plan: Michigan's version of Medicaid Expansion, implemented in April 2014, is a large factor in the reduction of the rate of uninsured adults over the last two years.

- As of October 2016, more than 1,450 Schoolcraft County residents were enrolled in this "Medicaid Expansion" health insurance program run by MDHHS under the Affordable Care Act (see below).
- This represents 29 percent of the estimated 3,670 residents age 18-64.
- The rate of uninsured adults age 18-64 in Schoolcraft County has likely been reduced by more than half since 2014, due to the Healthy Michigan Plan, ACA Marketplace plans, and coverage for 18-25 year olds on parents' policies and people with pre-existing conditions who can now access insurance. Of these four reasons, Healthy Michigan Plan is undoubtedly the biggest factor.
- Many adults, especially between the ages of 18-39 who are less likely to have jobs that offer health insurance, may be accessing health care for the first time since their high school sports physicals, which could exacerbate a shortage of primary care providers.
- Health plans must cover 10 essential services (but not adult dental care).



HPSA

The table lists the current federal Health Care Professional Shortage Area (HPSA) designations that apply to Schoolcraft County. The area is especially in high need for mental health access.

Area, Population or Clinic	Care Type	Date Designated
Schoolcraft County – Single County	Mental Health	03/01/2014
Schoolcraft County – Single County	Primary Care	10/04/2012
Schoolcraft County – Single County	Dental Health	10/11/2013
Schoolcraft County – Geographic Area High Need	Mental Health	03/07/2014
Schoolcraft County – Medicaid-Eligible Population	Dental Health	10/11/2013
Schoolcraft County – Low-Income Population	Primary Care	10/04/2012
Schoolcraft Memorial Hospital Rural Health Clinic	Mental Health	10/21/2013
Schoolcraft Memorial Hospital Rural Health Clinic	Primary Care	12/26/2013
Schoolcraft Memorial Hospital Rural Health Clinic	Dental Health	12/26/2013
Manistique Tribal Health Clinic	Mental Health	10/26/2002
Manistique Tribal Health Clinic	Primary Care	05/15/2015
Manistique Tribal Health Clinic	Dental Health	12/02/2011

Maternal, Infant and Child Health

According to 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.

A wide range of social determinants impact the well-being of women, infants and children including race/ethnicity, income, educational attainment, access to health care and the physical environment. In spite of significant improvements over the years in maternal health, many studies show that an increasing number of pregnant women in the United States have chronic health conditions such as high blood pressure, diabetes, or heart disease that may put them at higher risk of adverse outcomes.

Reduction in maternal and infant mortality and preterm and low birthweight births are important Healthy People 2020 goals. Although pregnancy-related mortality for women has declined in the United States, approximately 700 women still die of pregnancy-related causes each year and 65,000 have serious health complications, according to the CDC.

Preterm birth is the birth of an infant before 37 weeks of pregnancy and is the greatest contributor to infant deaths, with most preterm-related deaths occurring among babies who were born before 32 weeks gestation. Preterm birth is also a leading cause of long-term neurological disabilities in children. In 2014, preterm birth affected about 1 of every 10 infants born in the United States. Fortunately, most newborns grow and thrive. However, for every 1,000 babies that are born in the Unites States, nearly six die during their first year. Most of these babies die as a result of birth defects, preterm birth, sudden infant death syndrome, complications of pregnancy, and injuries.

According to 2015 estimates from the World Fact Book, the United States trails 56 other countries with lower (better) infant mortality rates, including all European countries, the United Kingdom, Canada, Poland, Croatia, Scandinavia and Japan. Monaco had the lowest rate at 1.82 infant deaths per 1,000 live births. The United States estimate was 5.87 deaths per 1,000 births (an improvement over 2010's rate of 6.1/1,000), and the country with the highest infant mortality was Afghanistan, with a staggering 115.8 per 1,000, or one-in-seven.

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. In addition, healthy birth and early identification and treatment of health problems among infants can prevent death or disability and enable children to reach their full potential. A few key points from the CDC's Pregnancy Risk Assessment Monitoring System (PRAMS) and other sources

include:

- In 2011, approximately 10.2 percent of women nationally reported smoking during the last 3 months of pregnancy. In Michigan that number was 14.9 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 2011, approximately 45 percent of U.S. women were overweight or obese prior to conception. In Michigan this percentage was 50.3 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 risk of being stillborn, premature, too heavy and of having birth defects,

- Only 66.8 percent of U.S. women and 74.6 percent of Michigan women report adequate prenatal care as assessed by the Kessner index, a commonly used algorithm for evaluating the adequacy of prenatal care.

- According to a large study of more than 4,000 women, approximately one in seven women were 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.

- 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

- There are about 60 births per year to Schoolcraft County residents.

- Local cigarette smoking during pregnancy far exceeds state levels with a long term average of greater than 30 percent of Schoolcraft County pregnant women reporting at least some tobacco use during pregnancy. As noted above, tobacco exposure increases the risk of prematurity, low birthweight and Sudden Infant Death (SIDS) for these children.

- Immunization is one of the most important tools available to protect the health of children in our communities. It is important to maintain high levels of immunization within communities in order to limit the spread of infectious disease. The percent of coverage needed depends on the virus or bacteria targeted. For example, measles, with its easy transmissibility, requires vaccination coverage of 93-94 percent of the population to be most effective, while coverage in the mid-80 percent range would suffice for mumps. Unfortunately, at the state and in most U.P. counties, rates for the primary series of vaccines completed by 36 months are below 80 percent. Schoolcraft County recently had 73.9 percent immunization completion rate at 19-35 months, ranking 56th among 82 Michigan counties.

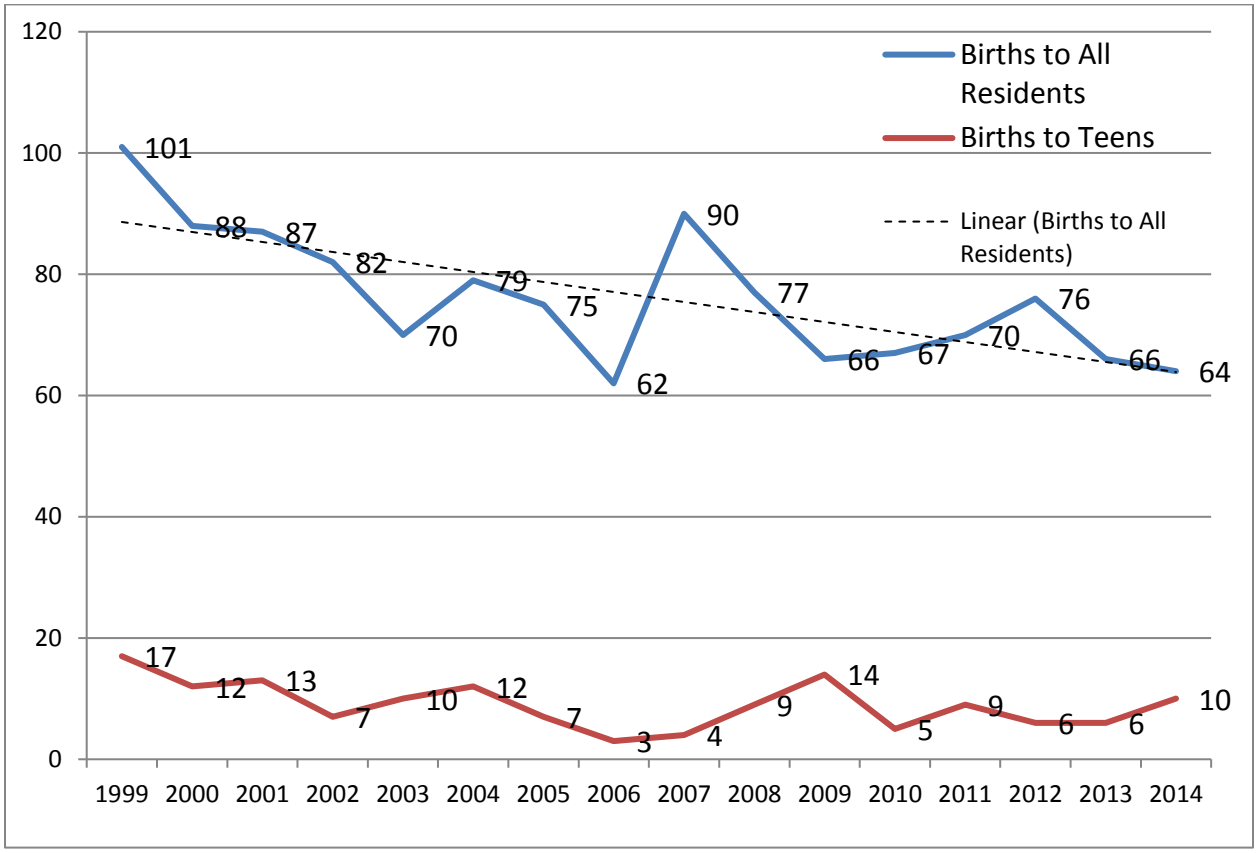
Potential Future Implications

- Tobacco prevention efforts are imperative to decrease the initiation of tobacco use in youth as research demonstrates that the adolescent brain is more susceptible to nicotine addiction and early use increases the risk of becoming a lifelong smoker. Local tobacco use in pregnant women places children and their mothers at risk.

- A focus on improving access to quality preventive care among women and children is an important societal priority as early prevention is a cost-effective strategy in promoting community health.

- Four out of five teen pregnancies are unplanned and both teen mothers and their children are at higher risk of poor outcomes. These include: low educational attainment and poverty for mothers and prematurity, low birthweight, and lower educational attainment for their children. Access to reproductive health services is critically important to support the delivery of healthy children into healthy homes.

All Births, and Teen Births, Schoolcraft County Residents, 1999-2014



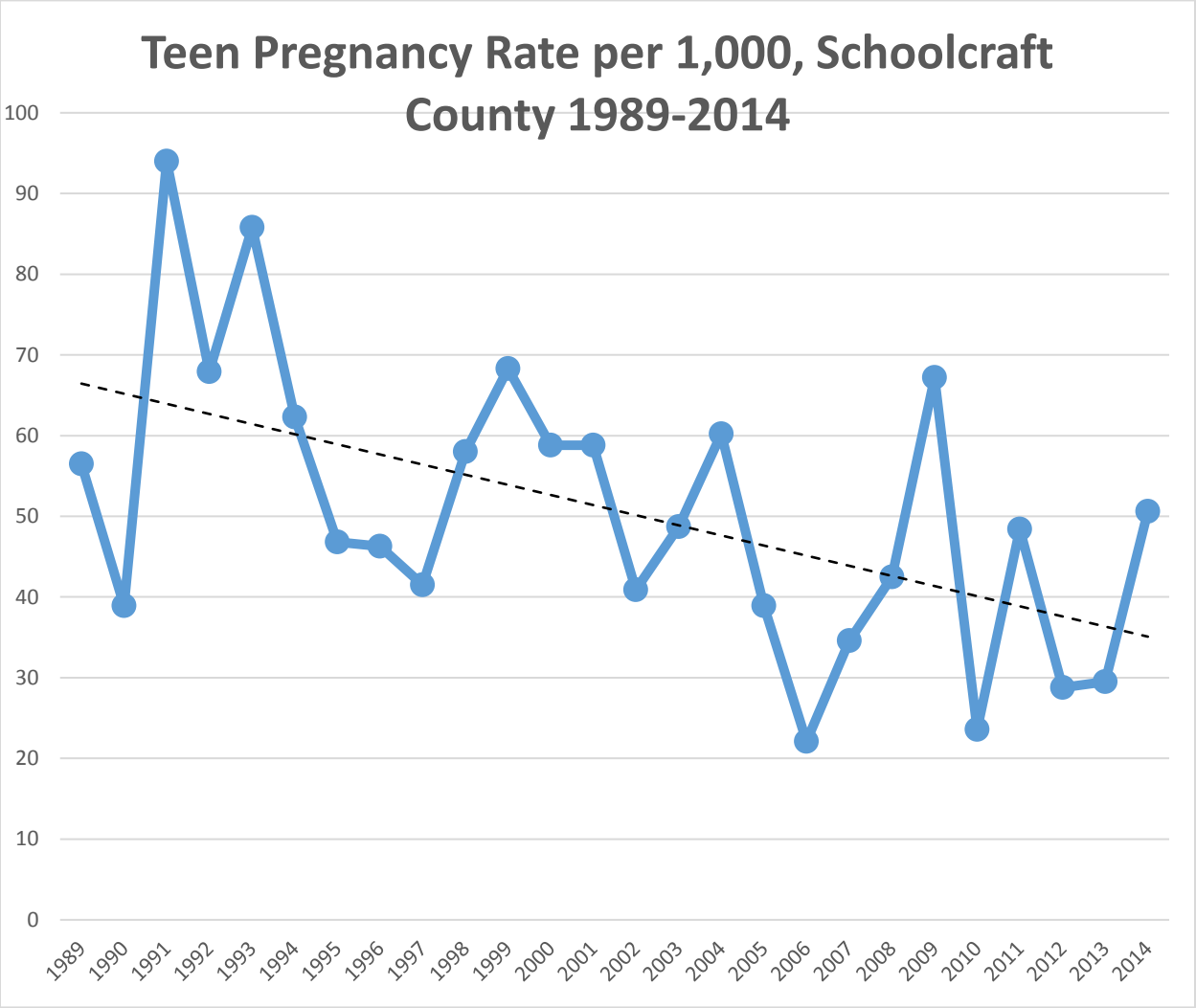
Births to Schoolcraft County residents are declining, are not keeping pace with deaths (roughly 60 births versus 120 deaths per year).

Selected Birth Statistics, 2014

Natality rates and percentages	Schoolcraft Co.	Michigan
Percent births with adequate prenatal care*	57.8	67.5
Teen pregnancy rate per 1,000 girls 15-19	36.8	38.3
Percent low-weight births**	6.8	8.4

Access to prenatal care, represented by 57.8 percent of mothers having received adequate prenatal care according to the multi-factorial Kessner Index, was lower than the Michigan rate in 2014. Obstetric care is provided at SMH at periodic visiting clinics. Teen pregnancy incidence was similar to state and national rates, but somewhat higher compared with White teens nationwide. The percentage of low birth weight babies was laudable.

Teen Pregnancy



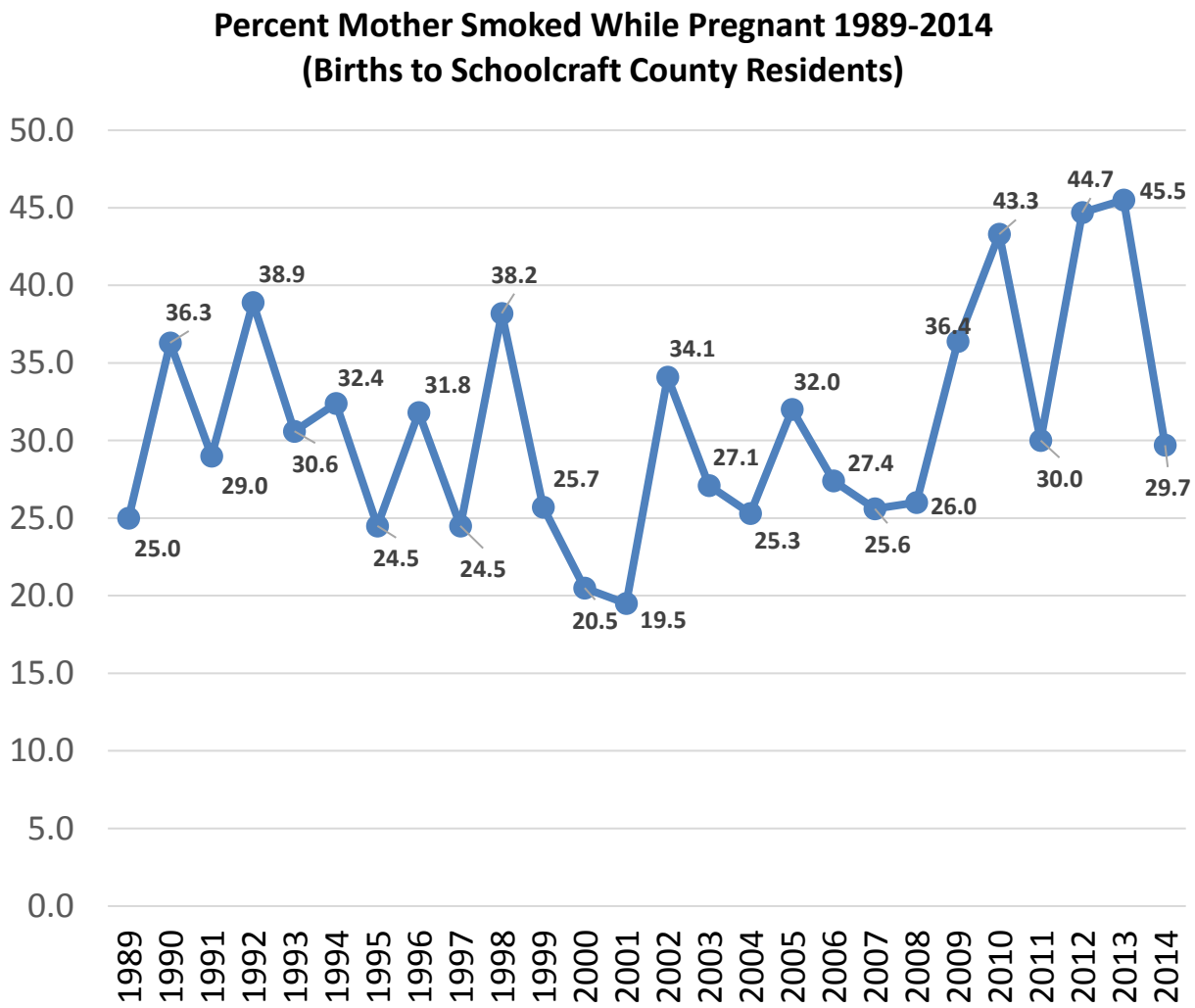
The national teen pregnancy rate has declined almost continuously over the last two decades. The teen pregnancy rate includes pregnancies that end in a live birth, as well as those that end in abortion or miscarriage. Between 1990 and 2010, the rate declined by 51 percent—from 116.9 to 57.4 pregnancies per 1,000 teen girls. According to recent national data, this decline is due to the combination of an increased percentage of adolescents who are waiting to have sexual intercourse and the increased use of contraceptives by teens. The local trend line is similar to the U.S. rate for White teens.

Additional Pregnancy and Birth Statistics, 2014

Maternal Characteristics, 2014	Schoolcraft County	Michigan
% Under 20 years	15.6	6.1
% First births	50.0	38.7
% Fourth and higher order births	7.8	12.4
% Less than 12 years of education	9.4	12.3
% Unmarried	53.1	42.5
% Maternal HIV test performed	70.3	80.3
% Received prenatal care during first trimester†	65.6	72.7
% of women delivering a live birth who had a healthy weight prior to pregnancy†	21.9	28.6
% Smoked while pregnant	29.7	18.3

Maternal Characteristics, 2014	Schoolcraft County	Michigan
% Cesarean delivery	50.0	32.7
% of Women with low-risk live births that were Cesarean births	48.3	29.7
% of Women with low-risk live births that were first birth Cesarean section†	34.5	17.5
% of Cesarean births among low-risk women with a prior Cesarean birth†	88.9	87.7
% Weight gained while pregnant less that 16 pounds	10.9	15.2
% Weight gained while pregnant for singleton mom was recommended†	22.6	29.7
% Weight gained while pregnant for singleton moms was excessive	53.2	46.4
% Breast feeding planned	60.9	36.8
% Breast feeding planned or initiated	75.0	79.2
% WIC food during pregnancy	67.2	42.9

Prenatal Tobacco Exposure: Tobacco use is associated with a broad range of poor health outcomes for smokers in general and for infants of smokers in particular. Aside from the impact of other components in cigarettes, nicotine decreases placental blood flow and can decrease growth of the fetus leading to the delivery of low birth weight infants. In addition, maternal smoking during and after pregnancy is associated with an increased risk of Sudden Infant Death Syndrome (SIDS). Data on smoking during pregnancy is collected from birth certificates and reflects smoking during any or all of the pregnancy. Smoking percentages in the region are generally far higher than for Michigan and the U.S. Even given the fact that Whites and Native Americans, rural residents and people of low income and educational status tend to have higher rates of tobacco use than Blacks, Asians, urbanites and people of higher socioeconomic status, the persistently high rates of prenatal tobacco exposure in Schoolcraft County are disturbing and represent an ongoing health issue.



Infant-Toddler Immunization: Schoolcraft County currently ranks 56th among 82 Michigan counties for the 19-35 month window for immunization series completion.

Infant-toddler Immunization Series	Schoolcraft (MCIR)	LMAS (MCIR)	MI Avg (MCIR)	US Average 2014 NIS	Schoolcraft County Rank	HP 2020 Goal
19 through 35 months "window"	%	%	%	%	No.	%
Birth Dose Hep B coverage	**77.3**	74.4	78.8	72.4	**59**	85%
4313314 coverage†	73.9	70.4	74.8	71.6	56	80%
43133142 coverage†	**52.3**	46.1	53.3	-	**47**	-
2+ Hep A	**52.3**	47.1	55	57.5	**52**	85%
4+ DTaP	**75.0**	74.7	78.5	84.2	**69**	90%
4+ PCV	**79.5**	79.7	84.9	82.9	**79**	90%
UTD†† Rota. (8-24 months)	**39.1**	51.1	70.9	-	**83**	-
WIC coverage (4313314)	84.8	79.5	77.6	65.7	13	-
Medicaid coverage (4313314)	**80.4**	73.3	75.6	-	**28**	-

Vaccinations are one of the most important public health accomplishments of the 20th century, making infectious diseases no longer the leading cause of death in Americans. Completion of the 4:3:1:3:3:1:4 series of vaccinations includes: 4 doses of diphtheria/tetanus/pertussis (DTaP) vaccine, 3 doses of polio (IPV) vaccine, 1 dose of measles/ mumps/ rubella (MMR) vaccine, 3 doses of Hemophilus B (HIB) vaccine, 3 doses of hepatitis B (HepB) vaccine, one dose of varicella and 4 doses of pneumococcal vaccine. These doses are timed for maximum protection of vulnerable infants and toddlers. If they are not all given by age 3, the child will not be counted as completed in the 19-35 month window referenced in the above table.

Although levels have fluctuated over time and most notably suffered declines in the wake of the 1998 fraudulent study linking MMR vaccine and autism, they have recovered some in recent years. Still, low vaccination coverage of populations, certainly at below 80 percent, places the community, particularly its most vulnerable residents, at increased risk of vaccine preventable diseases and their potential complications. Measles, for example, requires coverage of 93-95 percent of the community for optimal herd immunity. Much of the U.P. and Michigan fall well below recommended levels.

Adolescent Health

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, and risky sexual behaviors can adversely affect adolescents and young adults. Some adolescents also struggle to adopt positive behaviors that could decrease their risk of developing chronic diseases in adulthood, such as eating nutritiously, engaging in physical activity, and choosing not to use tobacco. Environmental factors such as family, peer group, school, and community characteristics also contribute to adolescents' health and risk behaviors. (CDC)

Results from the CDC 2013 Youth Behavioral Risk Factor Survey (YBRS), a survey of students in grades 9-12 in all 50 states, indicated that many high school students engaged in health-risk behaviors associated with the leading causes of death among persons aged 10–24 years in the United States. During the 30 days before the survey, 34.9 percent of high school students nationwide had had at least one alcoholic drink, 23.4 percent had used marijuana, and 17.9 percent had carried a weapon at least once. During the 12 months before the survey, 24.7 percent of students had been in a physical fight, 19.6 percent had been bullied on school property, and 8.0 percent had attempted suicide. Many high school students nationwide are engaged in sexual high risk behaviors associated with unintended pregnancies and STDs, including HIV infection. Nearly half (46.8 percent) of students had ever had sexual intercourse, 34.0 percent had sexual intercourse during the 3 months before the survey (i.e., currently sexually active), and 15.0 percent had already had sexual intercourse with four or more people during their life. Among currently sexually active students, only 59.1 percent reported using a condom during their last sexual intercourse.

Results from the 2013 national YRBS also indicate many high school students are engaged in behaviors associated with the leading causes of death among adults aged 25 years and older in the United States. During the 30 days before the survey, 15.7 percent of high school students had smoked cigarettes and 8.8% had used smokeless tobacco. A full 30 percent of high school students were either overweight or obese. During the 7 days before the survey, 5.0 percent of high school students had not eaten fruit or consumed 100-percent fruit juices and 6.6 percent had not eaten vegetables. Only 15.7 percent of students had eaten a serving of vegetables 3 or more times a day in the previous 7 days. Three-quarters of high school students reported more than 2 hours per day of screen time.

The YBRS does not sample in all communities, so it cannot provide county-level data. Instead, Michigan counties and even individual schools can access data from a similar, but not exactly comparable on-line survey conducted periodically in many Michigan middle- and high called the Michigan Department of Education's Michigan Profile for Healthy Youth

(MiPHY) survey. The MiPHY provides aggregate student results on health risk behaviors including substance use, violence, physical activity, nutrition, sexual behavior, and emotional health in grades 7, 9, and 11. The survey also measures risk and protective factors most predictive of alcohol, tobacco, and other drug use and violence. Student privacy is maintained through confidential, anonymous, and voluntary participation. A minimum of at least two districts and at least two building types (middle school or high school) must participate for a county/regional report to be generated. Unfortunately, not all schools participate in the MIPHY survey and those who do may eliminate questions at their discretion. Over the past few years, many U.P. school districts have not opted to take the MiPHY.

In Schoolcraft County, only 7th graders took the MiPHY survey in 2014. Their data is presented in this chapter.

Local Focus

- Schoolcraft County ranks best in Michigan for overall immunization completion rate for teens. Luce ranks 17th out of 83 counties for girls completing the HPV series. This relatively new vaccine can prevent the virus that causes cervical cancer.

- Nearly 40 percent of local teens are either overweight or obese, similar to neighboring counties.

Potential Future Implications

- Adolescents have important preventive health care needs, including immunizations, and access to birth control for those who chose it.

- Early adolescence (middle school) is a critical age for ATOD prevention efforts as that is the age on experimentation when lifelong habits may be formed.

Schoolcraft County Adolescent Immunization Rates, July 2016 Snapshot
(June 30, 2016 MDHHS Report Card)

Measure	Schoolcraft (MCIR)	LMAS (MCIR)	MI Avg (MCIR)	US Average 2014 NIS	Schoolcraft County Rank	HP 2020 Goal
13 through 17 years						
132321 coverage‡	86.7	79.8	74.0	-	1	-
1323213 coverage‡	38.4	33.0	26.5	-	9	-
1+ Tdap	90.0	83.7	78.9	87.6	1	80%
1+ MCV4	89.8	83.9	78.9	79.3	1	80%
3+ HPV (Females)	43.2	39.6	32.1	39.7	17	80%
3+ HPV (Males)	34.4	28.4	23.0	21.6	10	-
UTD Meningitis (17 yrs)	46.8	45.4	42.5	-	30	-

Schoolcraft County ranks first out of all Michigan counties for immunization for teens, and 17th out of 82 counties for girls completing the HPV series. This relatively new vaccine can prevent the virus that causes cervical cancer.

Adolescent Risk Behaviors: 2014 MiPHY Student Survey

On the following pages are data tables for 175 7th graders in Schoolcraft County surveyed during the 2013-2014 school year, 105 males and 69 females. Risk factors surveyed included, Nutrition and Weight, Physical Activity, Violence, Sexual Activity, and Alcohol, Tobacco and Other Drugs (ATOD).

2014 MiPHY Student Survey Results

Nutrition	Grade 7	Male	Female
Percentage of students who ate five or more servings per day of fruits and vegetables during the past seven days	20.9% (32)	20.4% (19)	22.0% (13)
Percentage of students who drank three or more glasses per day of milk during the last seven days	25.1% (43)	22.8% (23)	29.0% (20)
Percentage of students who drank a can, bottle, or glass of soda or pop one or more times per day during the past seven days	19.5% (33)	20.0% (20)	19.1% (13)
Percentage of students who had breakfast every day in the past seven days	42.7% (73)	46.5% (47)	37.7% (26)
Percentage of students who did not eat breakfast in the past seven days	9.4% (16)	8.9% (9)	10.1% (7)

Weight	Grade 7	Male	Female
Percentage of students who are **obese** (at or above the 95th percentile for BMI by age and sex)	18.7% (28)	21.9% (21)	12.5% (7)
Percentage of students who are **overweight** (at or above the 85th percentile and below the 95th percentile for BMI by age and sex)	19.3% (29)	17.7% (17)	23.2% (13)
Percentage of students who described themselves as slightly or very overweight	27.1% (46)	20.4% (21)	37.9% (25)
Percentage of students who are trying to lose weight	45.9% (79)	32.7% (34)	67.2% (45)
Percentage of students who have ever gone without eating for 24 hours or more to lose weight or to keep from gaining weight	15.3% (26)	9.8% (10)	23.9% (16)
Percentage of students who have ever taken diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight	2.4% (4)	1.0% (1)	4.5% (3)
Percentage of students who have ever vomited or taken laxatives to lose weight or to keep from gaining weight	5.3% (9)	2.0% (2)	10.4% (7)

Note that nearly two in five young adolescents were either obese or overweight.

Physical Activity	Grade 7	Male	Female
Percentage of students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days	52.6% (90)	55.9% (57)	48.5% (33)
Percentage of students who attended physical education (PE) classes on one or more days in an average week when they were in school	41.9% (70)	49.0% (49)	31.8% (21)
Percentage of students who play on any sports team	74.7% (127)	77.5% (79)	70.1% (47)
Percentage of students who watched three or more hours per day of TV on an average school day	26.5% (45)	28.7% (29)	23.5% (16)
Percentage of students who played video or compute games or use a computer for something that is not school work three or more hours per day on an average school	32.5% (55)	32.0% (32)	33.8% (23)

Physical activity rates tend to decline in late adolescence into adulthood, as participation in team sports drops off.

Danger and Violence	Grade 7		Male		Female	
Percentage of students who ever carried a weapon, such as a gun, knife, or club	60.7%	(102)	77.2%	(78)	34.8%	(23)
Percentage of students who ever carried a weapon on school property	2.4%	(4)	4.0%	(4)	0.0%	(0)
Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school on one or more of the past 30 days	9.4%	(16)	7.8%	(8)	11.9%	(8)
Percentages of students who had been threatened or injured with a weapon such as a gun, knife, or club on school property one or more times during the past 12 months	10.0%	(17)	12.7%	(13)	6.0%	(4)
Percentage of students who had property such as their car, clothing, or books stolen or deliberately damaged on school property one or more times during the past 12 months	31.6%	(54)	31.4%	(32)	30.9%	(21)
Percentage of students who have ever been in a physical fight	38.2%	(63)	47.0%	(47)	23.4%	(15)
Percentage of students who have ever been in a physical fight on school property	24.8%	(41)	33.0%	(33)	10.9%	(7)
Percentage of students who were ever in a physical fight in which they were hurt or had to be treated by a doctor or nurse	3.0%	(5)	3.0%	(3)	3.1%	(2)

Suicide	Grade 7		Male		Female	
Percentage of students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months	20.9%	(33)	15.2%	(14)	29.2%	(19)
Percentage of students who ever seriously considered attempting suicide	20.4%	(33)	16.8%	(16)	25.8%	(17)
Percentage of students who ever made a plan about how they would attempt suicide	11.3%	(18)	9.5%	(9)	14.1%	(9)
Percentage of students who ever tried to kill themselves	4.3%	(7)	2.1%	(2)	7.5%	(5)
Percentage of students whose suicide attempt resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse during the past 12 months	3.1%	(5)	2.1%	(2)	4.5%	(3)

When we think of risk groups for suicide, middle-aged and senior men and women, especially middle-aged men who are gun owners, often come to mind, but teens and even pre-teens are increasingly at risk according to national statistics, and young adolescent girls are the group that has experienced the steepest rate of increase in suicides in recent years.

Infectious Disease

As noted by the Centers for Disease Control (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 the 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 2014, an Ebola outbreak that emerged in Africa became an enormous public health concern across the globe. The arrival of the first U.S. case, through the travel of a Liberian man, brought attention to the fact that in a world made smaller by air travel, public health surveillance and collaborative work across borders is essential to every country's well-being. In all, there have been over 28,000 cases and 11,000 deaths worldwide due to this highly lethal virus. Clearly, public health measures taken by the U.S. were highly successful, as there have been only two domestically acquired cases in the U.S.; both in nurses who provided care for the first U.S. case. In Michigan, healthcare systems, emergency response teams and local public health worked collaboratively with state and federal agencies to ensure local preparedness.

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 40,000 deaths and 20 million vaccine-preventable illnesses could be avoided in each birth cohort if its 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 healthcare providers, 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 indicated, and final reports are submitted to the state. Information is also shared with the federal Centers for Disease Control (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 U.P. counties and the state as a whole. Two of the more commonly occurring and important illnesses are chlamydia and hepatitis C.

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. Women, especially young women 15-24 years of age, are hit hardest by Chlamydia. 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. There were 43 confirmed cases of Chlamydia in Chippewa County from the start of 2011 through 2015, and 205 cases throughout the LMAS district.

Hepatitis C is an infectious liver disease that results from infection with the Hepatitis C virus (HCV). The majority of individuals infected with HCV have no symptoms or symptoms so mild as to go unnoticed. Unfortunately, as many as 75-85 percent will develop chronic ongoing infection. It is estimated that 20 percent of those infected will develop cirrhosis within 20 years and others may develop liver cancer, which is one of the fastest growing causes of cancer mortality nationally. Hepatitis C is also the current leading reason for liver transplantation. As many as five percent of individuals infected with HCV, will die from HCV-related illness. HCV is usually spread when blood from a person infected with the Hepatitis C virus enters the body of someone who is not infected. Before 1992, when blood products began being screened for HCV, transfusion was an important source of infection.

Today, most people become infected with the Hepatitis C virus by sharing needles or other equipment used to inject drugs. HCV may also be transmitted in utero from a mother to her child and rarely through sexual contact. Unlike Hepatitis A and B, there is no current vaccine to prevent Hepatitis C infection but there is treatment available.

The CDC now recommends a one-time screening blood test of those born between 1946 and 1964, as there is higher prevalence in this group than the population overall . Other groups recommended to undergo testing include those who use intravenous drugs, those with HIV, those with certain medical conditions and those with known exposure. There are an estimated 2.7 million Americans living with Hepatitis C infection—most of them unaware. In Luce County, 63 new cases of HCV were diagnosed in the last five years.

Local Focus

- Increasing immunization coverage in our population is critically important to prevent outbreaks of vaccine-preventable diseases like pertussis, chicken pox and measles. Note the 8 pertussis cases in the LMAS region from 2011-2015, and 19 cases of Chickenpox over the last five years.

- Chlamydia is the most common *laboratory-confirmed* sexually transmitted disease in the region. Of note, Human Papillomavirus (HPV), the leading cause of cervical cancer, is the overall most common sexually transmitted disease. The cancer-causing strains are now largely preventable with the widely available HPV vaccine. Note, in addition to cervical cancer, HPV has been clearly linked to penile, anal, and head and neck cancers in both males and females. The HPV vaccine has demonstrated exceptional safety and efficacy in reducing HPV infection and is a critically important tool to prevent cancer.

Potential Future Implications

- A well-vaccinated public will continue to be critically important in controlling the spread of many communicable diseases and even cancer (Hepatitis B vaccine, HPV vaccine). This will be even more important as the world becomes effectively smaller through global travel. Illnesses that have declined substantially in this country can re-emerge in the U.S. through infections contracted outside the country and brought home, or through contact of U.S. residents with individuals arriving from other countries where vaccine preventable illnesses are still common.

- It is possible that the territory of Lyme-infected ticks will continue to expand within the state and nationally. Prevention efforts to increase awareness, decrease tick

habitat around local homes and otherwise limit exposure through use of environmental measures (long clothing, repellants) will be increasingly important to minimize disease.

- Screening for HCV is increasing the number of identified cases found among the Baby Boomer population and in younger individuals in our communities using intravenous drugs. There will likely be an ongoing increased need for appropriate treatment services locally.

- The core functions of public health, including disease surveillance and protection of food and water supplies, will continue to be critically important in maintaining the health of the local population.

Infectious Disease Cases Completed in MDSS 2011-15 (5-year totals)

Disease (Incidence, not Prevalence)	Cases Schoolcraft County	Cases LMAS
HIV/AIDS	0	0
All Foodborne	21	115
All Meningitis	2	9
Chlamydia	43	205
Gonorrhea	2	15
Syphilis	0	0
Tuberculosis	0	4
Chickenpox	2	19
Pertussis	0	8
Hepatitis A	0	6
Hepatitis B	0	0
Hepatitis C	36	169

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 can generally 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. 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. From a public health perspective, the positive aspect of chronic disease is that it is, in large part, very preventable.

The Center for Managing Chronic Disease outlines a perspective on chronic disease management below.

Above: Circles of Influence in Self-Management of Chronic Disease

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:

- As of 2012, about half of all adults—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 self-report survey for 2013, 64 percent of adults and 30 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 national Behavioral Risk Factor Surveillance System (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 2013, an estimated 17.8% (42.1 million) U.S. adults were current cigarette smokers. Of these, 76.9% (32.4 million) smoked every day and 23.1 percent (9.7 million) smoked some days. 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 US 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.

As noted above, chronic disease is largely preventable. In particular, four modifiable health risk behaviors—lack of physical activity, poor nutrition, tobacco use, and excessive alcohol consumption—are responsible for much of the illness and early death related to chronic diseases.

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 age-adjusted cancer incidence rates (new cancer cases diagnosed per year per 100,000 people) are similar to the state of Michigan overall. 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, and because in small towns, nearly everyone knows someone who has had cancer, and fundraisers for cancer are more common than for other diseases.

- Regional diabetes prevalence is about 10 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. and LMAS 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 20 percent of local adults have been diagnosed with chronic or episodic depression and related diagnoses.

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 obesity rates that are currently about 30 percent locally, 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. Targeted and effective prevention efforts can have an enormous impact on the health of our community in future decades.

Age-adjusted Hospitalization Rates per 100,000 Residents, 2014*

Leading Hospital Discharges, 2014	Number of Discharges, Schoolcraft Co.	Rate per 100,000, Schoolcraft Co.	Rate per 100,000, Michigan
All Hospitalizations	1,012	1,213.0	1,282.7
Heart Diseases	115	137.8	127.6
Newborns and Neonates (less than 7 days)	77	92.3	116.1
Females with Deliveries	74	88.7	111.5
Injury and Poisoning	80	95.9	102.4
Septicemia	15	18.0	50.8
Psychoses	32	38.4	47.1
Osteoarthrosis and Allied Disorders	64	76.7	40.9
Cancer (Malignant Neoplasms)	25	30.0	38.1
Cerebrovascular Diseases	43	51.5	34.3
Pneumonia	69	82.7	31.5

*Rates are per 100, 000, using as the standard population the age distribution of the total population of the United States for the year 2000.

Local hospitalization rates appear similar to statewide rates. Hospitals and communities seek to reduce population rates through primary prevention (e.g. promote tobacco reduction in the general population); secondary prevention (e.g. targeted nutrition education for overweight patients); or tertiary prevention (e.g. better management of diabetes or asthma in primary care to reduce acute conditions leading to hospitalization.)

Selected Mortality Rates, 2014*

Leading Causes of Death	Number of Deaths Schoolcraft County	Rate per 100,000* Schoolcraft County	Rate per 100,000* Michigan
Total	120	822.5	781.6
Heart Disease	29	193.8	200.3
Cancer	32	220.2	173.5
C.L.R.D.	9	*	44.2
Stroke	5	*	37.8
Accidents	1	*	41.2
Alzheimer's	5	*	27.0
Diabetes Mellitus	1	*	23.6
Pneumonia/Flu	1	*	15.4
Kidney Disease	4	*	15.2
Suicide	2	*	13.2

*Rates are per 100, 000. Leading causes of death are computed by the direct method, using as the standard population the age distribution of the total population of the United States for the year 2000.

Local rates are within the expected ranges. Roughly half the deaths in any area, any year, will be from heart disease and cancer.

2012-2014 Behavioral Risk Factor Survey: Michigan, U.P. & LMAS

Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing and systematic random-sample survey of the health of adults age 18 and older in the United States, conducted by the federal Centers for Disease Control and Prevention (CDC) and state health departments, including the Michigan Department of Health and Human Services (MDHHS, formerly MDCH). The BRFSS is the gold standard for population health data in the United States because it has been conducted in roughly the same way for many years using the same questions and statistical methods.

Given the tens of thousands of people interviewed annually at the national and state levels, and the sophisticated weighting methods used to ensure that the respondents match the characteristics of the population, extremely accurate estimates are made, with narrow 95 Percent Confidence Intervals (the lower and upper bounds within which it can be said with 95 percent certainty that the true value lies.) But for smaller population areas, such precise values are not available due to the smaller numbers sampled.

For an area the size of Schoolcraft County, just 20-30 people may be interviewed per year within the Michigan sample. Therefore, MDHHS does not calculate rates for small counties. The smallest areas with published rates are the state's 12 BRFSS regions (of which the entire Upper Peninsula is one region) and the health department level (including the LMAS District, Luce-Mackinaw-Alger-Schoolcraft counties.) Even for the regions, three years' worth of data must be combined in order to accumulate enough respondents to allow for reasonable estimates.

And even among the three-year regional and health district data, not all indicators from the state and national BRFSS can be reported, because some questions are only asked in alternate years. And, furthermore, for some of the most recently published data, rates were available for the Upper Peninsula but not for LMAS. This happens when there are not enough people surveyed, or enough people answering a question, at the health district level. The LMAS district has one of the smallest populations of any health department jurisdiction in Michigan, so even over three years not enough people are sampled to calculate reasonable estimates for some questions. Questions that apply to all people surveyed, such as "How would you rate your health status?" or "Are you a current smoker, former smoker, or have you never smoked?" generally will have enough responses for reasonable estimates. But rates for indicators that apply only to a subset of all adults, such as "Men over age 50 who reported a PSA test for prostate cancer screening in the past year" will not have sufficient sample sizes for publishing. Therefore, there are only 21 indicators available for reporting in this chapter, out of more than 70 indicators reported at the state and national levels, but they include many of the most

commonly referenced indicators such as rates for health insurance coverage, smoking, obesity, heart disease, cancer and diabetes.

Even for these 21 indicators, two important notes of caution must be made:

1. For LMAS data, the 95 Percent Confidence Intervals, or C.I. (think of them as the 'margin of error', to use a familiar, though somewhat imprecise term) are quite wide, much larger than the state and regional C.I., so while the LMAS estimate may appear significantly higher or lower than the state rate using the generic sense of the word significant, in scientific terms the difference ***may not be statistically significant*** if the local C.I. overlaps the Upper Peninsula or Michigan rate. For instance, from Table 1, Health Status, Fair or Poor, the LMAS rate was 22.1%, much higher than the 16.2% rate for the entire U.P. and 17.2% for Michigan. But the 95% C.I. for the LMAS district for that indicator is (13.3-34.2), compared with (13.8-18.9) for the U.P. and (16.6-17.8) for Michigan. Hence, it cannot be said with certainty that the LMAS rate is higher (worse) because the C.I. are overlapping. Note that the larger the area's population (and the larger the sample size), the narrower the 95% C.I.

2. The regional and local data reported by the state have not been reweighted to reflect the jurisdiction's population characteristics for age, gender and other factors. This is very important to remember, because the U.P. and Luce County have older and less racially diverse populations that Michigan as a whole; i.e. a great proportion of seniors and relatively fewer young adults. Given that young people as a group tend to have better health status and lower rates of disease and disability, for many of the indicators in this chapter the true figure for LMAS may be higher (worse) than the published rate, because the answers from older adults should have been weighted greater to reflect local demographics. Conversely, for some behaviors like binge drinking or not having health insurance that are associated more with younger adults, the published data may overestimate the local rate, for the same reason.

With all that in mind, the following seven paragraphs are reprinted from the introduction to the MDHHS *2012-2014 Michigan BRFS Regional & Local Health Department Estimates* report issued August 18, 2015, prepared by Chris Fussman, M.S., Epidemiologist/BRFSS Coordinator, to give further background on the methodology of Michigan's survey and calculations:

> The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort among the Population Health Surveillance Branch (PHSB) of the Centers for Disease Control and Prevention (CDC), the Michigan State University Institute for Public Policy and Social Research (IPPSR), and the Michigan Department of Health and Human Services. Michigan BRFS data contribute to the national Behavioral Risk Factor Surveillance System that is managed by the PHSB at the CDC.

State-specific, population-based prevalence estimates (and asymmetric 95% confidence intervals) of health risk behaviors, preventive health practices, and chronic conditions are calculated using annual data sets (see Annual Tables at http://www.michigan.gov/brfs). However, region-specific and local health department-specific prevalence rates are usually computed using BRFS data combined across years.

For this report, data from the 2012-2014 Michigan BRFS were combined. The total sample sizes by year were: 10,499 in 2012, 12,759 in 2013, and 8,466 in 2014. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2012 through 2014 Michigan Behavioral Risk Factor Surveys, the sample of land line telephone numbers that were utilized for data collection was selected using a list-assisted, random-digit-dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. The sample of cell phone numbers used within each survey year was randomly selected from dedicated cellular telephone banks sorted on the basis of area code and exchange within the State of Michigan.

Iterative proportional fitting or raking was the weighting methodology used to make the 2012-2014 Michigan BRFS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of Michigan adults by telephone source (land line vs. cell phone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status. No additional weighting factors were computed at the regional or local health department (LHD) level, thus the weights used might not always provide accurate regional and/or LHD estimates, particularly when regional and/or LHD demographic distributions vary greatly from that of the state.

Population-based prevalence estimates and asymmetric 95% confidence intervals were calculated for indicators of health status, health risk behaviors, clinical preventive practices, and chronic conditions among the overall adult population in Michigan, as well as at the regional and local health department level. All analyses were performed in SAS-Callable SUDAAN®, a statistical computing program that was designed for complex sample surveys. In an effort to provide the most reliable information possible, prevalence estimates are suppressed if they are based on a denominator of less than 50 respondents or have a relative standard error of greater than 30%. Comparisons between estimates with non-overlapping 95% confidence intervals should be considered significantly different.

Due to the BRFSS methodology changes that took place in 2011, the estimates provided within the following tables should not be compared to Michigan BRFSS estimates from years prior to 2011. If you have any questions regarding any of the estimates within the following tables, please contact Chris Fussman at MDHHS, by phone, 517-335-8144, or by email, MIBRFSS@michigan.gov.

Regional BRFSS Data

Indicator	Michigan	U.P.	LMAS
Health Status: Fair/Poor	17.2 (16.6-17.8)	16.2 (13.8-18.9)	22.1 (13.3-34.2)
Obesity (BMI 30+)	31.1 (30.4-31.8)	29.5 (26.4-32.8)	30.4 (21.1-41.6)
No Health Insurance Age 18-64	15.6 (14.9-16.3)	15.0 (12.0-19.8)	*
No Health Care Due to Cost	15.0 (14.5-15.6)	12.3 (10.0-15.2)	20.0 (11.0-33.6)
No Routine Checkup Last Year	30.6 (29.9-31.3)	31.9 (28.4-35.5)	37.9 (27.1-50.0)
Current Smoker	22.0 (21.3-22.7)	21.2 (18.1-24.8)	30.2 (19.8-43.2)
No Leisure-time Physical Activity	24.4 (23.7-25.1)	21.7 (19.0-24.7)	21.6 (14.0-31.7)
Heavy Drinking	6.4 (6.0-6.8)	8.6 (6.8-10.8)	9.1 (5.5-14.6)
Binge Drinking	19.0 (18.4-19.6)	21.1 (18.1-24.6)	32.1 (21.5-45.1)
No Dental Visit Last Year	31.7 (30.8-32.6)	33.0 (28.4-37.9)	44.8 (29.8-60.7)
Ever Told Depression	20.8 (20.2-21.4)	20.8 (17.9-24.0)	20.2 (12.3-31.4)

Community Focus Groups

On November 17 and 18, a diverse group of community members took part in a series of focus groups sponsored by Schoolcraft Memorial Hospital. A presentation of demographic and health data was delivered by Community Health Assessment Specialist Ray Sharp of Western U.P. Health Department, and followed by a lively discussion of what Schoolcraft County has to offer and can improve in terms of the health of residents, with notes taken by Health Data Analyst Kim Reeve. These meetings were dedicated to discussing the health needs of all residents in Schoolcraft County that were narrowed down to six main areas of concern or opportunity.

Concern: Recruit and retain more physicians, mid-level medical practitioners as well as mental health professionals

With the passage of the Affordable Care Act, more people have health insurance (either Medicaid or coverage through Marketplace plans) than before. This means many people have started going to see a doctor for the first time in many years – especially in terms of yearly physicals. However, a new problem has surfaced from this increase of usage – a shortage of primary care physicians and mid-level medical practitioners.

Recruitment and retention of physicians has always been difficult in rural areas, and it is becoming even more difficult with the increase in demand that came with ACA. Schoolcraft County experiences the same problems that rural community's nationwide struggle with:

- It is hard to pay well enough to recruit physicians especially with reimbursement rates for care dropping.
- It is also difficult to recruit someone who has a highly educated spouse when there are not enough highly skilled jobs in the area.
- The education system is continuing to struggle with falling enrollment and cuts to their budgets. Good schools are key to recruitment of new professionals to a community.

The entire UP is also experiencing an extreme shortage in mental health providers. Schoolcraft County feels this as well. For example, there is only one child psychiatrist in the entire UP and the waitlist for a new patient is 13 months long. Marquette also has a six month waiting period for new patients so some patients are traveling to Green Bay for initial testing and care. The Veterans Administration averages a three to four month wait for new patients, even with four doctors serving the UP. Many veterans are traveling to Milwaukee for mental health services.

These long wait times and shortage of psychiatrists and therapists mean that some primary care physicians are trying to manage mental health needs that are complicated and require a specialist. It is possible for MSH to develop a partnership with Lake Superior State University that has a remote Masters of Social Work program through Grand Valley State University. All of these students are required to do a one-year internship that would alleviate some of the mental health care shortage.

Concern: Lack of recreation and gym facilities

Though many of the focus group participants agreed that Schoolcraft County is beautiful, there is also a lack of recreational and gym facilities for residents to use in order to maintain a healthy

lifestyle. The winter months in the UP are extremely difficult in terms of weather so a YMCA or other gym center would be extremely helpful for residents who need and/or wish to exercise all year long. Access to fitness facilities improve health outcomes and can prevent some extremely costly illnesses in the future.

Concern and Opportunity: Access, use and maintenance of feeding programs

Poverty is a big concern for the residents of Schoolcraft County. Low-income families and individuals experience quite a few extra speed bumps in life, especially access to enough food, let alone healthy food. Currently, Schoolcraft County is served by a food pantry, Feeding America as well as some food programs for children. However, there is a concern that some residents live in such rural areas that they cannot easily access the programs. Also, some people that really need to use the feeding programs are too embarrassed to come in and admit they need help. Finally, there is a possibility that Feeding America will stop serving the UP in the near future, which would leave a lot of people without necessary food. (Feeding America currently brings 500 boxes of food to the county a month).

Though concerns about these programs are considerable, new opportunities do exist. There are some new grocery stores coming to surrounding counties that have feeding programs that may be available for Schoolcraft County. For example, both Sault Ste. Marie and Escanaba will have Meijer stores. Meijer has a food pantry program that will bring healthy food into communities in need. Schoolcraft County could begin work on this program now.

Opportunity: Develop a partnership between Department of Health and Human Services, law enforcement and Schoolcraft Memorial Hospital to treat children who have experienced trauma

Children can experience trauma like abuse and neglect that can impact them for the rest of their lives. There is an opportunity for a partnership with the Department of Health and Human Services, SMH and law enforcement to help get to the root of the problems caused by trauma. Not only will this provide children who have already experienced trauma with the necessary treatment and care, this partnership can prevent future trauma by breaking the cycle that impacts multiple generations within the same family. Schoolcraft County DHHS is working on a pilot program to address all aspects of childhood trauma and MSH would be a great addition to the program.

Opportunity: Schoolcraft Memorial Hospital can stand as a hub for education and information sharing

The system of health care and social safety nets that are available to individuals is difficult to navigate and complicated to access. However, families that need extra help or have special needs can greatly benefit from accessing the programs that are available in their community. With that in mind, Schoolcraft Memorial Hospital has the opportunity to be a central information hub for families in Schoolcraft County. By providing training and informational sessions to both their employees and community members, MSH can insure that more people are accessing the programs available to them.

SMH can also sponsor seminars on health problem prevention techniques as well as sessions on life skills for children, teens and parents. By providing informational classes to the community, some health problems can be minimized. Also, SMH can become a central repository for information that benefits the entire community.

Opportunity: Pursue health foundation opportunities

Many larger communities, especially urban areas, have opportunities to fund new health programs through federal grants, however, Schoolcraft County does not have the ability to access federal grant funds due to limited population size. Schoolcraft County does not have big corporations in the area that would be willing and able to help fund programs that help communities become healthier. However, there are opportunities to be had. There are two health foundations that serve the area that could be potential funders for health improvement programs. By accessing funds through health foundations, MSH and Schoolcraft County could address the concerns and opportunities discussed in these focus groups.

Focus Group Participant List

Tracie	Abram	Michigan State University Extension
Sheila	Aldrich	City of Manistique
Alan	Barr	Schoolcraft County Economic Development Council
Kristen	Boyd	Schoolcraft Memorial Hospital
Ann	Bradshaw	Schoolcraft Memorial Hospital
Renee	Chandler	Schoolcraft Memorial Hospital
Boyd	Chappel	Schoolcraft Memorial Hospital
Karen	Cirino	Schoolcraft Memorial Hospital
Bob	Crumb	Schoolcraft Memorial Hospital
Nancy and Gary	Demors	Resource Fair Director
Lisa	DesJarden	Schoolcraft Memorial Hospital
Darrell	Dixon	Schoolcraft County Sherriff Department
Aaron	Eagle	Schoolcraft Memorial Hospital
Joan	Ecclesine	MDS CAA Early Childhood Program
Ashlee	Eisinger	Manistique Area Schools
Britteny	Eveningred	LMAS DHD Luce Mackinac Alger Schoolcraft District Health Department
Matthew	Eveningred	Michigan Department of Health & Human Services
Donna	Foote	Veterans Administration
Deborah	Fragel	Schoolcraft Memorial Hospital
Fawn	Freeborn	Schoolcraft Memorial Hospital
Paul	Furman	Schoolcraft County Sherriff Department
Sara	Giles	Schoolcraft Memorial Hospital
Courtney	Grant	Hiawatha Behavioral Health
Jim	Harmes	Retired Fire Chief, SMH Board of Trustees
Jan	Jeffcott	City of Manistique

Jacqueline	Jeneoru	Great Lakes Recovery Center
Kent	LaCroix	Schoolcraft Memorial Hospital
Tonya	Leik	Schoolcraft County Medical Facility
Trisha	McEvers	Goodlife Constructive Therapies
Ann	McGregor	Habitat for Humanity Hiawathaland
Dan	McKinney	Hiawatha Behavioral Health
Gunnar	Mickelson	LMAS DHD Luce Mackinac Alger Schoolcraft District Health Department
Cindy	Olli	Schoolcraft Memorial Hospital
Kerry	Ott	LMAS DHD Luce Mackinac Alger Schoolcraft District Health Department
Eric	Perrollaz	Schoolcraft County Transit Authority
Susan	Phillips	Schoolcraft Memorial Hospital - retired
Ellyn	Plackowski	Counselor - Private Practice
Amy	Powers	Veterans Administration
Amy	Quinn	Great Lakes Center for Youth Development
Mark	Rhode	Putvin Drug Store
Mary	Ross-Dubord	Upper Peninsula Commission for Area Progress
Kimberly	Shiner	Schoolcraft Memorial Hospital
John	Stapleton	Schoolcraft County Transit Authority
Julie	Toennessen	Manistique Area Schools
Robin	VeltKamp	Schoolcraft Memorial Hospital
Georganne	Verigan	Acupuncture and Therapeutic Massage, SMH Board of Trustees
David	Wesoloski	Sault Ste. Marie Tribe of Chippewa Indians
Margo and Loney	Withey	Good Neighbor Services
Judy	Zerilli	
Jamie	Ziemba	Schoolcraft Memorial Hospital

Recommendations for Priority Health Issues/Objectives

Following the analysis of community health data and participant comments from the three community focus groups, Ray Sharp met with SMH management staff and then made the following suggestions for three priority health needs to be addressed by the hospital and community, with objectives specific to SMH's role in addressing identified population health needs over the next 3 years:

Need #1: Parent education on nutrition, health, child development, job skills, and other topics to help strengthen families, especially those caught in an intergenerational cycle of poverty, low educational attainment and low expectations, to improve the health of the next generation.

> Objective 1.a: Develop SMH as a community learning center, in collaboration with a variety of community partners, to promote knowledge and behavior changes for a healthier population.
>
> Objective 1.b: Be a partner in a new coalition to be led by MDHHS to reduce and manage childhood trauma that can manifest in poor outcomes later in life.

Need #2: HPSA designation for mental health services, and primary care (and provider shortages for medical specialties.)

> Objective 2.a: Research, plan and develop a provider network to improve access to care for behavioral health (mental health counseling and substance abuse treatment) through telehealth, in collaboration with neighboring underserved counties.
>
> Objective 2.b: Research, plan and develop a provider network to improve access to primary and specialty medical care through telehealth, in collaboration with neighboring underserved counties.

Need #3: A growing population of elderly residents, many living in rural isolation, with limited means, diminishing capabilities, and chronic diseases.

> Objective 3.a: Strengthen and publicize the system of free medical transport to bring elderly patients to the rural clinic and other hospital services.
>
> Objective 3.b: Work with community partners including agencies and volunteers to improve access for the elderly to food assistance and help with chores and household needs.