HEALTH RISK BEHAVIORS AMONG NATIVE AMERICANS IN MICHIGAN

INTER-TRIBAL COUNCIL OF MICHIGAN

2017 Tribal Behavioral Risk Factor Survey

INTER-TRIBAL COUNCIL OF MICHIGAN, INC.

The Health Risk Behaviors Among Native Americans in Michigan: 2017 Native American Behavioral Risk Factor Survey Report (NaBRFS) 2020 is a publication of the Inter-Tribal Council of MI.

ACKNOWLEDGEMENTS:

This special NaBRFS is due to the cooperative efforts of many individuals. We gratefully acknowledge the NaBRFS participants, the 610 members of the Hannahville Indian Community, Keweenaw Bay Indian Community, and Little River Band of the Ottawa Indians residing in Michigan, as well as the 260 Native American respondents from the MiBRFS, who took the time to participate in the survey.

We wish to acknowledge Sheryl Weir and Heidi Neumayer at the Michigan Department of Health and Human Services who funded and oversaw this particular project and Chris Fussman at the Michigan Department of Health and Human Services who oversaw the 2017 MiBRFS.

A special thank you to Debra Rusz, BRFS Project Manager/Analyst, and the Michigan State University Office for Social Research interviewers, lab supervisors and other OSR staff involved in the data collection.

We wish to acknowledge the Michigan Public Health Institute Center for Healthy Communities team, listed below, who provided data analysis and technical support.

Finally, we also would like to acknowledge the Inter-Tribal Council of Michigan's Health Education and Chronic Disease team, listed below, who coordinated and led the project through intentional collaboration.

This report would not be possible without the assistance of all of these individuals and organizations.

Noel Pingatore, BS, CPH, Department Director
Cathy Edgerly, BS, MS, Program Manager
Josh Mayo, MPH, Program Manager
Joshua Hudson, BS, Program Manager

Inter-Tribal Council of Michigan
Health Education and Chronic Disease Department
Sault Sainte Marie, MI 49783

Shannon Laing, MSW, Director
Stephanie Fluegeman, MPH, Health Information Specialist
Meena Adaikappan, MPH, Research Associate
Monal Shroff, PhD, Research Scientist

Michigan Public Health Institute
Center for Healthy Communities
Okemos, MI 48864

TABLE OF CONTENTS

CULTURAL CONSIDERATIONS

Culturally Specific Methodology using Phone Numbers from Tribal Enrollment Lists

Community-Based Approaches with Tribes in the Driver's Seat

Ongoing Community Outreach Results in Improved Response Rates and Increased Data Accuracy

The Inter-Tribal Council of Michigan's (ITCM) approach was to work respectfully with interested Tribes and utilize Tribal input and feedback on the BRFS process. This community-based methodology resulted in higher BRFS response rates than those seen by the state.

Attaining permission to conduct the survey and using Tribal enrollment rosters necessary for the sampling process required much ground work and included presentations to Tribal leadership on the merit and value of Native American specific health risk behavior data. Confidentiality and data sharing agreements were fully approved by Tribal legal staff in order to access de-identified phone numbers from Tribal enrollment rosters.

Throughout the survey, the ITCM served as the liaison between each Tribe, the Michigan Department of Health and Human Services (MDHHS), and the Michigan State University interviewers. ITCM created outreach templates for each Tribe such as newsletters, mailings, and social media in order to inform Tribal communities about the upcoming BRFS.

Prior to the survey process, the ITCM provided training to MSU interviewers on cultural etiquette, and linguistic and language patterns specific to Michigan Tribes. The MSU staff provided positive feedback to the training and noted that the survey process was resultantly improved.

This successful BRFS methodology resulted in timely Tribal-specific population-based health information. Tribal leaders use the data to design and implement chronic disease prevention activities and provide support for policy and environmental changes.

BRFSS METHODS AND OVERVIEW

The Michigan Behavior Risk Factor Survey (MiBRFS) is an annual statewide telephone survey conducted through a collaborative effort between the Population Health Surveillance Branch (PHSB) of the U.S. Centers for Disease Control and Prevention (CDC), Michigan State University (MSU), Institute for Public Policy and Social Research (IPPSR), Office for Survey Research (OSR) and the Michigan Department of Health and Human Services (MDHHS). This annual telephone survey of Michigan adults aged 18 years and older collects information on health behaviors, risk factors and conditions associated with many of the leading causes of morbidity and mortality. Roughly 9,000 adults are interviewed each year, using both landline and cellphone sampling frames in Michigan.

Though the sample size is more than sufficient for analysis at the state level, the number of respondents from relatively small race/ethnic subpopulations is insufficient to allow for in-depth single year analysis. Native Americans make up only 0.5% of Michigan's adult population. Without special over-sampling, the typical MiBRFS sample includes too few respondents for quality analysis.

The Health Disparities Reduction and Minority Health Section (HDRMH) of MDHHS arranged for OSR to conduct special supplemental studies of certain small race/ethnic subpopulations to boost the sample size. These oversamples are typically conducted on a three or four-year rotation. In 2017, the HDRMH offered an opportunity for Indian Tribes to participate in a Native American BRFS (NaBRFS) through the Inter-Tribal Council of Michigan. Hannahville Indian Community (HIC), Keweenaw Bay Indian Community (KBIC) and Little River Band of Ottawa Indians (LRB) accepted the invitation to participate. Each of these Tribes received a weighted data set specifically for their community. In addition, the data from all three communities was combined and merged with data from Michigan Native Americans (regardless of Tribal affiliation) from the 2017 MiBRFS. This report provides an overview and comparison of the data. *All information related to the Tribal communities is in summary form so as not to identify any specific community.*

The original target of 492 completed interviews from the Tribal communities was based on a 7% margin of error using 3,976 as the adult population size estimate of registered Tribal members living in Michigan from these three Tribal communities. The final number of completed interviews (563) **exceeded** the target due to the efficiency of the Tribal phone number lists.

The 2017 Native American Behavioral Risk Factor Survey (NaBRFS) was conducted from June 19, 2017 to December 19, 2017 and followed the research protocols of the Michigan Behavioral Risk Factor Survey (MiBRFS) other than the sample design and minor changes in the calling protocol due to using a randomized list. CDC specifies a **rigorous** set of standards regarding the sample design, respondent selection, informed consent, call scheduling, monitoring, and verification procedures that must be followed. The 2017 MiBRFS data was conducted from January 23, 2017 to March 9, 2018 and followed standard CDC protocols.

OSR interviewers completed a total of 563 NaBRFS interviews. An additional 47 NaBRFS respondents completed the interview far enough to be considered a partial interview by CDC BRFS protocol, giving a total of 610 NaBRFS cases. In addition, a total of 228 MiBRFS interviews, landline and cellphone combined, were completed with Native Americans, with an additional 32 cases that qualified for as a CDC partial. This gives a total of 260 cases coming from the MiBRFS and a grand total of 870 cases with a CASRO response rate of 50.6%.

SUMMARY

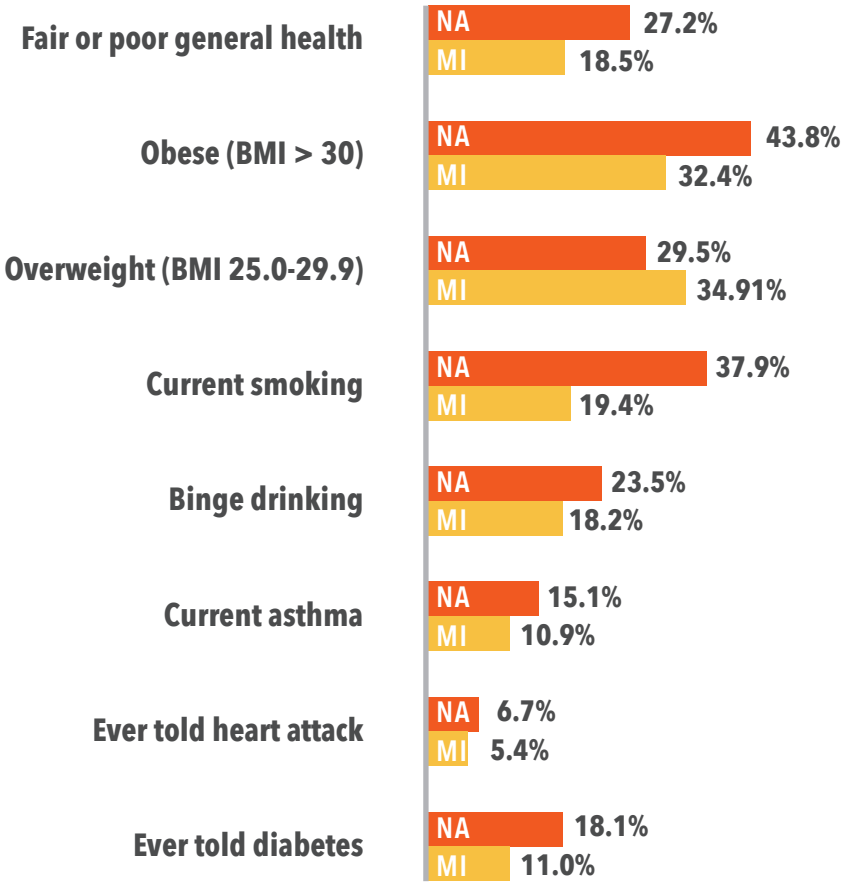
This report presents estimates from both the 2017 Native American BRFS (NaBRFS) and the State of Michigan 2017 BRFSS (MiBRFS). When possible, comparison charts will be included to highlight health disparities.

The NaBRFS is one of the only sources of state-specific, population-based estimates of the prevalence of various health behaviors, medical conditions, and preventive health care practices among Native American Michigan adults. The survey findings can be used by Tribal agencies, public health agencies, academic institutions, nonprofit organizations, and others to develop programs that promote the health of Native American Michigan citizens.

The results from the 2017 NaBRFS presented within this report have been weighted as described in the methods section and can be interpreted as prevalence estimates among the Michigan Native American adult population.

SELECTED RISK FACTORS – 2017 BRFS

NATIVE AMERICANS IN MICHIGAN (NA) COMPARED TO MICHIGAN AVERAGE (MI)



SURVEY BACKGROUND & DEMOGRAPHICS

WHO DOES THE SURVEY REPRESENT?

870 surveys were completed. Demographics and all survey results presented are **weighted** by population proportion. This means that responses were adjusted to more accurately represent the adult population of the Michigan Native American population.

AGE

CATEGORY	PERCENT
18-34	31.2
35-44	18.3
45-54	19.7
55-64	17.5
65+	13.3

GENDER

CATEGORY	PERCENT
Woman	50.5
Man	49.5

HOUSEHOLD INCOME

CATEGORY	PERCENT
Less than $20,000	29.2
$20,000 to $34,999	26.0
$35,000 to $49,999	15.7
$50,000 to $74,999	15.7
$75,000 or more	13.4

EMPLOYMENT STATUS

CATEGORY	PERCENT
Employed for wages	50.0
Self-employed	5.8
Student	4.5
Retired	13.4
Unable to work	12.7
Homemaker	4.4
Out of work for less than 1 year	3.5
Out of work for 1 year or more	5.6

TRIBAL AFFILIATION

CATEGORY	PERCENT
Little River Band of Odawa Indians	29.0
Keweenaw Bay Indian Community	29.0
Hannahville Indian Community	12.0
Other MI Native Americans	30.0

RELATIONSHIP STATUS

CATEGORY	PERCENT
Married	25.4
Never married	38.6
Divorced	18.5
Member of an unmarried couple	9.6
Separated	2.5
Widowed	5.4

EDUCATION

CATEGORY	PERCENT
Less than 9th grade	2.3
9th-11th grade	13.0
High school graduate	33.8
Some college	37.5
College graduate	13.4

HEALTH STATUS INDICATORS

GENERAL HEALTH STATUS

Among NaBRFS respondents:

- An estimated 27.2% of adults reported having fair or poor general health status.
- Reporting of fair or poor health increased with age.
- Almost half of the adults (43.5%) between 55-64 had reported having fair or poor general health.
- Females (30.7%) had a somewhat higher prevalence of fair or poor health status when compare to males (23.6%).
- As income increases, those adults who reported fair or poor health decreased.
- The highest percent of adults that had poor or fair health were adults with a household income of less than $20,000 (41.6%).

GENERAL HEALTH, FAIR OR POOR

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**27.2**	**(22.7-31.6)**
AGE		
18 – 34	15.8	(8.4-23.2)
35 – 44	17.5	(7.4-27.6)
45 – 54	32.4	(23.0-41.8)
55 – 64	43.5	(34.0-52.5)
65+	39.4	(28.2-50.6)
GENDER		
Male	23.6	(17.2-30.0)
Female	30.7	(25.0-36.4)
HOUSEHOLD INCOME		
< $20,000	41.6	(32.7-51.3)
$20,000 to $34,999	29.2	(19.9-38.5)
$35,000 to $49,999	27.4	(16.3-38.5)
$50,000 to $74,999	12.5	(5.2-19.9)
≥ $75,000	12.7	(0.1-25.4)

27%

of Native American adults in Michigan have **fair or poor health.**

QUALITY OF LIFE

Physically and mentally unhealthy days measure the number of days within the past 30 days that individuals rate their physical and mental health as not good. Poor physical and mental health was defined as 14 or more days within the past 30 days in which the adults rated their physical and mental health as not good.

- 21.0% of adults reported having poor physical health. 21.0% of adults had poor mental health.
- Poor physical health increased with age. However, poor mental health decreased with age.
- Women were more likely to report both poor physical and mental health (22.8% and 23.8%, respectively) than men (19.1% and 18.0%, respectively).
- As household income increases, both poor physical and mental health decreased.

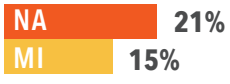
	POOR PHYSICAL HEALTH[a]		POOR MENTAL HEALTH[b]	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**21.0**	**(17.1-24.9)**	**21.0**	**(17.0-25.0)**
AGE				
18 – 34	11.7	(4.8-18.5)	22.5	(13.7-31.5)
35 – 44	10.2	(3.3-17.1)	23.3	(13.5-33.1)
45 – 54	29.3	(20.0-38.6)	25.7	(16.9-34.5)
55 – 64	35.8	(26.7-44.9)	18.6	(10.6-26.5)
65+	24.6	(14.9-34.2)	9.5	(4.5-14.4)
GENDER				
Male	19.1	(13.2-25.0)	18.0	(12.2-23.8)
Female	22.8	(17.7-27.9)	23.8	(18.5-29.1)
HOUSEHOLD INCOME				
< $20,000	38.4	(29.1-47.6)	31.4	(22.9-39.8)
$20,000 to $34,999	22.4	(14.2-30.7)	19.4	(11.3-27.5)
$35,000 to $49,999	19.4	(9.0-29.7)	20.2	(9.7-30.7)
$50,000 to $74,999	5.3	(1.9-8.7)	16.7	(6.4-26.9)
≥ $75,000	4.5	(0.3-8.7)	13.7	(5.5-22.0)

[a] Among all adults, the proportion reporting 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.

[b] Among all adults, the proportion reporting 14 or more days of poor mental health, which includes stress, depression, and problems with emotions during the past 30 days.

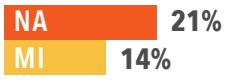
21%

of Native American adults in Michigan have **poor physical health.**



21%

of Native American adults in Michigan have **poor mental health.**



WEIGHT STATUS

Overweight and obesity have been proven to increase the risk of many diseases and health conditions such as high blood pressure, diabetes, coronary heart disease, stroke, gallbladder disease, high cholesterol, and some forms of cancer[3]. Overweight is defined as having a body mass index (BMI) between 25.0 and 29.9, and obesity is defined as a BMI greater than or equal to 30.0.

- 29.5% of adults were in the overweight category and 43.8% were in the obese category.
- As age increased, the prevalence of obesity and of being overweight increased as well.
- More than two-fifths of adults ages 35-44 (43.7%) were overweight.
- About close to half of 65 and older adults were obese (49.7%).
- There was a higher prevalence of being overweight or obese among women (27.9% and 44.3%) than men (31.1% and 43.3%).

	OVERWEIGHT		OBESE	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**29.5**	**(25.0-34.0)**	**43.8**	**(39.1-48.6)**
AGE				
18 – 34	18.4	(11.8-25.0)	41.4	(31.7-51.3)
35 – 44	43.7	(31.5-56.0)	36.5	(25.4-47.5)
45 – 54	33.0	(22.8-43.2)	45.6	(35.1-56.2)
55 – 64	25.0	(17.3-32.7)	49.1	(39.6-58.7)
65+	32.6	(20.2-45.1)	49.7	(37.5-61.9)
GENDER				
Male	31.1	(24.3-38.0)	43.3	(36.2-50.4)
Female	27.9	(22.2-33.7)	44.3	(38.0-50.6)
HOUSEHOLD INCOME				
< $20,000	25.1	(17.1-33.1)	43.8	(34.2-53.3)
$20,000 to $34,999	27.5	(17.4-37.6)	53.2	(42.8-63.7)
$35,000 to $49,999	32.0	(19.8-44.2)	42.6	(29.1-56.2)
$50,000 to $74,999	29.6	(17.1-42.1)	46.9	(34.0-59.8)
≥ $75,000	37.4	(25.8-49.0)	33.9	(22.1-45.7)

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

30%

of Native American adults in Michigan are **overweight**.

44%

of Native American adults in Michigan are **obese**.

RISK BEHAVIOR INDICATORS

NO LEISURE TIME PHYSICAL ACTIVITY

Regular physical activity among adults has been shown to reduce the risk of many diseases including cardiovascular disease, diabetes, colon and breast cancers, and osteoporosis. Keeping physically active also helps to control weight, maintain healthy bones, muscles, and joints, and relieve symptoms of depression[4].

- Close to half of all adults reported having no leisure time for physical activity (47.4%) and more than half of adults 65 and older (62.1%) reported that they had no leisure time for physical activities.
- As age increased, the prevalence of no leisure time for physical activity also increased.
- Slightly more women (51.9%) than men (42.1%) reported having no leisure time for physical activity.
- The lack of leisure time for physical activity increased as the household income decreased.
- Half of adults who make less than $20,000 (54.7%) reported a lack of leisure time to do physical activities.

NO LEISURE TIME PHYSICAL ACTIVITY

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**47.4**	**(41.2-53.5)**
AGE		
18 – 34	39.3	(25.9-52.7)
35 – 44	47.6	(31.3-63.9)
45 – 54	38.7	(26.2-51.3)
55 – 64	53.0	(41.1-64.9)
65+	62.1	(46.8-77.4)
GENDER		
Male	42.1	(33.2-50.9)
Female	51.9	(43.3-60.5)
HOUSEHOLD INCOME		
< $20,000	54.7	(42.7-66.7)
$20,000 to $34,999	53.7	(41.0-66.4)
$35,000 to $49,999	43.7	(25.4-62.1)
$50,000 to $74,999	36.3	(21.4-51.3)
≥ $75,000	34.7	(13.7-55.8)

47%

of Native American adults in Michigan have **no leisure time physical activity**.

FRUIT AND VEGETABLE CONSUMPTION

A healthy diet rich in fruits and vegetables may reduce the risk of cancer and other chronic conditions[5].

- Overall, 65.6% of adults ate at least one serving or more of fruit per day, and 81.5% of adults ate at least one serving or more of vegetables per day.
- Fruit consumption increased as age increased.
- Vegetable consumption was highest for those ages 35-44 (86.3%).
- More women than men reported consuming fruits (74.4% and 56.3%). This trend is also seen with vegetables; women reported consuming vegetables at 86.1% while men came in at 76.5%.
- Fruit consumption was the highest for adults around $20,000 to $34,999 (71.1%).
- As household income increased, so did vegetable consumption among adults.

	FRUITS (≥1 SERVING/DAY)		VEGETABLES (≥1 SERVING/DAY)	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**65.6**	**(61.0-70.2)**	**81.5**	**(77.7-85.2)**
AGE				
18 – 34	64.1	(54.4-73.8)	78.2	(69.7-86.7)
35 – 44	64.4	(52.5-76.2)	86.3	(78.1-94.5)
45 – 54	69.2	(59.8-78.6)	84.4	(77.1-91.7)
55 – 64	60.7	(51.2-70.2)	83.7	(76.0-91.4)
65+	72.5	(63.2-81.9)	73.5	(63.7-83.3)
GENDER				
Male	56.3	(49.0-63.6)	76.5	(70.2-82.7)
Female	74.4	(69.3-79.5)	86.1	(81.9-90.3)
HOUSEHOLD INCOME				
< $20,000	67.0	(58.1-76.0)	75.2	(66.4-83.9)
$20,000 to $34,999	71.7	(62.5-81.0)	80.0	(72.0-88.1)
$35,000 to $49,999	61.6	(47.6-75.7)	78.3	(65.2-91.5)
$50,000 to $74,999	63.7	(50.7-76.7)	88.1	(81.7-94.4)
≥ $75,000	60.0	(47.2-72.8)	89.8	(83.6-96.0)

66%

of Native American adults in Michigan consume **at least 1 serving of fruit per day**.

82%

of Native American adults in Michigan consume **at least 1 serving of vegetables per day**.

COMMERCIAL TOBACCO USE

Cigarette smoking is the leading cause of preventable death in the U.S., accounting for more than 480,000 deaths each year[6].

- Close to two-fourths of adults (37.9%) reported that they currently smoked cigarettes.
- 61% of adults ages 35 to 44 reported to be currently smoking cigarettes.
- As age increased, the prevalence of adults who currently smoke decreased.
- Men and women had similar prevalence of currently smoking cigarettes (39.2% and 36.7% respectively).
- The prevalence of adults who reportedly currently smoke decreased as household income increased.
- About half of adults who make less than $20,000 a year responded that they are currently smoking cigarettes (50.5%).

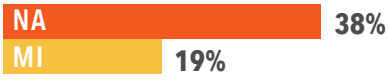
CURRENTLY SMOKING[a]

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**37.9**	**(33.2-42.6)**
AGE		
18 – 34	40.8	(30.8-50.2)
35 – 44	61.0	(49.8-72.2)
45 – 54	35.1	(25.2-45.1)
55 – 64	33.4	(24.7-42.0)
65+	12.0	(6.8-17.1)
GENDER		
Male	39.2	(32.1-46.3)
Female	36.7	(30.4-43.0)
HOUSEHOLD INCOME		
< $20,000	50.5	(40.9-60.0)
$20,000 to $34,999	39.6	(29.5-49.8)
$35,000 to $49,999	31.6	(19.0-44.3)
$50,000 to $74,999	34.2	(21.0-47.4)
≥ $75,000	26.8	(13.3-40.3)

[a] Among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

38%

of Native American adults in Michigan **currently smoke**.



QUIT ATTEMPTS

Attempts to quit smoking, even if unsuccessful, are important because quitting for good may take several tries over the course of one's life. All current smokers were asked whether they had tried to quit in the past 12 months.

- 56.3% of current smokers reported that they have attempted to quit smoking in the past year.
- The prevalence of those adults who attempted to quit in the past year increased as age increased for ages 18-54.
- Adults who were ages 45-54 had highest reported quit attempts in the past year (60.9%).
- 65.7% of women reported attempting to quit compared to 46.6% of men who reported the same.
- As household income increased, so did the prevalence of adults who reported quit attempts.
- Adults who had a household income between $35,000 and $49,999 had the lowest reported quit attempts in the past year at 36.0%.

QUIT ATTEMPT IN PAST YEAR

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**56.3**	**(48.2-64.3)**
AGE		
18 – 34	55.4	(28.6-60.6)
35 – 44	60.1	(43.5-76.8)
45 – 54	60.9	(44.5-77.4)
55 – 64	49.1	(33.4-64.9)
65+	39.2	(19.5-59.0)
GENDER		
Male	46.6	(34.8-58.3)
Female	65.7	(55.8-75.6)
HOUSEHOLD INCOME		
< $20,000	50.0	(35.5-64.6)
$20,000 to $34,999	59.1	(43.0-75.2)
$35,000 to $49,999	36.0	(13.9-58.1)
$50,000 to$74,999	65.0	(39.9-90.1)
≥ $75,000	83.3	(63.4-100.0)

56%

of Native American adults in Michigan who currently smoke **made a quit attempt in the past year**.

ALCOHOL CONSUMPTION

Across the United States, excessive alcohol use contributes to approximately 88,000 deaths each year for adults across all races.[7] Binge drinking is defined as consuming five or more alcoholic drinks per occasion for men, or four or more alcoholic drinks per occasion for women, at least once in the past month. Heavy drinking is defined as consuming an average of more than two alcoholic drinks per day for men or more than one alcoholic drink per day for women in the past month.

- Close to one-fourth of adults admitted to binge drinking (23.5%)
- The prevalence of binge drinking increased as age increased, with adults 65 and older at the highest (28.0%).
- Women were more likely to report binge drinking than men (25.6% and 21.3% respectively).
- The rate of binge drinking among adults stayed relatively steady as household income increased.
- Adults with a household income of ≥ $75,000 have the highest reported percentage of binge drinking (31.4%).

BINGE DRINKING[a]

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**23.5**	**(19.13-27.8)**
AGE		
18 – 34	20.8	(12.5-29.2)
35 – 44	21.9	(10.9-32.8)
45 – 54	22.5	(14.6-30.5)
55 – 64	27.0	(18.3-35.6)
65+	28.0	(15.3-40.7)
GENDER		
Male	21.3	(15.3-27.4)
Female	25.6	(19.6-31.6)
HOUSEHOLD INCOME		
< $20,000	23.6	(15.3-31.9)
$20,000 to $34,999	21.9	(13.4-30.5)
$35,000 to $49,999	23.2	(11.7-34.7)
$50,000 to $74,999	21.4	(12.6-30.2)
≥ $75,000	31.4	(18.3-44.5)

[a] Among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

24%

of Native American adults in Michigan **binge drink**.

PRESCRIPTION DRUG ABUSE

Adults were asked if they had ever used prescription drugs not prescribed to them for the purposes of getting high.

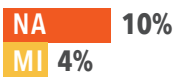
- 9.5% of adults admitted to ever using prescription drugs to get high.
- As age increased, the prevalence of ever using prescription drugs decreased.
- Men were almost twice as likely to have ever used prescription drugs than women (11.9% and 7.4% respectively).
- The number of adults whom reported ever using prescription drugs to get high increased as household income increased.

EVER USED PRESCRIPTION DRUGS TO GET HIGH

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**9.5**	**(6.1-13.0)**
AGE		
18 – 34	20.0	(10.8-29.2)
35 – 44	6.7	(0.0-13.5)
45 – 54	7.7	(0.1-15.3)
55 – 64	4.7	(0.7-8.7)
65+	1.2	(0.0-3.3)
GENDER		
Male	11.9	(6.2-17.6)
Female	7.4	(3.3-11.5)
HOUSEHOLD INCOME		
< $20,000	6.9	(1.9-11.9)
$20,000 to $34,999	8.3	(11.5-15.4)
$35,000 to $49,999	15.2	(2.9-28.5)
$50,000 to $74,999	12.3	(2.5-22.2)
≥ $75,000	12.0	(10.7-22.8)

10%

of Native American adults in Michigan have **ever used prescription drugs to get high**.



INJECTED DRUG ABUSE

Adults were asked if they had ever used injected drugs for the purposes of getting high.

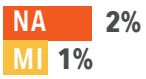
- 2.2% of all the adults surveyed admitted to injecting drugs to get high at some point in their life.
- The prevalence of ever injecting drugs to get high stayed relatively steady for all the age groups.
- Men were more likely than women to report injecting drugs to get high (2.6% and 1.8% respectively).
- Adults who had a household income of $75,000 or greater (5.9%) were more than twice as likely to ever use injected drugs to get high than any other household income group.

EVER INJECTED DRUGS TO GET HIGH

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**2.2**	**(0.9-3.5)**
AGE		
18 – 34	2.2	(0.0-5.0)
35 – 44	2.7	(0.0-5.6)
45 – 54	2.2	(0.0-5.6)
55 – 64	2.1	(0.0-4.6)
65+	1.7	(0.0-4.3)
GENDER		
Male	2.6	(0.4-4.9)
Female	1.8	(0.4-3.2)
HOUSEHOLD INCOME		
< $20,000	2.6	(0.0-5.2)
$20,000 to $34,999	1.3	(0.0-2.9)
$35,000 to $49,999	0.0	(0.0-0.0)
$50,000 to $74,999	1.7	(0.0-4.2)
≥ $75,000	5.9	(0.0-13.8)

2%

of Native American adults in Michigan have **ever injected drugs to get high**.



CLINICAL PREVENTATIVE PRACTICES

ROUTINE CHECKUP IN PAST YEAR

A yearly routine checkup is a great way to remain proactive about one's health. The benefits of having an annual checkup include early diagnosis and treatment of existing conditions and prevention of future medical problems[8].

- 69.9% of adults surveyed reported that they have had a routine checkup within the last year.
- As age increased, the prevalence of those adults that had a routine checkup in the past year increased as well.
- Adults that were 65 and older have the highest rate of reporting undergoing a routine checkup in the past year (92.4%).
- Women were more likely than men to have undergone a routine checkup within the past year (77.6% and 61.2% respectively).
- The prevalence of undergoing a routine checkup within the past year decreased as household income increased.
- Adults with a household income of $50,000 to $74,999 had the highest rate of adults who reported having a routine checkup within the past year (76.6%).

HAD A ROUTINE CHECKUP WITHIN THE PAST YEAR

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**69.9**	**(63.5-76.2)**
AGE		
18 – 34	56.4	(41.3-71.4)
35 – 44	65.1	(53.3-76.8)
45 – 54	72.2	(62.3-82.2)
55 – 64	79.2	(72.3-86.2)
65+	92.4	(87.7-97.1)
GENDER		
Male	61.2	(51.5-72.7)
Female	77.6	(72.5-82.6)
HOUSEHOLD INCOME		
< $20,000	73.8	(65.6-82.0)
$20,000 to $34,999	69.3	(58.9-79.8)
$35,000 to $49,999	61.8	(47.4-76.0)
$50,000 to $74,999	76.6	(67.3-85.8)
≥ $75,000	73.3	(60.0-86.6)

70%

of Native American adults in Michigan **had a routine checkup within the past year**.

CHOLESTEROL SCREENING & AWARENESS

High blood cholesterol is a major risk factor for coronary heart disease, the leading cause of death in the U.S.[9]

- 95% of adults reported that they have had their cholesterol checked within the past 5 years.
- 35.3% of adults reported that they have been told at some point that they had high cholesterol by a medical professional.
- As age increased, so does the prevalence of adults who have been told that they have high cholesterol.
- Men were more likely than women to have ever been told that they have high cholesterol (36.5% and 34.0% respectively).
- The prevalence of adults who had their cholesterol checked within the past five years decreased as age increased with the exception of those adults who were 65 and older.
- Almost all adults who were 65 and older reported getting their cholesterol checked within the past five years (99.2%).
- Women were slightly more likely to get their cholesterol checked within the past five years than men (95.6% and 94.4% respectively).

	CHOLESTEROL CHECKED WITHIN THE PAST 5 YEARS		EVER TOLD HIGH CHOLESTEROL	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**95.0**	**(92.4-97.7)**	**35.3**	**(29.9-40.7)**
AGE				
18 – 34	96.4	(93.6-99.2)	12.6	(3.6-21.6)
35 – 44	91.5	(81.8-100.0)	27.5	(16.0-39.1)
45 – 54	93.1	(84.8-100.0)	41.1	(30.7-51.6)
55 – 64	95.2	(91.2-99.1)	52.9	(43.3-62.6)
65+	99.2	(98.0-100.0)	49.9	(37.5-62.4)
GENDER				
Male	94.4	(90.5-98.5)	36.5	(27.5-45.6)
Female	95.6	(92.0-99.2)	34.0	(28.0-39.9)
HOUSEHOLD INCOME				
< $20,000	97.5	(95.1-100.0)	39.5	(29.4-49.6)
$20,000 to $34,999	92.0	(83.8-100.0)	39.6	(28.7-50.5)
$35,000 to $49,999	98.1	(95.9-100.0)	45.3	(30.7-59.9)
$50,000 to $74,999	95.6	(90.5-100.0)	29.9	(18.8-41.0)
≥ $75,000	91.9	(78.5-100.0)	27.2	(15.6-38.8)

95%

of Native American adults in Michigan have had their **cholesterol checked within the past 5 years.**

35%

of Native American adults in Michigan have **ever been told they have high cholesterol.**

COLORECTAL CANCER SCREENING

In 2016, colorectal cancer was the second leading cause of cancer-related deaths in Michigan.[10] Fecal occult blood tests, sigmoidoscopy, and colonoscopy are screening procedures that are performed to detect colorectal cancer in the early stages. Appropriate colorectal cancer screening consists of a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years. These questions were only asked of respondents over the age of 50.

- 70.5% of adults have ever had a colonoscopy or sigmoidoscopy.
- Only 24.6% of adults reported ever having a blood stool test.
- As age increased, the prevalence of undergoing colonoscopies increased.
- The prevalence of ever having a blood stool test increased with age.
- Women were more likely to have had both types of colorectal cancer screenings when compared to men.

	EVER HAD BLOOD STOOL TEST		EVER HAD COLONOSCOPY OR SIGMOIDOSCOPY	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**24.6**	**(19.4-29.8)**	**70.5**	**(64.6-76.5)**
AGE				
18 – 34	–	–	–	–
35 – 44	–	–	–	–
45 – 54	14.3	(6.0-22.7)	57.8	(44.0-71.6)
55 – 64	23.7	(16.2-31.1)	73.5	(65.0-82.1)
65+	35.3	(23.9-46.8)	81.3	(72.3-90.3)
GENDER				
Male	21.2	(14.3-28.2)	67.5	(58.6-76.4)
Female	27.8	(20.0-35.5)	73.4	(65.5-81.4)
HOUSEHOLD INCOME				
< $20,000	22.6	(10.2-35.0)	66.5	(53.8-79.2)
$20,000 to $34,999	21.7	(12.3-31.1)	65.6	(52.7-78.6)
$35,000 to $49,999	32.3	(16.8-47.8)	77.5	(61.9-93.0)
$50,000 to$74,999	22.1	(9.2-35.1)	80.0	(63.8-96.2)
≥ $75,000	37.9	(21.4-54.3)	79.0	(66.8-91.2)

71%

of Native American adults in Michigan **have ever had a sigmoidoscopy or colonoscopy** (50+ years old).

HIV TESTING

The Native American population is disproportionately affected by many social and behavioral factors that contribute to a disparity in health outcomes and increased vulnerability for Human Immunodeficiency Virus (HIV) infection. The Native American population is relatively young, and has high rates of poverty, sexually transmitted diseases and drug and alcohol abuse. **HIV infection is preventable and people who may already have the disease can get treatment that increases life quality and expectancy, as well as decreases chances of transmission.** It is important to keep awareness elevated and to remind community members that testing and treatments are available; these efforts will save lives. Early awareness of an HIV infection through HIV testing can prevent further spread of the disease, and an early start on antiretroviral therapy can increase the quality of life among those who are living with HIV/AIDS.[11] Note: This survey question was only asked of respondents 18 to 64 years old.

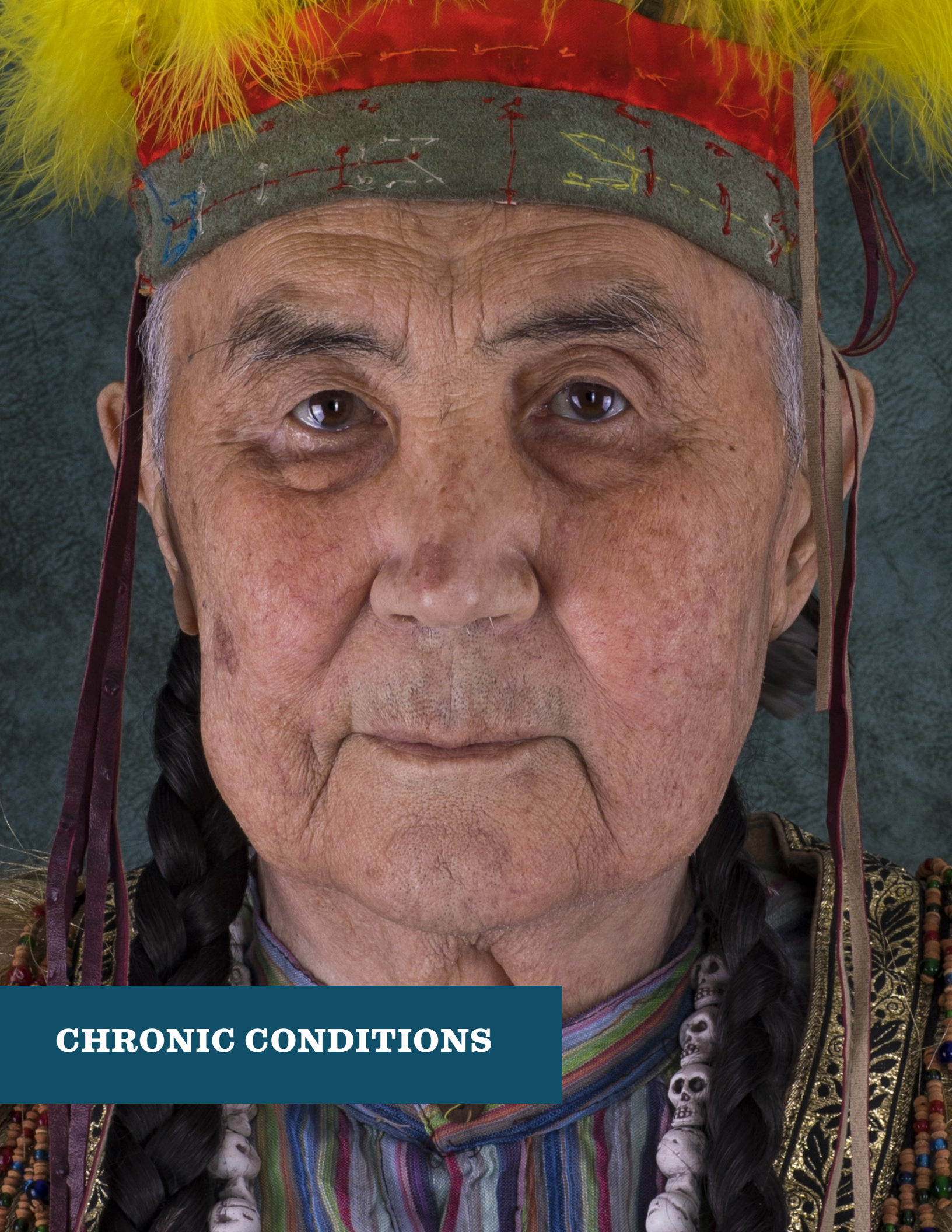
- 56.9% of adults have had an HIV test.
- Adults ages 35 to 44 have the highest percent of adults who reported ever having an HIV test at 72.9%.
- Women were more likely to report ever having an HIV test than men (59.6% and 53.9% respectively).
- As household income increased, the prevalence of adults who reported undergoing a HIV test decreased.
- Adults who have a household income of $20,000 to $34,999 have the highest percent of adults who reported having an HIV test at 62.5%.

EVER HAD AN HIV TEST

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**56.9**	**(51.7-62.0)**
AGE		
18 – 34	51.7	(41.7-61.6)
35 – 44	72.9	(62.3-83.4)
45 – 54	58.0	(47.0-68.9)
55 – 64	39.2	(29.7-48.7)
65+	N/A	N/A
GENDER		
Male	53.9	(45.9-61.9)
Female	59.6	(53.0-66.3)
HOUSEHOLD INCOME		
< $20,000	57.8	(51.1-74.0)
$20,000 to $34,999	62.5	(51.1-74.0)
$35,000 to $49,999	48.5	(33.0-64.0)
$50,000 to $74,999	54.8	(41.0-68.6)
≥ $75,000	57.5	(44.3-70.7)

57%

of Native American adults in Michigan have **ever had an HIV Test.**



CHRONIC CONDITIONS

HIGH BLOOD PRESSURE

Adults with high blood pressure are at a higher risk for heart disease, stroke, congestive heart failure, and kidney disease.[12]

- 42.9% of adults reported that they have been told at some point that they had high blood pressure.
- As age increased, so does prevalence of being told they have high blood pressure.
- 72.5% of adults who were 65 and older reported that they have been told they had high blood pressure.
- Men were 17% more likely to have been told they had high blood pressure when compared to women (51.7% and 34.4% respectively).
- The prevalence of adults with high blood pressure decreased as household income increased.

EVER TOLD HIGH BLOOD PRESSURE

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**42.9**	**(37.1-48.7)**
AGE		
18 – 34	31.2	(14.6-47.8)
35 – 44	28.9	(18.4-39.5)
45 – 54	44.5	(34.3-54.6)
55 – 64	56.1	(46.9-65.3)
65+	72.5	(60.0-84.4)
GENDER		
Male	51.7	(42.3-61.1)
Female	34.4	(28.7-40.0)
HOUSEHOLD INCOME		
< $20,000	48.9	(39.4-58.3)
$20,000 to $34,999	45.5	(35.4-55.6)
$35,000 to $49,999	35.7	(23.8-47.6)
$50,000 to $74,999	39.6	(27.3-51.8)
≥ $75,000	35.1	(23.8-46.4)

43%

of Native American adults in Michigan have **ever been told they have high blood pressure**.

HIGH CHOLESTEROL

High cholesterol is a major risk factor for coronary heart disease, the leading cause of death in the U.S.

- 35.3% of adults reported that they have been told they had high cholesterol.
- As age increased, the prevalence of high cholesterol also increased.
- Men and women both had similar rates of being told they had high cholesterol (36.5% and 34.0% respectively).
- The prevalence of high cholesterol decreased as household income increased with the notable exception of those who made $35,000 to $49,999.
- Adults with a household income at $35,000 to $49,999 reported the highest prevalence rate at 45.3%.

EVER TOLD HIGH CHOLESTEROL

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**35.3**	**(29.9-40.7)**
AGE		
18 – 34	12.6	(3.6-21.6)
35 – 44	27.5	(16.0-39.1)
45 – 54	41.1	(30.6-51.6)
55 – 64	52.9	(43.2-62.6)
65+	49.9	(37.5-62.4)
GENDER		
Male	36.5	(27.5-45.6)
Female	34.0	(28.0-40.0)
HOUSEHOLD INCOME		
< $20,000	39.5	(29.4-49.6)
$20,000 to $34,999	39.6	(28.7-50.5)
$35,000 to $49,999	45.3	(30.7-60.0)
$50,000 to $74,999	29.9	(18.8-41.0)
≥ $75,000	27.2	(15.6-38.8)

35%

of Native American adults in Michigan have **ever been told they have high cholesterol**.

35%
35%

ASTHMA IN ADULTS

Asthma, a chronic inflammatory disorder of the lungs explained as wheezing, coughing, chest tightness, and troubled breathing, is yet another serious disease which stresses the health of Native American families in Michigan. Asthma is a chronic inflammatory disorder of the lungs, characterized by wheezing, coughing, difficulty breathing, and chest tightness. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few of the potential risk factors that are associated with the development of asthma.[13]

- 15.1% of adults admitted to currently having asthma.
- The prevalence of currently having asthma stayed relatively the same as age increased.
- Adults who were ages 45-54 had the highest rate of currently having asthma at 18.7%.
- Significantly more women than men reported that they currently have asthma (21.2% and 8.6% respectively)
- The number of people whom reported currently having asthma decreases as their household income increases.

CURRENT ASTHMA

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**15.1**	**(11.9-18.4)**
AGE		
18 – 34	12.7	(6.8-18.6)
35 – 44	15.5	(7.4-23.6)
45 – 54	18.7	(10.9-26.5)
55 – 64	15.5	(8.8-22.2)
65+	15.2	(7.3-22.9)
GENDER		
Male	8.6	(5.0-12.9)
Female	21.2	(16.4-26.0)
HOUSEHOLD INCOME		
< $20,000	25.9	(17.9-34.0)
$20,000 to $34,999	15.5	(8.5-22.5)
$35,000 to $49,999	10.4	(3.3-17.5)
$50,000 to $74,999	4.6	(1.2-7.9)
≥ $75,000	15.2	(8.0-22.5)

15%

of Native American adults in Michigan **have asthma.**

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Chronic obstructive pulmonary disease (COPD) is a progressive disease that usually results in coughing, wheezing, shortness of breath, chest tightness, and other symptoms. Cigarette smoking is the leading cause of COPD.[14]

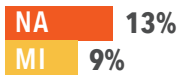
- About 13% of adults reported that they have ever been told they had COPD.
- As age increased, so did the prevalence of adults with COPD.
- Slightly more women than men had reported ever being told that they have COPD (15.9% and 10.3% in that order).
- Prevalence of being told COPD among adults decreased as household income increased.

EVER TOLD COPD

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**13.1**	**(10.0-16.2)**
AGE		
18 – 34	4.4	(0.0-9.3)
35 – 44	10.9	(3.1-18.8)
45 – 54	16.5	(8.9-24.2)
55 – 64	18.8	(11.7-26.0)
65+	24.7	(16.3-33.1)
GENDER		
Male	10.3	(6.3-14.3)
Female	15.9	(11.2-20.5)
HOUSEHOLD INCOME		
< $20,000	23.6	(15.6-31.6)
$20,000 to $34,999	16.7	(9.5-23.9)
$35,000 to $49,999	7.0	(2.3-11.6)
$50,000 to $74,999	3.6	(0.7-6.5)
≥ $75,000	4.4	(0.0-8.9)

13%

of Native American adults in Michigan have **ever been told they have COPD**.



ARTHRITIS

Arthritis and rheumatism are the leading causes of disability within the U.S. These conditions have been diagnosed in more than 54 million U.S. adults.[15]

- Close to 35% of adults reported ever being told that they had arthritis (34.7%).
- As age increased, so does the prevalence of adults whom have ever been told that they have arthritis.
- Almost twice as many women reported ever being told that they have arthritis compared to men (42.1% and 27.1% respectively).
- As household income increased, the prevalence of arthritis decreased.

EVER TOLD ARTHRITIS

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**34.7**	**(29.9-39.6)**
AGE		
18 – 34	5.7	(2.2-9.2)
35 – 44	28.7	(18.4-39.0)
45 – 54	40.9	(30.8-50.9)
55 – 64	61.9	(53.2-70.7)
65+	67.3	(57.7-77.0)
GENDER		
Male	27.1	(20.4-33.9)
Female	42.1	(35.9-48.2)
HOUSEHOLD INCOME		
< $20,000	49.7	(40.2-59.2)
$20,000 to $34,999	40.0	(30.2-49.9)
$35,000 to $49,999	25.5	(15.0-35.9)
$50,000 to $74,999	28.7	(18.6-38.9)
≥ $75,000	16.0	(8.5-23.4)

35%

of Native American adults in Michigan have **ever been told they have arthritis**.

CARDIOVASCULAR DISEASE

Heart disease and stroke are the first and fifth leading causes of death, respectively, in both Michigan and the U.S.[16]

- 6.7% of adults reported that they have had a heart attack. 5.4% of adults reported ever being told that they had angina and 5.1% of adults reported ever being told they had a stroke.
- As age increased, the prevalence of adults ever being told they had angina, stroke or ever having a heart attack also increased.
- Men were more likely to have ever had a heart attack than women (7.8% and 5.6% respectively).
- As household income increased, the prevalence among adults of ever being told angina or stroke decreased.
- Adults with a household income of $20,000 to $34,999 had the highest rate of having had heart attack (12.0%).

	EVER HAD HEART ATTACK		EVER TOLD ANGINA		EVER TOLD STROKE	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**6.7**	**(4.4-9.0)**	**5.4**	**(3.4-7.4)**	**5.1**	**(3.2-6.9)**
AGE						
18 – 34	0.3	(0.0-0.8)	0.5	(0.0-1.1)	0.4	(0.0-0.12)
35 – 44	3.4	(0.0-7.4)	0.4	(0.0-1.3)	1.1	(0.0-2.6)
45 – 54	7.7	(1.1-14.2)	11.9	(4.6-19.2)	8.3	(2.5-14.1)
55 – 64	10.8	(4.6-17.0)	5.8	(1.0-10.7)	11.9	(5.7-18.2)
65+	20.1	(11.1-29.2)	14.5	(8.0-20.9)	8.2	(3.1-13.3)
GENDER						
Male	7.8	(4.2-11.4)	7.1	(3.7-10.6)	5.9	(2.7-9.1)
Female	5.6	(2.7-8.5)	3.8	(1.9-5.6)	4.3	(2.5-6.2)
HOUSEHOLD INCOME						
< $20,000	3.6	(0.7-6.5)	10.0	(4.7-15.3)	9.8	(4.9-14.7)
$20,000 to $34,999	12.0	(5.8-18.3)	7.5	(1.5-13.5)	5.7	(0.4-11.1)
$35,000 to $49,999	11.5	(4.8-18.3)	1.1	(0.0-2.6)	2.1	(0.0-4.9)
$50,000 to $74,999	1.5	(0.0-3.1)	2.7	(0.4-5.0)	1.8	(0.0-3.7)
≥ $75,000	3.8	(0.0-7.5)	2.5	(0.0-5.7)	4.0	(0.4-7.5)

7%

of Native American adults in Michigan have ever **had a heart attack**.

NA 7%
MI 5%

5%

of Native American adults in Michigan have **ever been told they had a stoke**.

NA 5%
MI 4%

CANCER

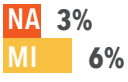
Cancer is the second leading cause of death in both Michigan and the U.S.[16] There are more than 100 different types of cancer. By 2030, the expected number of new cases per year will rise to roughly 23.6 million.[17]

- 2.6% of adults reported ever being told that they had skin cancer, while 6.1% reported ever being told that they had other types of cancer.
- As age increased, so did the prevalence of ever being told they had skin cancer or any other types of cancer.
- Slightly more men than women reported ever being told they had skin cancer (3.0% and 2.2% respectively).
- Almost twice as many women than men reported ever being told they had any other type of cancer (7.9% and 4.3% respectively).
- As household income increased, the prevalence of being told one had skin cancer increased as well.
- However, when household income increased, the prevalence of being told one had other types of cancer decreased.

	EVER TOLD SKIN CANCER		EVER TOLD ANY OTHER TYPES OF CANCER	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**2.6**	**(1.5-3.7)**	**6.1**	**(4.1-8.0)**
AGE				
18 – 34	0.1	(0.0-0.4)	1.1	(0.0-2.3)
35 – 44	0.5	(0.0-1.4)	2.5	(0.4-4.6)
45 – 54	2.3	(0.0-5.0)	5.0	(1.3-7.7)
55 – 64	4.7	(1.3-8.2)	12.1	(5.5-18.6)
65+	9.0	(4.0-14.0)	16.7	(8.3-25.1)
GENDER				
Male	3.0	(1.1-4.8)	4.3	(1.9-6.7)
Female	2.2	(1.1-3.3)	7.9	(4.9-10.9)
HOUSEHOLD INCOME				
< $20,000	2.1	(0.0-4.7)	9.8	(4.7-14.9)
$20,000 to $34,999	2.6	(0.6-4.5)	3.6	(1.3-6.0)
$35,000 to $49,999	1.0	(0.0-2.5)	4.8	(1.1-8.5)
$50,000 to $74,999	3.9	(0.9-6.9)	6.8	(1.2-12.4)
≥ $75,000	5.9	(0.5-11.3)	3.5	(0.3-67.0)

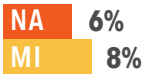
3%

of Native American adults in Michigan have **ever been told they had skin cancer**.



6%

of Native American adults in Michigan have **ever been told they had any other types of cancer**.



DIABETES

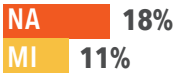
Approximately 20% of all Native Americans have diabetes mellitus. Risk factors include age; obesity, poor diet, physical inactivity, high blood pressure, having a mother, father, brother, or sister with diabetes; having diabetes during pregnancy; giving birth to a baby weighing > 9 pounds; and also, having a degree of Indian ancestry. Type 2 diabetes, the most common form of diabetes among Native Americans, may develop slowly over a period of years.[18]

- About 18% of adults had ever been told they had diabetes (18.1%).
- Close to 3% of adults had ever been told that they are pre-diabetic or borderline (2.7%).
- As age increased, the prevalence of ever being told one had diabetes also increased.
- Slightly more men than women reported that they were ever told they had diabetes (18.4% and 17.7%).
- The prevalence of being told one was diabetic or pre-diabetic decreased when household income increased.

	EVER TOLD DIABETES		EVER TOLD BORDERLINE OR PRE-DIABETES	
DEMOGRAPHIC CHARACTERISTICS	**%**	**95% CI**	**%**	**95% CI**
TOTAL	**18.1**	**(14.5-21.6)**	**2.7**	**(1.2-4.3)**
AGE				
18 – 34	3.8	(0.6-7.0)	1.3	(0.0-3.5)
35 – 44	6.2	(1.2-11.2)	4.3	(0.0-9.6)
45 – 54	23.4	(14.3-32.6)	1.4	(0.0-3.3)
55 – 64	29.2	(20.8-37.6)	5.0	(0.2-9.8)
65+	46.4	(34.8-57.9)	2.9	(0.7-5.1)
GENDER				
Male	18.4	(12.9-23.8)	2.7	(0.3-5.1)
Female	17.7	(13.2-22.3)	2.7	(0.9-4.6)
HOUSEHOLD INCOME				
< $20,000	22.4	(14.7-30.1)	2.2	(0.0-5.3)
$20,000 to $34,999	29.1	(20.1-38.2)	3.3	(0.0-6.7)
$35,000 to $49,999	17.3	(8.1-26.4)	1.1	(0.0-2.6)
$50,000 to $74,999	9.6	(3.6-15.6)	1.1	(0.0-2.8)
≥ $75,000	9.7	(3.7-15.8)	6.1	(0.0-14.4)

18%

of Native American adults in Michigan have **ever been told they have diabetes**.



13%

of Native American adults in Michigan have **ever been told they have borderline or pre-diabetes**.

KIDNEY DISEASE

Kidney disease is a condition in which the blood properly. Adults with diabetes or hypertension are at increased risk of kidney disease. Kidney disease is also a risk factor for the development of cardiovascular disease.[19]

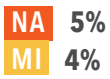
- 4.8% of adults reported ever being told that they had kidney disease.
- As age increased, the prevalence of being told one had kidney disease increased.
- Women were almost twice as likely as men to be told they had kidney disease (6.0% and 3.6% respectively).
- The number of adults whom reported being told they had kidney disease fell as household income increased.

EVER TOLD KIDNEY DISEASE

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**4.8**	**(2.9-6.7)**
AGE		
18 – 34	1.5	(0.0-4.0)
35 – 44	5.9	(0.0-11.9)
45 – 54	3.8	(0.0-7.5)
55 – 64	7.1	(2.3-11.8)
65+	9.7	(4.5-14.9)
GENDER		
Male	3.6	(1.1-6.1)
Female	6.0	(3.2-8.7)
HOUSEHOLD INCOME		
< $20,000	9.5	(4.3-14.8)
$20,000 to $34,999	4.4	(0.6-8.2)
$35,000 to $49,999	4.8	(0.0-11.4)
$50,000 to $74,999	4.0	(0.0-8.2)
≥ $75,000	1.1	(0.0-2.8)

5%

of Native American adults in Michigan have **ever been told they have kidney disease**.



DEPRESSION

Depression is a common and treatable medical disorder that is more common among individuals with chronic conditions such as obesity, diabetes, and arthritis.[20]

- One-third of adults admitted to ever being told they had depression.
- For ages 18-54, as age increased, so did the prevalence of ever being told they had depression.
- However from ages 55 and older, the prevalence of ever being told they had depression decreased as age increased.
- Women were about one and half times more likely to have ever been told they had depression when compared to men (39.9% and 26.0% respectively).
- As household income increased, prevalence of having ever been told they had depression decreased.

EVER TOLD DEPRESSION

DEMOGRAPHIC CHARACTERISTICS	%	95% CI
TOTAL	**33.0**	**(28.2-37.8)**
AGE		
18 – 34	29.8	(19.5-40.0)
35 – 44	35.7	(24.6-46.8)
45 – 54	39.4	(29.2-49.6)
55 – 64	33.3	(24.5-42.0)
65+	26.0	(17.0-35.1)
GENDER		
Male	26.0	(19.2-32.8)
Female	39.9	(33.9-45.9)
HOUSEHOLD INCOME		
< $20,000	47.4	(38.0-56.8)
$20,000 to $34,999	34.4	(24.7-44.2)
$35,000 to $49,999	22.6	(12.6-32.6)
$50,000 to $74,999	31.6	(19.7-43.6)
≥ $75,000	14.1	(7.2-21.0)

33%

of Native American adults in Michigan have **ever been told they have depression**.

REFERENCES

1. U.S. Census Bureau. Understanding and Using American Community Survey Data: What All Data Users Need to Know. 2018.https://www.census.gov/content/dam/Census/library/publications/2018/acs/acs_general_handbook_2018.pdf. (December2019).
2. Idler E, Benyamini Y. Self-rated Health and Mortality: a Review of Twenty-Seven Community Studies. J Health Soc Behav. 1997; 38(1): 21-37.
3. Centers for Disease Control and Prevention. 2019. Adult Overweight and Obesity - Adult Obesity Causes & Consequences. https://www.cdc.gov/obesity/adult/causes.html. (January 2020).
4. U.S. Department of Health and Human Services. 2018. Physical Activity Guidelines for Americans, 2nd ed. https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf. (January 2020).
5. Centers for Disease Control and Prevention. 2013. State Indicator Report on Fruits and Vegetables. https://www.cdc.gov/nutrition/downloads/state-indicator-report-fruits-vegetables-2013.pdf. (January 2020).
6. U.S. Department of Health and Human Services. 2014. The Health Consequences of Smoking - 50 Years of Progress: A Report of the Surgeon General. https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf. (December 2019).
7. Centers for Disease Control and Prevention. Excessive Alcohol Use - Preventing a Leading Risk for Death, Disease, and Injury. 2015. https://www.cdc.gov/chronicdisease/resources/publications/aag/alcohol.htm. (December 2019).
8. Centers for Disease Control and Prevention. 2017. Family Health - Regular Checkups are Important. https://www.cdc.gov/family/checkup/. (December 2019).
9. Centers for Disease Control and Prevention. 2019. High Cholesterol Facts. https://www.cdc.gov/cholesterol/facts.htm. (December 2019).
10. Michigan Department of Health and Human Services. 2018. 2016 Michigan Resident Death File. Division of Vital Records & Health Statistics.
11. Panel on Antiretroviral Guidelines for Adults and Adolescents. 2019. Guidelines for the Use of Antiretroviral Agents in HIV-1- Infected Adults and Adolescents. Department of Health and Human Services. https://aidsinfo.nih.gov/contentfiles/lvguidelines/adultandadolescentgl.pdf. (December 2019).
12. Centers for Disease Control and Prevention. 2019. High Blood Pressure - High Blood Pressure Facts. https://www.cdc.gov/bloodpressure/facts.htm. (December 2019).
13. U.S. Department of Health and Human Services, National Heart Lung and Blood Institute. 2014. Who is at Risk for Asthma? https://www.nhlbi.nih.gov/health/health-topics/topics/asthma/atrisk. (December 2019).
14. U.S. Department of Health and Human Services, National Heart Lung and Blood Institute. 2017. What is COPD? https://www.nhlbi.nih.gov/health/health-topics/topics/copd. (December 2019).
15. 29. Centers for Disease Control and Prevention. 2019. Arthritis: Improving the Quality of Life for People With Arthritis. https://www.cdc.gov/chronicdisease/resources/publications/aag/arthritis.htm. (December 2019).
16. 30. Michigan Department of Health and Human Services, Division of Vital Records & Health Statistics. 2017 Michigan Death Certificate Registry. https://www.mdch.state.mi.us/pha/osr/deaths/causrankcnty.asp. (December 2019).
17. 31. National Cancer Institute. 2015. What is Cancer? https://www.cancer.gov/about-cancer/understanding/what-is-cancer. (December 2019).
18. 32. Centers for Disease Control and Prevention. 2019. Diabetes Home - Basics About Diabetes. https://www.cdc.gov/diabetes/basics/diabetes.html. (December 2019).
19. 33. Centers for Disease Control and Prevention. 2017. National Chronic Kidney Disease Fact Sheet, 2017. https://www.cdc.gov/diabetes/pubs/pdf/kidney_factsheet.pdf. (December 2019).
20. 34. Centers for Disease Control and Prevention. Current Depression Among Adults - United States, 2006 and 2008. MMWR 2010; 59(38): 1229-1235.

MIBRFS METHODOLOGY

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 between 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 & Human Services (MDHHS). Michigan Behavioral Risk Factor Surveillance System (MiBRFS) data contribute to the CDC Behavioral Risk Factor Surveillance System (BRFSS) that is conducted within every state, the District of Columbia, and several U.S. territories.

From June to December 2017, the MiBRFS collected a special sample of Native American response data from both landline and cell phone respondents. The sample of telephone numbers was selected using a list of phone numbers provided by three Tribes of their membership. The lists of numbers were randomized prior to use. In order to be part of the sample, it was required that the respondents were non-institutionalized, registered adult members of one of the participating Tribal communities who resided in Michigan at the time of call and capable of completing the interview without any assistance. Those who lived in college/university house were considered eligible and treated as single persons households.

The data were first assigned a stratum weight based on the probability of selection from the sampling frame within the stratum. The multiple sampling frames were combined and treated as a single sampling frame to create an aggregated dataset, then a design weight was calculated from the stratum weight by considering the 'within household' probability of selection. This accounted for the issue of multiple people in the household listing the same phone number.

Next, a weighting methodology known as iterative proportional fitting or raking was used to maximize representativeness of the sample findings by adjusting the findings to match eight different raking margins. These raking margins were: 1) telephone usage group; 2) age recoded into three categories by race/ethnicity; 3)homeowner status; 4) gender by race/ethnicity; 5) marital status recoded into three categories; 6) education recoded into four categories; 7) race/ethnicity; and 8) age recoded into seven categories by gender. The population margins were taken from the proxy population numbers for weighting/raking from the American Community Survey 2012-2016 5-year Survey[1].

The weight from the iterative proportional fitting weighting methodology or raking process was then adjusted using a series of marginal weights after inputting any missing data. The resulting weight is an expansion weight; which projects the weighted number of cases onto the actual population size. The final weight used for data analysis also used all the mentioned weighting adjustments and margins but results in a number of weighted cases that is equal to the actual number of interviews completed. This final weight is used on the aggregate dataset.

Due to the BRFSS methodology changes that were implemented in 2011, the 2017 MiBRFS estimates provided within this report as state comparison numbers to the Michigan Native American population should only be compared to estimates from 2011-2017 and not to estimates from years prior to 2011. Due to the BRFSS methodology changes that were implemented in the Fruits and Vegetables Module in 2017, estimates from this module should not be compared to years prior.

SAMPLE RESULTS FOR THE 2017 MIBRFS: NATIVE AMERICAN POPULATION

The total sample size for the 2017 MiBRFS: Native American population was 870. Weighting, as described above, was done so that the results would accurately reflect the proportions of the Native American population in Michigan.

HEALTH RISK BEHAVIORS AMONG NATIVE AMERICANS IN MICHIGAN:
2017 Tribal Behavioral Risk Factor Survey