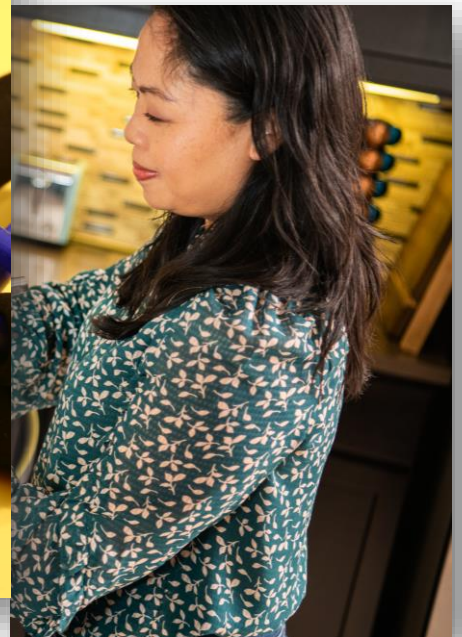
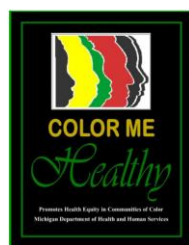


# HEALTH RISK BEHAVIORS AMONG ASIAN AND PACIFIC ISLANDER ADULTS WITHIN THE STATE OF MICHIGAN



## 2022 ASIAN AND PACIFIC ISLANDER BEHAVIORAL RISK FACTOR SURVEY





Michigan Department of Health & Human Services

GRETCHEN WHITMER, GOVERNOR | ELIZABETH HERTEL, DIRECTOR

# **2022 Asian/Pacific Islander Behavioral Risk Factor Survey (APIBRFS)**

Health Risk Behaviors  
Among Asian/Pacific Islander  
Adults Within  
the State of Michigan

**[Michigan.gov/BRFS](https://Michigan.gov/BRFS)  
[Michigan.gov/MDHHS-MI-TEACH](https://Michigan.gov/MDHHS-MI-TEACH)**



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# Asians and Pacific Islanders in Michigan

Asians and Pacific Islanders were the fastest-growing racial group in the United States in 2016 and are projected to remain the fastest-growing racial group from 2016 to 2060.<sup>1</sup> During this period, the U.S. population reporting their race as Asian is projected to grow by as much as 162%, increasing from 5.7% of the total U.S. population to 10.8%.<sup>1</sup> “Asian” is defined by the Office of Management and Budget’s updated Statistical Policy Directive No. 15 as “individuals with origins in any of the original peoples of Central or East Asia, Southeast Asia, or South Asia, including, for example, Chinese, Asian Indian, Filipino, Vietnamese, Korean, and Japanese.”<sup>2</sup> Native Hawaiian and Other Pacific Islanders (NHPI) are also projected to see a population increase of up to 45% between 2016 and 2060.<sup>1</sup> NHPI is defined as “individuals with origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands, including, for example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, and Marshallese.”<sup>2</sup>

More than 334,000 Asian Americans and approximately 433 NHPI live in Michigan.<sup>3</sup> Michigan is home to a significant Asian population, with an estimated 3.3% of the state’s population being of Asian descent in 2020.<sup>3</sup> The overall population of Michigan increased from 2010 to 2020, with the number of individuals reporting their race as Asian increasing by 40.3% during the same period, and the NHPI population growing by more than 7.2%.<sup>3</sup> The growth of the Asian population has been fueled primarily by international immigration.<sup>1</sup> Michigan’s Asian American population is richly diverse, encompassing a wide range of cultural backgrounds and experiences. While some groups - such as East Asians and Asian Indians - tend to have higher levels of educational attainment and income, others - including Bangladeshi, Hmong and Burmese communities - may face greater socioeconomic challenges.<sup>4</sup>

Although both the Asian and NHPI populations are growing, accurate and timely data at the population level are limited. Data are necessary to describe current health conditions and identify key areas for prevention and intervention programs aimed at improving the health of Asians and NHPs in Michigan. Currently, the Michigan Behavioral Risk Factor Survey (MiBRFS) provides the state with annual data on various health behaviors, medical conditions, and preventive health care practices at the population level and by race/ethnicity. Due to the small number of Asian/Pacific Islander (API) participants in the MiBRFS each year, APIs are often grouped into the ‘Other, non-Hispanic’ or ‘Hispanic’ categories, depending on their reported ethnicity. Estimates for APIs are not available on a yearly basis and are only provided when multiple years of data are combined. Therefore, a standalone survey of API adults in Michigan was conducted to address these data gaps by the Michigan Department of Health and Human Services (MDHHS) Office of Transformation, Engagement and Community Health(MI-TEaCH) and the Lifecourse Epidemiology and Genomics Division (LEGD).

# APIBRFS

This report presents estimates from the 2022 Asian/Pacific Islander Behavioral Risk Factor Survey (APIBRFS), a statewide landline, cell phone, and online survey of non-institutionalized Asian residents in Michigan aged 18 years and older. For the remainder of this report, the term 'Asian' will be used to describe respondents that are either Asian American or NHPI. This is the second report of state-specific, population-based estimates of the prevalence of various health behaviors, medical conditions, and preventive health care practices that focus specifically on Asian adults in Michigan. A detailed description of the methodology of the survey is included at the end of the report, and the results are described in the subsequent pages. If the 95% confidence intervals for the estimates being compared did not overlap, they were considered significantly different. All Asian participants were of non-Hispanic origin. The survey findings are used by public health agencies, academic institutions, nonprofit organizations, and others to develop programs that promote the health of Asian adults in Michigan.

## Limitations of the 2022 APIBRFS

Due to the nature of the data collection for the 2022 APIBRFS, there are noteworthy limitations to consider when interpreting the results. First, the survey did not achieve its targeted goal of 574 completed interviews to have full representation and disaggregation of Central, Southeast, and South Asian communities in Michigan. Only 383 completed interviews were achieved, and as such, all results should be interpreted as not fully representative of the Asian American community in Michigan. Second, due to the low number of completed interviews, the APIBRFS survey was administered in multiple waves, with an initial release in 2022 and a second release of the survey in 2023. These multiple releases also used different formats and methodologies for each wave of the survey. The first wave in 2022 used a more traditional Behavioral Risk Factor Survey methodology of only landline and cellphone interviews with participants, while the second wave used a new methodology combining landline, cellphone, and web-based surveys. This means the 2022 APIBRFS is not fully comparable to previous minority-specific Behavioral Risk Factor Surveys or to the yearly MiBRFS.

The MDHHS Office of Transformation, Engagement and Community Health (MI-TEaCH) prioritizes improving the availability of health-related data for racial and ethnic minorities in Michigan. In keeping with this priority, and considering the limitations of the 2022 APIBRFS, future data collection efforts will focus on obtaining health data among Asian racial groups, utilizing methods explored in this APIBRFS and refining them for future efforts.

## Other Minority Health Behavioral Risk Factor Surveys

Additional projects among other populations currently underrepresented within the statewide Michigan BRFs conducted by MDHHS and MI-TEaCH include:

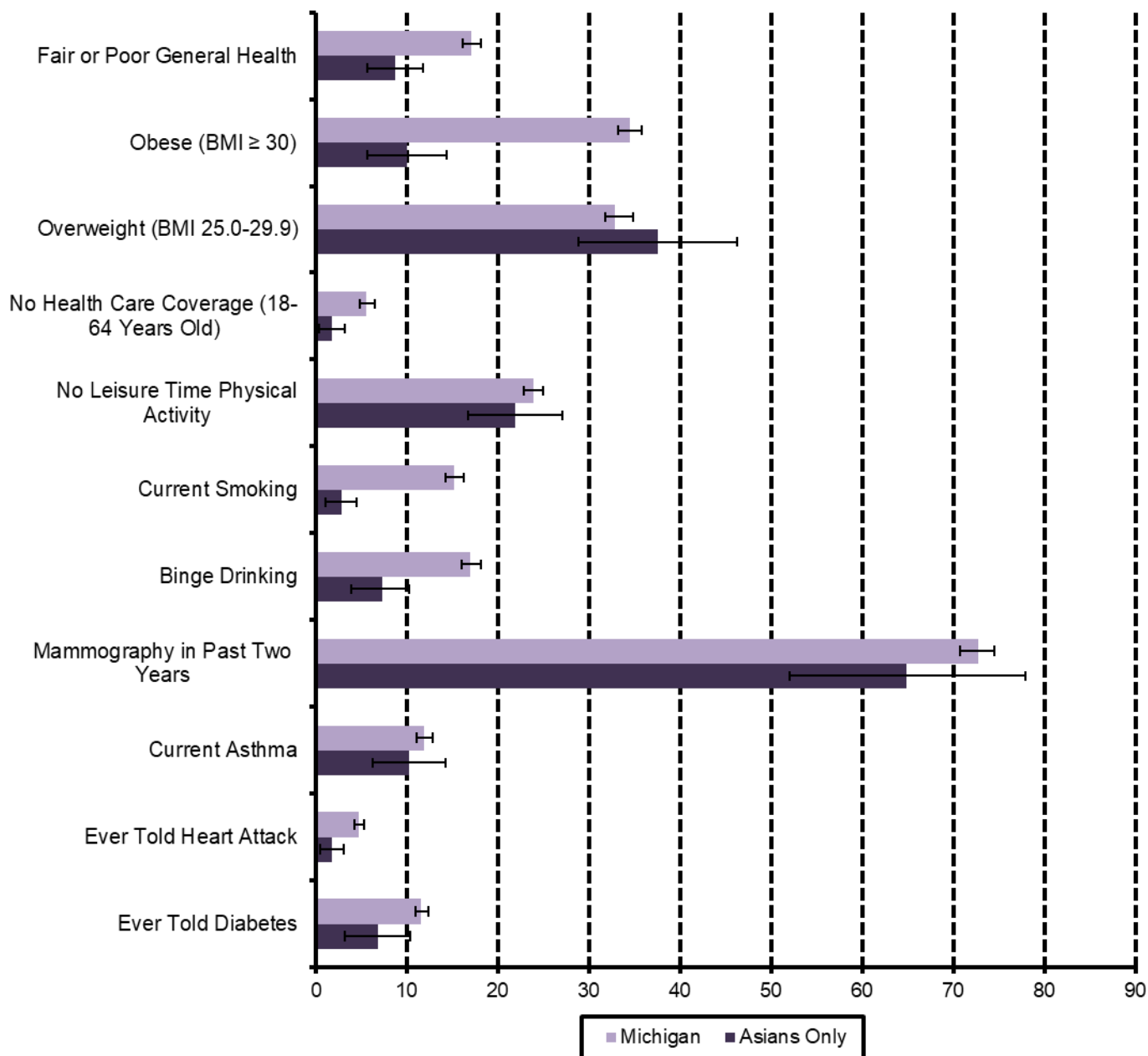
- In 2017, a stand-alone BRFs-like survey was conducted among the Native American and American Indian population within Michigan. Results from the 2017 Native American BRFs are available [online](#).
- In 2016, a stand-alone BRFs-like survey was conducted among the Arab/Chaldean American population within Michigan, and results are available [online](#).

Conducting BRFs among minority populations in Michigan provides critical data related to health outcomes and behaviors among adults, data that were not previously available from the MiBRFS alone. These data provide important information for public health officials, health care providers, researchers, and local and state-level policymakers by expanding our understanding of the risk factors and preventive behaviors for the major causes of disease among minority populations in Michigan. Moreover, they provide important information needed to develop effective, culturally appropriate programs and services.

# Summary

All the results from the 2022 APIBRFS presented in this report have been weighted, as described in the methods section at the end of the report and can be interpreted as prevalence estimates among the Asian adult population in Michigan. Differences in demographic characteristics can directly and indirectly influence the prevalence of certain health conditions and related risk factors and are important to consider.<sup>5</sup> Nationwide, the Asian population has higher levels of education and income compared to non-Hispanic whites,<sup>6</sup> and a similar pattern was observed statewide in the 2022 APIBRFS. For many health indicators, such as obesity and current asthma, the prevalence among Asians in Michigan was lower than the statewide estimates. The Asian population had a higher percent of overweight individuals compared to the statewide estimate, a trend that was consistent with the findings from the 2022 State BRFS. However, it is important to consider the limitations of the data (as described on the previous page) when interpreting the results.

**Clinical Preventive Practices- 2022 MiBRFS and 2022 Asian Pacific Islander BRFS Michigan vs. Asians Only**



# Summary, continued

## Public Health Implications of Findings

Several themes emerged from the findings of the 2022 APIBRFS that have implications for public health.

### ✦ Approximately 1 in 3 Asian adults in Michigan are overweight.

In 2022, an estimated 37.6% of Asian adults in Michigan were classified as overweight, higher than all Michigan adults (32.8%). However, an additional 10.0% of Michigan Asian adults were classified as obese, significantly lower compared to all Michigan adults (34.5%). Although the lower prevalence of obesity among Asians is encouraging, some research suggests that Asians are at increased risk for chronic conditions, such as diabetes, at a lower body mass index (BMI) than other racial/ethnic groups.<sup>7-8</sup> Additionally, research from the World Health Organization suggests that traditional BMI cut points may not be as useful for the Asian population, and there are alternative cutoffs for this population.<sup>7</sup> This should be taken into consideration when analyzing the results for the Asian population in Michigan, where the low rate of obesity coexists with a high rate of overweight status.

### ✦ About 8.7% of Asian adults in Michigan report having fair or poor health.

In 2022, an estimated 8.7% of Asian adults reported having fair or poor health, compared to 17.1% of all Michigan adults. While the rate of reported fair or poor health is lower among Michigan's Asian population, barriers may exist to gaining accurate insights into the health status of this group due to cultural and language barriers influencing perceptions of health.<sup>9</sup> Likewise, Asian Americans are more likely to report fair or poor health regardless of socioeconomic status.<sup>9</sup> With this in mind, efforts should still be made by MDHHS to monitor the health status of Michigan's Asian population through mortality and morbidity reporting to mitigate potential biases in self-reported health among minority populations.

### ✦ Nearly 1 in 5 Asian adults in Michigan report having no leisure time for physical activity.

In 2022, an estimated 21.9% of Asian adults in Michigan reported having no leisure time for physical activity, similar to 23.9% of all Michigan adults. Physical activity is essential for increasing life expectancy and reducing the risk of heart disease, diabetes, and obesity.<sup>10</sup> At the national level, Asians having higher rates of physical activity compared to other racial/ethnic groups.<sup>11</sup> A higher socioeconomic status often leads to more availability of leisure time for physical activity, which should be considered when evaluating this population.<sup>12</sup>

### ✦ Approximately 6 in 10 Asian women in Michigan report having a mammogram.

In 2022, an estimated 64.9% of Asian women in Michigan aged 40 years and older reported having a mammogram in the past two years, significantly lower than the 72.7% of all Michigan women in the same age group. At the national level, a similar pattern exists, with Asian women having lower mammogram screening rates compared to the general population and other racial/ethnic groups.<sup>13</sup> Some direct barriers to cancer screening among Michigan's Asian population include lack of health insurance, cultural traditions, difficulty finding breast cancer information, and perceived needs for additional breast cancer care.<sup>14-15</sup> Increasing access to information and communication about breast cancer awareness and screening among Asian adults may improve preventive screening rates.

### ✦ About 6.8% of Asian adults in Michigan report ever being told they had diabetes.

In 2022, an estimated 6.8% of Asian adults in Michigan reported ever being told by a doctor that they had diabetes, significantly lower than the 11.6% reported by all Michigan adults. Although diabetes rates are lower among Asians in Michigan, nationally Asians are diagnosed with diabetes at higher rates compared to other racial/ethnic groups.<sup>16</sup> Continuous screening and monitoring for prediabetes and diabetes should still be prioritized for Michigan's Asian population, especially among individuals with common diabetes risk factors such as obesity, hypertension, high cholesterol, or the use of tobacco products like cigarettes and e-cigarettes.<sup>16</sup> Similarly, screening for diabetes and prediabetes in Michigan's Asian population should apply lower BMI thresholds, as studies show that Asian Americans are at higher risk of developing diabetes at lower BMI levels.<sup>17</sup>

# Demographics

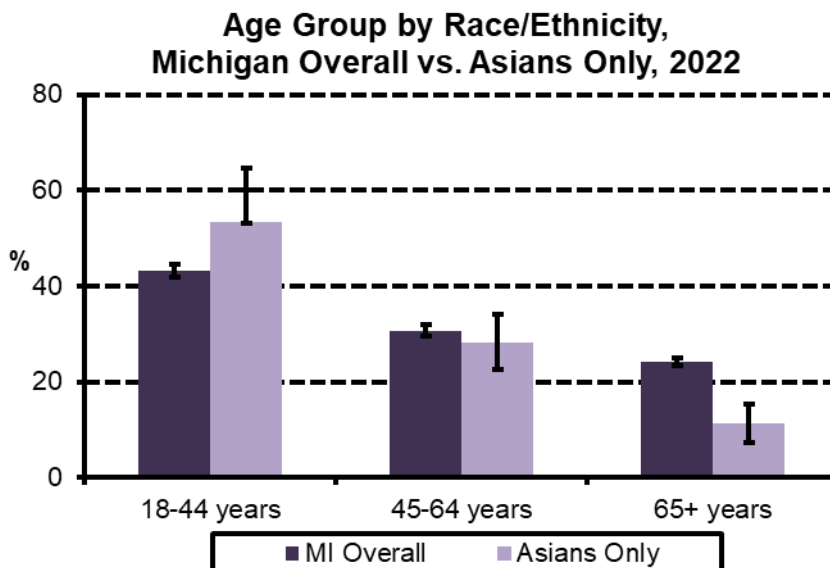
Nationwide, the Asian population has the highest education attainment and highest household income among racial and ethnic populations.<sup>6,18</sup> Differences in these demographic characteristics can directly and indirectly influence the prevalence of certain health conditions and related risk factors.<sup>5</sup> Therefore, the demographic profile of Asian participants involved in the 2022 APIBRFS was compared to all participants involved in the 2022 MiBRFS.

- ◆ In 2022, the largest proportion of Asian adults were between the ages of 18 and 44 years (53.3%), significantly higher than the prevalence among all Michigan adults (44.1%).
- ◆ Both populations had an equal distribution of genders.
- ◆ Asian adults (78.4%) were significantly more likely to report having an education of some college or more compared to all Michigan adults (61.6%).
- ◆ Asian adults (67.1%) were significantly more likely to report a household income of \$50,000 or more than all Michigan adults (54.7%).

Asian, non-Hispanic Demographic Characteristics	Michigan Overall <sup>a</sup>		Asian, non-Hispanic Only <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Age</b>				
18 - 44	44.1	(42.8-45.4)	53.3	(53.1-64.5)
45 - 64	31.3	(30.2-32.5)	28.3	(22.5-34.0)
65+	24.6	(23.7-25.5)	11.3	(7.3-15.4)
<b>Gender</b>				
Male	48.8	(47.5-50.0)	50.7	(44.5-56.9)
Female	51.2	(50.0-52.5)	49.3	(43.1-55.5)
<b>Education</b>				
High School graduate or less	38.4	(37.1-39.7)	21.4	(15.6-27.3)
Some college or more	61.6	(60.3-62.9)	78.4	(72.6-84.3)
<b>Household Income</b>				
< \$25,000	17.2	(16.1-17.4)	14.8	(9.3-20.3)
\$25,000 - \$49,000	28.0	(26.7-29.4)	18.1	(12.4-24.8)
\$50,000+	54.7	(53.2-56.2)	67.1	(60.0-74.2)

<sup>a</sup>Demographics of all participants in the 2022 MiBRFS. (N = 10,058)

<sup>b</sup>Demographics of all participants in the 2022 APIBRFS. (N = 383)



# General Health Status

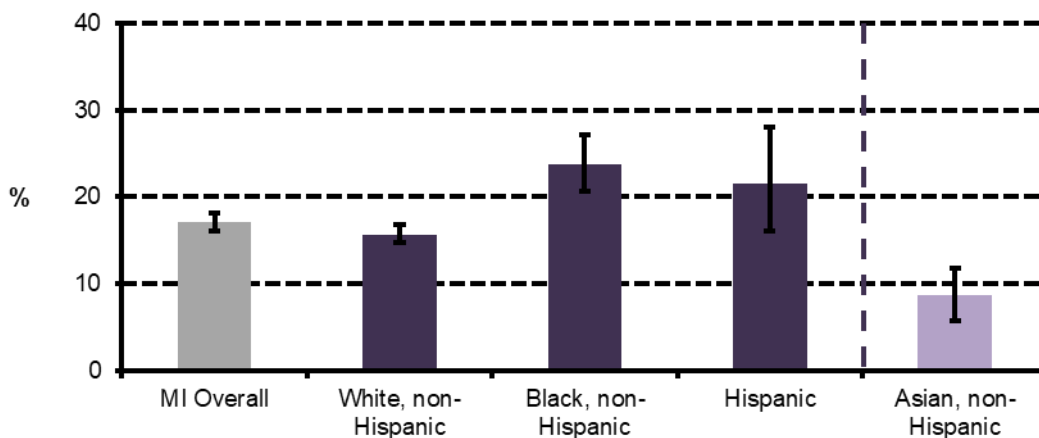
Self-assessed health is a measure of how a person perceives their own health. Self-assessed health status has been validated as a useful indicator of health among different populations and allows for broad comparisons across a variety of health conditions.<sup>9</sup>

- ◆ In 2022, an estimated 8.7% of Asian adults in Michigan reported that their general health was either fair or poor, compared to 17.1% (95% CI: 16.1-18.1) of all Michigan adults.
- ◆ The prevalence of fair or poor general health was similar by gender among Asian adults.
- ◆ Approximately 26.2% of individuals with a household income of less than \$25,000 reported fair or poor general health.
- ◆ Asian adults with a high school education or less (17.6%) reported a significantly higher prevalence of fair to poor health than Asian adults with some college or more (6.4%).
- ◆ In 2022, Asian adults (8.7%) reported a significantly lower prevalence of fair or poor general health than white, non-Hispanic adults (15.7%). In other words, white, non-Hispanic adults reported their health as either fair or poor at a rate 1.8 times higher than that of Asian adults in Michigan. The prevalence of fair or poor general health among Asian adults was significantly lower than that of Black, non-Hispanic adults and Hispanics.

Asian, non-Hispanic Demographic Characteristics	General Health, Fair or Poor <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	8.7	(5.7-11.8)
<b>Age</b>		
18 - 44	7.8	(3.9-11.7)
45 - 64	9.8	(4.1-15.4)
65+	12.8	(2.4-23.2)
<b>Gender</b>		
Male	7.1	(3.4-10.7)
Female	10.5	(5.6-15.4)
<b>Education</b>		
High School graduate or less	17.6	(7.3-27.8)
Some college or more	6.4	(3.7-9.0)
<b>Household Income</b>		
< \$25,000	26.2	(9.1-43.2)
\$25,000 - \$49,000	6.2	(0.9-11.6)
\$50,000+	7.2	(3.0-11.5)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported that their health, in general, was either fair or poor. (N = 383)

General Health, Fair or Poor, by Race/Ethnicity, Michigan, 2022



# 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 adult respondents rated their physical and mental health as "not good".

- ◆ In 2022, an estimated 5.7% of Asian Michigan adults reported poor physical health, and 8.3% reported poor mental health, compared to 12.5% (95% CI: 11.7-13.3) and 16.7% (95% CI: 15.6-17.7) of all Michigan adults, respectively.
- ◆ Although the prevalences of both indicators were higher among Asian females than Asian males, the differences were not significant.
- ◆ The prevalence of poor physical health increased with education level for Asian adults but was not significantly different. The prevalence of poor mental health decreased with increasing education level but was not significantly different.
- ◆ In 2022, Asian adults (5.7%) reported a significantly lower prevalence of poor physical health than white, non-Hispanics (12.1%), Black, non-Hispanics (15.3%), and Hispanics (12.8%) in Michigan.
- ◆ In 2022, Asian adults (8.3%) reported a significantly lower prevalence of poor mental health than white, non-Hispanics (16.1%), Black, non-Hispanics (18.5%), and Hispanics (24.1%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Poor Physical Health <sup>a</sup>		Poor Mental Health <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	5.7	(3.3-8.2)	8.3	(5.1-11.5)
<b>Age</b>				
18 - 44	3.4	(1.0-5.8)	10.3	(5.4-15.1)
45 - 64	6.1	(1.4-10.7)	7.1	(2.4-11.7)
65+	17.9	(4.6-31.1)	2.6	(0.0-6.5)
<b>Gender</b>				
Male	4.3	(1.4-7.1)	7.9	(3.4-12.3)
Female	7.3	(3.2-11.3)	8.7	(4.0-13.4)
<b>Education</b>				
High School graduate or less	2.3	(0.0-6.0)	12.2	(2.6-21.9)
Some college or more	6.7	(3.7-9.6)	7.2	(4.1-10.3)
<b>Household Income</b>				
< \$25,000	13.4	(0.7-26.1)	16.9	(2.3-31.5)
\$25,000 - \$49,000	6.8	(0.0-14.2)	12.8	(3.7-22.0)
\$50,000+	6.0	(1.9-10.0)	5.1	(1.6-8.5)

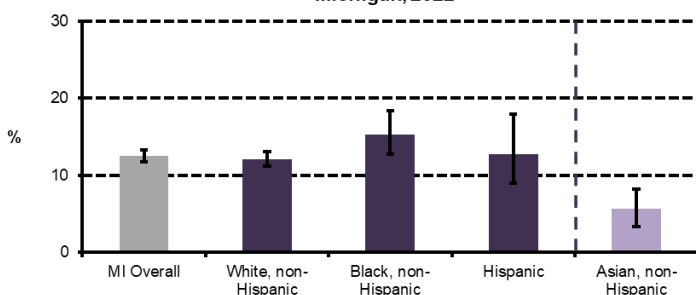
<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days. (N = 377)

<sup>b</sup>Among all Asian Pacific Islander adults, the proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days. (N = 377)

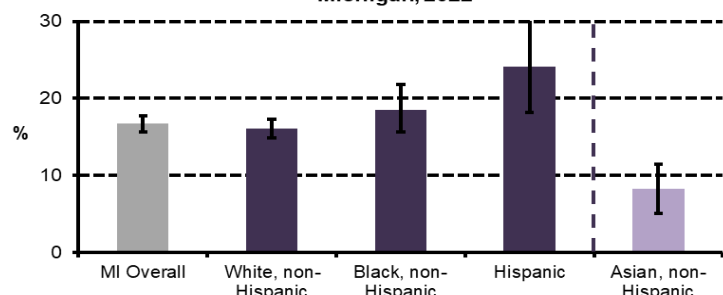
<sup>c</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

<sup>†</sup>This estimate should be used with caution due to its low reliability and precision.

Poor Physical Health by Race/Ethnicity, Michigan, 2022



Poor Mental Health by Race/Ethnicity, Michigan, 2022



# Disability

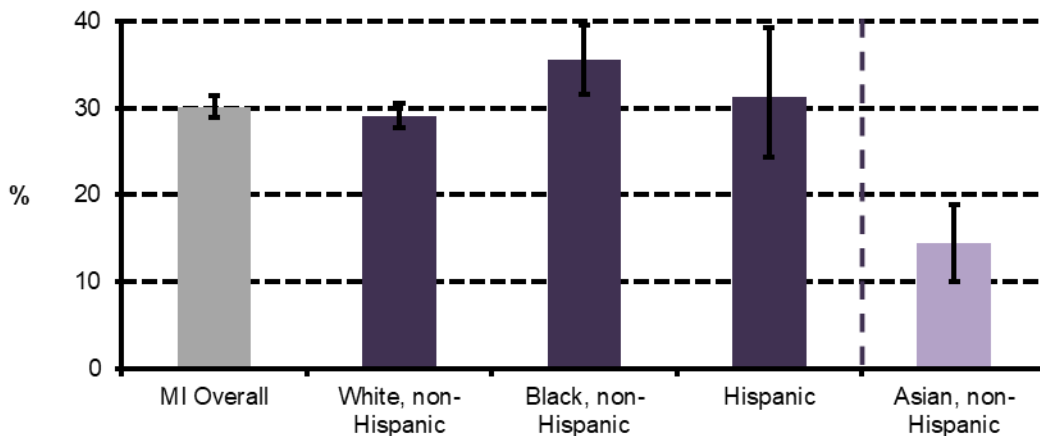
Through the Americans with Disabilities Act, an individual with a disability is defined as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history of such an impairment, or a person who is perceived by others as having such an impairment.<sup>19</sup>

- ◆ In 2022, an estimated 14.4% of Asian adults in Michigan reported being disabled, which was defined as being limited in any activities because of physical, mental, or emotional problems or requiring the use of special equipment, such as a cane, wheelchair, special bed, or special telephone due to a health problem. This was significantly lower than the 30.1% (95% CI: 28.9-31.4) of all Michigan adults who reported being disabled.
- ◆ The prevalence of disability was highest among individuals aged 65 and older (31.9%).
- ◆ The prevalence of disability was similar by gender among Asian adults.
- ◆ The prevalence of disability was higher among individuals with household incomes of less than \$25,000 and those in the \$25,000–\$49,999 income group (26.9% and 31.3%, respectively) compared to those with an income of \$50,000 or more.
- ◆ In 2022, Asian adults (14.4%) reported a significantly lower prevalence of disability than white, non-Hispanics (29.1%), Black, non-Hispanics (35.5%), and Hispanics (31.3%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Total Disability <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>		
<b>Age</b>		
18 - 44	13.2	(7.3-19.0)
45 - 64	11.2	(3.9-18.4)
65+	31.9	(14.6-49.2)
<b>Gender</b>		
Male	15.0	(8.9-21.1)
Female	13.9	(7.3-20.5)
<b>Education</b>		
High School graduate or less	23.0	(9.7-36.3)
Some college or more	12.1	(7.8-16.5)
<b>Household Income</b>		
< \$25,000	26.9	(9.7-44.0)
\$25,000 - \$49,000	31.3	(15.1-47.4)
\$50,000+	10.1	(4.3-15.8)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required the use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem. (N = 383)

Disability by Race/Ethnicity, Michigan, 2022



# 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.<sup>20</sup>

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. BMI is defined as weight in kilograms divided by height in meters squared ( $w/h^2$ ) and is calculated based on self-reported height and weight.

- ◆ In 2022, an estimated 10.0% of Asian adults in Michigan were classified as obese, with an additional 37.6% (95% CI: 28.9-46.3) of Michigan Asian adults being classified as overweight. The prevalence of obesity among all adults in Michigan was significantly higher at 34.5% (95% CI: 33.2-35.8), while the prevalence of overweight was 32.7% (95% CI: 31.5-34.0).
- ◆ Individuals in the 45–64 year age group had the highest prevalence of being overweight, although the differences by age group were not significant.
- ◆ The prevalence of obesity was similar by gender but skewed slightly higher among males; however, the difference was not statistically significant.
- ◆ In 2022, Asian adults (10.0%) reported a significantly lower prevalence of obesity than white, non-Hispanics (34.5%), Black, non-Hispanics (42.7%), and Hispanics (37.5%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Overweight <sup>a</sup>		Obese <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	37.6	(28.9-46.3)	10.0	(5.7-14.4)
<b>Age</b>				
18 - 44	34.7	(24.2-45.3)	12.6	(6.3-19.0)
45 - 64	47.3	(28.5-66.1)	9.5	(1.5-17.5)
65+	28.0	(7.3-48.7)	— <sup>c</sup>	— <sup>c</sup>
<b>Gender</b>				
Male	44.5	(33.2-55.9)	11.2	(5.3-17.2)
Female	28.5	(15.7-41.3)	8.4	(2.1-14.8)
<b>Education</b>				
High School graduate or less	58.9	(39.2-78.6)	7.8	(0.0-16.6)
Some college or more	31.1	(22.4-39.8)	10.7	(5.7-15.8)
<b>Household Income</b>				
< \$25,000	35.3	(12.7-58.0)	17.2	(0.8-33.6)
\$25,000 - \$49,000	33.4	(13.7-53.1)	9.7	(0.0-19.8)
\$50,000+	39.9	(26.0-53.8)	10.8	(3.9-17.7)

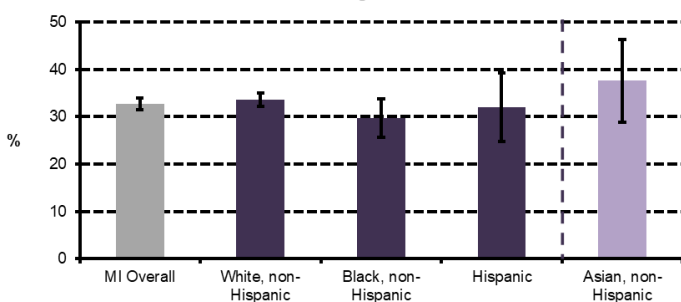
Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)<sup>2</sup>]. Weight and height were self-reported. Pregnant women were excluded.

<sup>a</sup>Among all Asian adults, the proportion of respondents whose BMI was greater than or equal to 25.0 and less than 30.0. (N = 199)

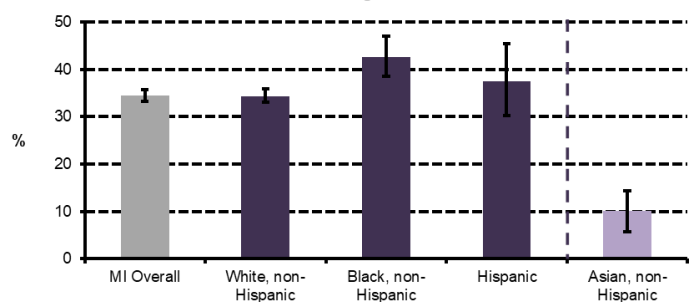
<sup>b</sup>Among all Asian adults, the proportion of respondents whose BMI was greater than 30.0. (N = 199)

<sup>c</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

Overweight by Race/Ethnicity, Michigan, 2022



Obesity by Race/Ethnicity, Michigan, 2022



# No Health Care Coverage

Adults who do not have health care coverage are less likely to access health care services and are more likely to delay obtaining needed medical attention.<sup>21</sup>

- ◆ In 2022, an estimated 1.8% of Asian adults aged 18-64 years in Michigan reported having no health care coverage, compared to 5.6% (95% CI: 4.8-6.5) of all Michigan adults.
- ◆ The prevalence of no health care coverage generally decreased with age and education level, although differences by age group were not significant.
- ◆ Although Asian males reported a higher prevalence of no health care coverage than Asian females, the difference was not significant.
- ◆ The prevalence of no health care coverage was higher among individuals with a household income of \$25,000–\$49,999 compared to those earning \$50,000 or more, although the difference was not statistically significant.
- ◆ In 2022, Asian adults (1.8%) reported a significantly lower prevalence of no health care coverage than white, non-Hispanics (4.8%), Black, non-Hispanics (5.0%), and Hispanics (16.9%) in Michigan.

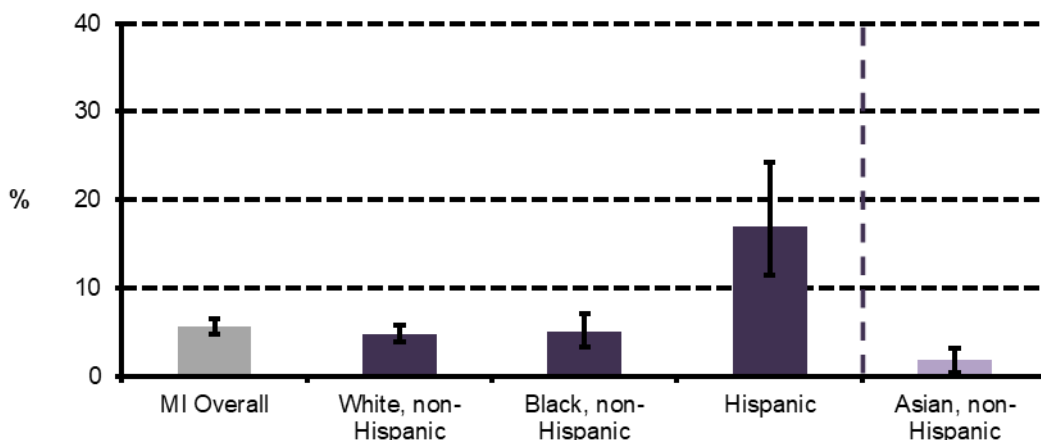
Asian, non-Hispanic Demographic Characteristics	No Health Care Coverage Among Adults 18-64 years <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	1.8	(0.4-3.2)
<b>Age</b>		
18 - 44	2.9	(0.5-5.3)
45 - 64	0.4	(0.0-1.1)
<b>Gender</b>		
Male	3.1	(0.5-5.7)
Female	0.5	(0.0-1.6)
<b>Education</b>		
High School graduate or less	4.5	(0.0-9.6)
Some college or more	1.1	(0.0-2.2)
<b>Household Income</b>		
< \$25,000	— <sup>b</sup>	— <sup>b</sup>
\$25,000 - \$49,000	7.0	(0.0-14.7)
\$50,000+	1.4	(0.0-3.1)

<sup>a</sup>Among Asian Pacific Islander adults aged 18-64 years, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare or Indian Health Services. (N = 301)

<sup>b</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

<sup>†</sup>This estimate should be used with caution due to its low reliability and precision.

**No Health Care Coverage Among Adults Aged 18 to 64 Years by Race/Ethnicity, Michigan, 2022**



# Limited Health Care Coverage

Two additional indicators related to health care access are: 1) not having a personal doctor or health care provider, and 2) having had a time during the past 12 months when you needed to see a doctor but could not because of the cost. Increases in access to primary care have been shown to substantially improve health-related outcomes.<sup>22</sup>

- ◆ In 2022, an estimated 20.2% of Asian adults in Michigan reported not having a personal health care provider, compared to 11.8% (95% CI: 10.9-12.8) of all Michigan adults. An estimated 4.5% of Asian adults reported not seeing a doctor within the past 12 months due to cost, significantly lower than among all Michigan adults (7.9% [95% CI: 7.2-8.7]).
- ◆ The prevalence of not having a personal health care provider was higher among the 45–64 year-old and 65+ age groups; however, these differences were not statistically significant.
- ◆ The prevalences of both indicators were similar by gender and education.
- ◆ In 2022, Asian adults (20.2%) reported a significantly higher prevalence of not having a personal health care provider than white, non-Hispanics (10.7%) and Black, non-Hispanics (10.0%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	No Personal Health Care Provider <sup>a</sup>		No Health Care Access Due to Cost <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	20.2	(15.4-24.9)	4.5	(2.3-6.7)
<b>Age</b>				
18 - 44	17.0	(11.2-22.7)	5.1	(2.2-8.0)
45 - 64	26.2	(15.9-36.5)	5.4	(0.6-10.1)
65+	22.5	(8.2-36.7)	— <sup>c</sup>	— <sup>c</sup>
<b>Gender</b>				
Male	19.3	(12.4-26.1)	6.6	(3.0-10.3)
Female	21.1	(14.4-27.8)	2.3	(0.0-4.6)
<b>Education</b>				
High School graduate or less	22.8	(9.9-35.7)	3.1	(0.0-7.0)
Some college or more	19.5	(14.5-24.5)	4.9	(2.3-7.4)
<b>Household Income</b>				
< \$25,000	30.6	(13.0-48.3)	9.4	(0.0-19.4)
\$25,000 - \$49,000	28.0	(11.4-44.6)	6.8	(0.0-13.8)
\$50,000+	15.1	(8.4-21.8)	4.7	(1.2-8.2)

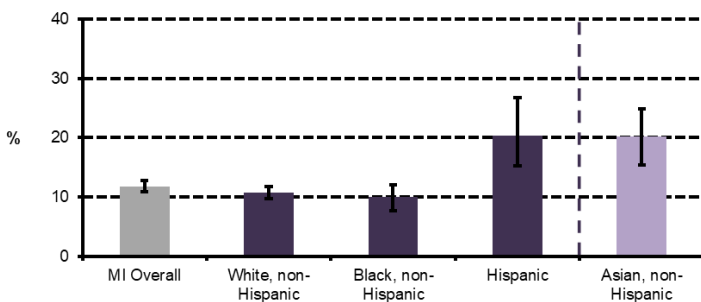
<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider. (N = 318)

<sup>b</sup>Among all Asian Pacific Islanders adults, the proportion who reported that in the past 12 months, they could not see a doctor when they needed to due to the cost. (N = 380)

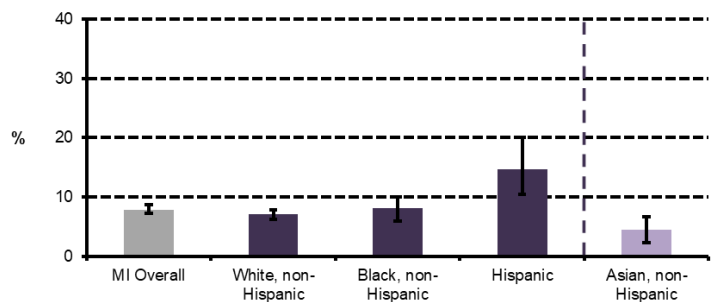
<sup>c</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

- ◆ In 2022, Asian adults (4.5%) reported significantly lower prevalence of no health care access due to cost as white, non-Hispanics (7.1%), Black, non-Hispanics (8.1%), and Hispanics (14.6%) in Michigan.

No Personal Health Care Provider by Race/Ethnicity, Michigan, 2022



No Health Care Access Due to Cost by Race/Ethnicity, Michigan, 2022



All Asian Pacific Islander prevalence estimates used data from the 2022 APIBRFS while estimates for Michigan overall as well as white, Black, and Other non-Hispanic estimates used data from the 2022 Michigan BRFS.

# Social Context

Differences in health-related exposures and stresses throughout life often result in differences in underlying health status.<sup>5</sup> As a result, it is important to examine the impact of social factors on the prevalence of disease.

- ◆ In 2022, an estimated 2.0% of Asian adults in Michigan reported worrying about having enough money to pay their rent or mortgage within the past year, compared to 11.8% of all Michigan adults (95% CI: 11.6-12.1). An estimated 6.9% of Asian adults reported worrying about having enough money to purchase nutritious meals within the past year, significantly lower than the 12.5% of all Michigan adults (95% CI: 11.4-13.6).

Asian, non-Hispanic Demographic Characteristics	Worried About Having Enough Money to Pay Rent/Mortgage <sup>a</sup>		Worried About Having Enough Money to Buy Nutritious Meals <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	2.0	(0.0-4.7)	6.9	(1.5-12.2)
<b>Age</b>				
18 - 44	2.1	(0.0-6.3)	10.4	(1.2-19.5)
45 - 64	1.6	(0.0-4.7)	2.4	(0.0-7.1)
65+	2.9	(0.0-8.7)	3.2	(0.0-8.0)
<b>Gender</b>				
Male	— <sup>c</sup>	— <sup>c</sup>	9.3	(0.0-18.7)
Female	3.7	(0.0-8.6)	4.8	(0.0-10.4)
<b>Education</b>				
High School graduate or less	1.9	(0.0-5.9)	18.9	(0.0-44.2)
Some college or more	2.1	(0.0-5.2)	4.6	(0.7-8.4)
<b>Household Income</b>				
< \$25,000	5.9	(0.0-17.8)	18.4	(0.0-50.7)
\$25,000 - \$49,000	10.9	(0.0-31.6)	15.1	(0.0-36.6)
\$50,000+	— <sup>c</sup>	— <sup>c</sup>	2.6	(0.0-6.3)

- ◆ The prevalence of adults who reported worrying about having enough money to pay rent was similar across age groups, while the prevalence of adults who reported not having enough money to purchase a nutritious meal was highest among those aged 18-44 and 65 years and older; however, there was no significant difference among age groups.

- ◆ While men had a higher prevalence of reporting being worried about having enough money to buy food, there was no significant difference between gender groups.

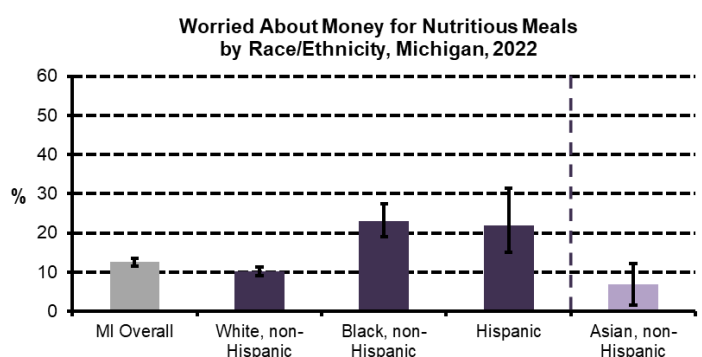
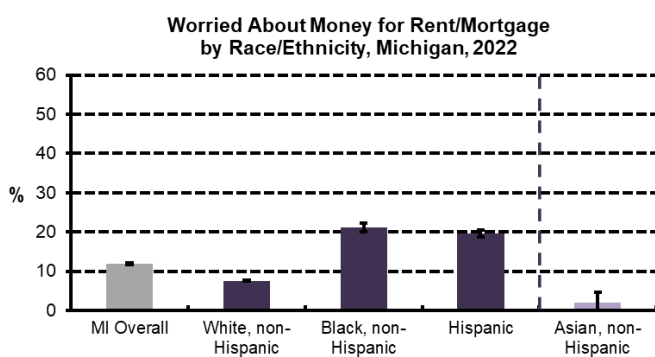
- ◆ For adults who reported worrying about having enough money to buy nutritious meals lower income groups had a higher prevalence, however, there was no significant difference among income groups.

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported always, usually, or sometimes being worried about having enough money to pay rent/mortgage in the past year. (N = 134)

<sup>b</sup>Among all Asian Pacific Islander adults, the proportion who reported always, usually, or sometimes being worried about having enough money to buy nutritious meals in the past year (N = 134)

<sup>c</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

- ◆ In 2022, Asian adults (2.0% and 6.9%, respectively) reported a significantly lower prevalence of worrying about having enough money to pay rent and worrying about having enough money to buy nutritious meals than white, non-Hispanics (7.6% and 10.1%, respectively), Black, non-Hispanics (21.2% and 23.1%, respectively), and Hispanics (19.6% and 22.0%, respectively), in Michigan.



# No Leisure Time Physical Activity

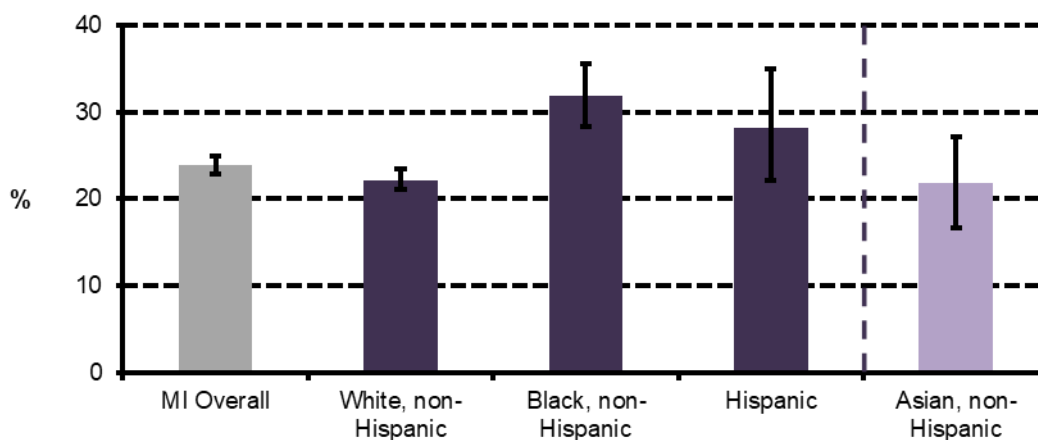
Regular physical activity among adults has been shown to reduce the risk of many diseases including cardiovascular disease, diabetes, colon and breast cancers, and osteoporosis. Keeping physically active also helps to control weight, maintain healthy bones, muscles, and joints, and relieve symptoms of depression.<sup>23</sup>

- ◆ In 2022, an estimated 21.9% of Asian adults in Michigan reported no leisure time physical activity within the past month, compared to 23.9% of all Michigan adults (95% CI: 22.8-25.0).
- ◆ The prevalence of no leisure time physical activity was highest among those 45-64 years old and among those in the \$25,000-\$49,999 group.
- ◆ The prevalence of no leisure time physical activity was similar by gender among Asian adults.
- ◆ In 2022, the prevalence of no leisure time physical activity among Asian adults (21.9%) was significantly lower than that of Black, non-Hispanic (31.8%) adults in Michigan.

Asian, non-Hispanic Demographic Characteristics	No Leisure Time Physical Activity <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>		
<b>Age</b>		
18 - 44	22.1	(15.3-28.8)
45 - 64	25.5	(14.7-36.3)
65+	12.1	(1.8-22.3)
<b>Gender</b>		
Male	21.0	(14.0-28.0)
Female	22.8	(15.0-30.7)
<b>Education</b>		
High School graduate or less	32.5	(17.2-47.8)
Some college or more	19.1	(14.0-24.1)
<b>Household Income</b>		
< \$25,000	23.4	(8.6-38.2)
\$25,000 - \$49,000	33.1	(16.8-49.4)
\$50,000+	21.0	(12.9-29.0)

<sup>a</sup>Among all Asian Pacific Islanders adults, the proportion who reported not participating in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise during the past month. (N = 381)

No Leisure Time Physical Activity by Race/Ethnicity, Michigan, 2022



# Cigarette Smoking

Cigarette smoking is the leading cause of preventable death in the United States, accounting for more than 480,000 deaths each year.<sup>24</sup>

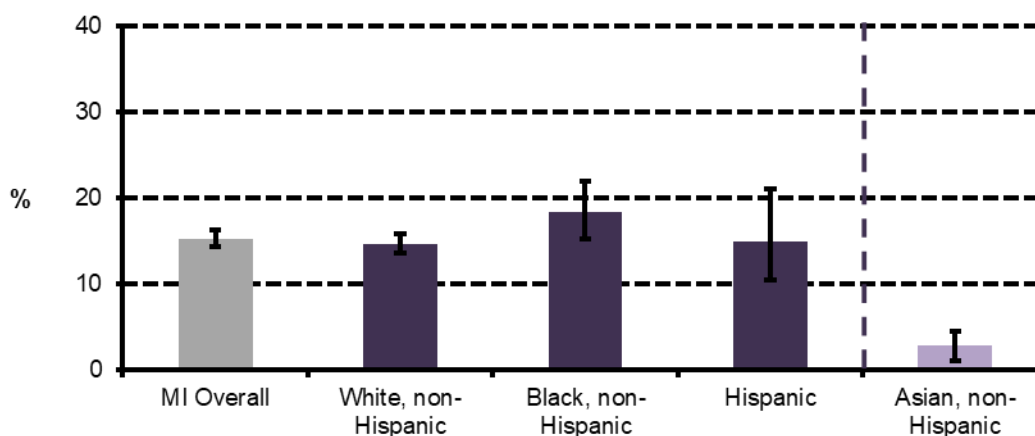
- ◆ In 2022, an estimated 2.8% of Asian adults in Michigan reported that they currently smoke cigarettes on a regular basis, lower than the 15.2% of all Michigan adults (95% CI: 14.3-16.2).
- ◆ Although Asian males reported a higher prevalence of current smoking than Asian females, the difference was not significant.
- ◆ Current smoking generally decreased with increasing education and household income levels.
- ◆ In 2022, the prevalence of Asian adults (2.8%) who reported that they currently smoke cigarettes was significantly lower than that of white, non-Hispanics (14.7%), Black, non-Hispanics (18.3%), and Hispanics (15.0%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Current Smoking <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	2.8	(1.1-4.5)
<b>Age</b>		
18 - 44	2.5	(0.4-4.6)
45 - 64	4.8	(0.7-8.8)
65+	--- <sup>b</sup>	--- <sup>b</sup>
<b>Gender</b>		
Male	4.1	(1.2-6.9)
Female	1.5	(0.0-3.2)
<b>Education</b>		
High School graduate or less	7.2	(1.2-13.1)
Some college or more	1.6	(0.2-3.0)
<b>Household Income</b>		
< \$25,000	8.3	(0.0-18.0)
\$25,000 - \$49,000	3.3	(0.0-7.9)
\$50,000+	2.2	(0.0-4.5)

<sup>a</sup>Among all Asian Pacific Islanders adults, the proportion who reported 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. (N = 340)

<sup>b</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

**Current Cigarette Smoking by Race/Ethnicity, Michigan, 2022**



# Alcohol Consumption

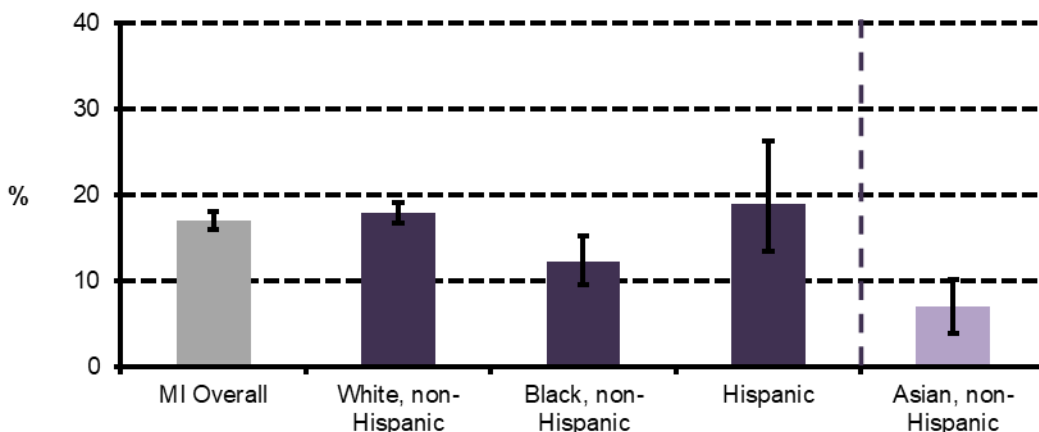
Alcohol abuse has been associated with serious health problems, such as cirrhosis of the liver, high blood pressure, stroke and some types of cancer.<sup>25</sup> It can also increase the risk for motor vehicle accidents, injuries, violence and suicide.<sup>25</sup> Binge drinking is defined as consuming 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, while 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.

- ◆ In 2022, an estimated 7.0% of Asian adults in Michigan reported binge drinking on at least one occasion within the past month. This is compared to 17.0% (95% CI: 16.0-18.1) of all Michigan adults who reported binge drinking.
- ◆ Although Asian males reported a higher prevalence of binge drinking than Asian females, the difference was not significant.
- ◆ Reported binge drinking decreased with increasing education level, but the difference was not significant.
- ◆ In 2022, the prevalence of Asian adults (7.0%) who reported that they currently engage in binge drinking was significantly lower than that of white, non-Hispanics (17.9%), Black, non-Hispanics (12.2%), and Hispanics (19.0%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Binge Drinking <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>		
<b>Age</b>		
18 - 44	11.2	(6.0-16.4)
45 - 64	1.4	(0.0-3.1)
65+	0.9	(0.0-2.8)
<b>Gender</b>		
Male	9.5	(4.2-14.8)
Female	4.5	(1.3-7.6)
<b>Education</b>		
High School graduate or less	9.8	(0.0-19.7)
Some college or more	6.3	(3.3-9.2)
<b>Household Income</b>		
< \$25,000	5.7	(0.0-13.5)
\$25,000 - \$49,000	6.0	(0.0-12.3)
\$50,000+	7.6	(2.4-12.9)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported consuming five or more drinks per occasion (for males) or four or more drinks per occasion (for women) at least once in the previous month. (N = 116)

**Binge Drinking by Race/Ethnicity, Michigan, 2022**



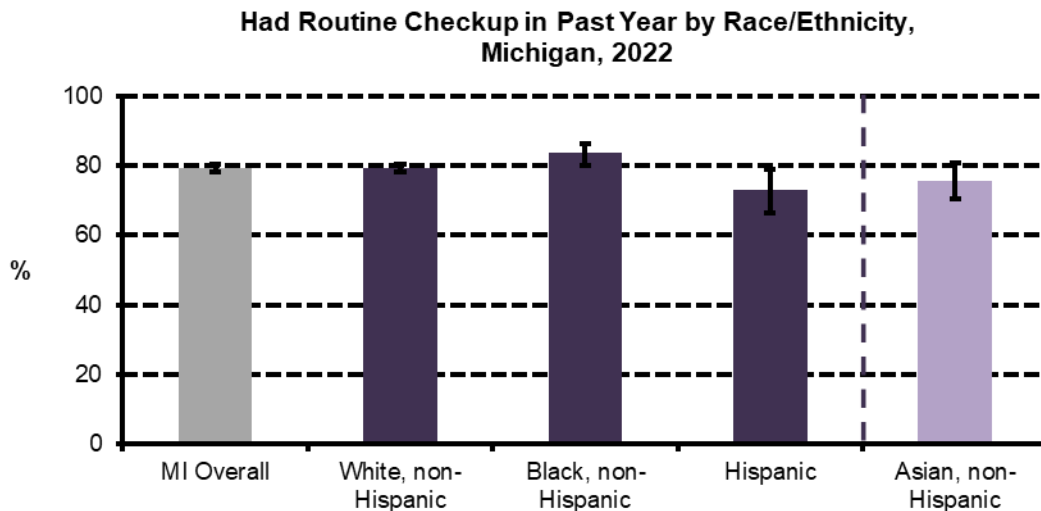
# Routine Checkup in Past Year

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.<sup>26</sup>

- ◆ In 2022, an estimated 75.7% of Asian adults in Michigan reported having a routine medical checkup within the past year, compared to 79.2% of all Michigan adults (95% CI: 78.1-80.3).
- ◆ The prevalence of having a routine checkup within the past year generally increased with age.
- ◆ The prevalence of having a routine checkup was similar by gender among Asian adults and across income groups.
- ◆ In 2022, the prevalence of Asian adults (75.7%) who reported having a routine medical checkup in the past year did not significantly differ from that of other racial/ethnic groups in Michigan.

Asian, non-Hispanic Demographic Characteristics	Had a Routine Checkup Within the Past Year <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	75.7	(70.5-80.9)
<b>Age</b>		
18 - 44	69.4	(62.1-76.6)
45 - 64	81.6	(72.5-90.6)
65+	94.6	(87.2-100.0)
<b>Gender</b>		
Male	75.6	(69.1-82.0)
Female	75.8	(67.7-84.0)
<b>Education</b>		
High School graduate or less	83.5	(70.4-96.6)
Some college or more	73.6	(68.0-79.2)
<b>Household Income</b>		
< \$25,000	81.5	(68.1-94.9)
\$25,000 - \$49,000	85.6	(75.5-95.6)
\$50,000+	76.3	(68.6-84.0)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported that they had a routine medical checkup within the past year. (N = 374)



# Breast Cancer Screening

Breast cancer is the second leading cause of cancer deaths among women in the United States.<sup>27</sup> In 2021, there were 1,403 deaths among Michigan women due to breast cancer, second only to those caused by lung cancer.<sup>28</sup> Early detection of breast cancer can occur using screening tools such as mammography and clinical breast exams.

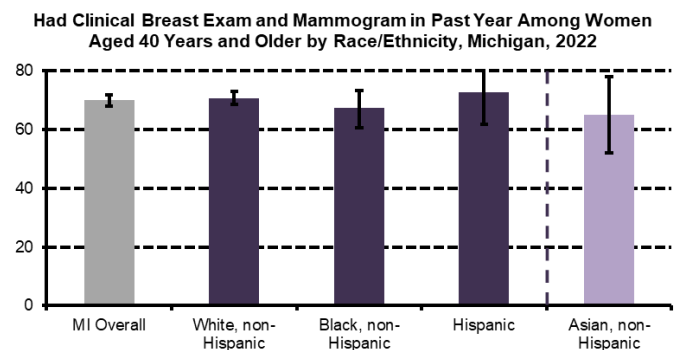
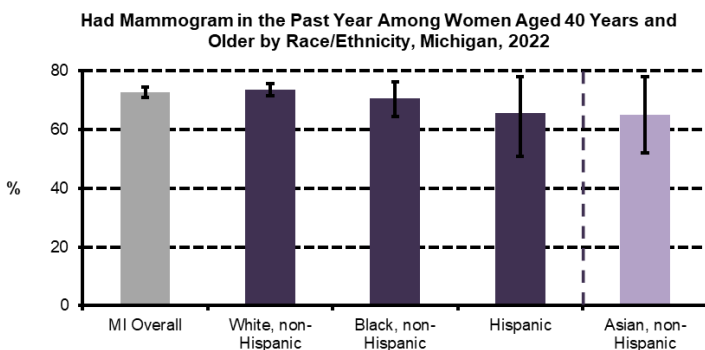
- ◆ In 2022, an estimated 64.9% of Asian women aged 40 years and older in Michigan reported having a mammogram within the past year, while 68.3% reported having both a clinical breast exam and a mammogram within the past year.
- ◆ Mammogram screenings increased with age.
- ◆ In 2022, although Asian women aged 40 years and older (68.3%) reported a lower prevalence of having both a clinical breast exam and a mammogram within the past year compared to all other racial/ethnic groups in Michigan, the differences were not significant.

Asian, non-Hispanic Demographic Characteristics	Had Mammogram in the Past Year Among Women Aged 40 Years and Older <sup>a</sup>		Had Clinical Breast Exam and Mammogram in Past Year Among Women Aged 40 Years and Older <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	64.9	(52.0-77.9)	68.3	(54.8-81.9)
<b>Age</b>				
40 - 59	62.8	(45.9-79.7)	71.7	(52.0-91.4)
60+	70.9	(51.5-90.3)	67.9	(47.0-88.7)
<b>Education</b>				
High School graduate or less	35.1	(0.0-74.7)	42.2	(0.0-92.8)
Some college or more	69.1	(56.5-81.8)	72.2	(58.7-85.6)
<b>Household Income</b>				
< \$25,000	54.8	(18.4-91.1)	41.8	(0.0-88.5)
\$25,000 - \$49,000	65.8	(26.3-100.0)	74.3	(39.2-100.0)
\$50,000+	75.1	(56.4-93.9)	72.8	(51.8-93.8)

<sup>a</sup>Among women aged 40 years and older, the proportion who reported having a mammogram within the past year. (N = 73)

<sup>b</sup>Among women aged 40 years and older, the proportion who reported having a clinical breast exam and a mammogram within the past year. (N = 62)

<sup>c</sup>This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.



# Colorectal Cancer Screening

In 2022, colorectal cancer was the third leading cause of cancer-related deaths in Michigan with 1,836 deaths.<sup>28</sup> 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.

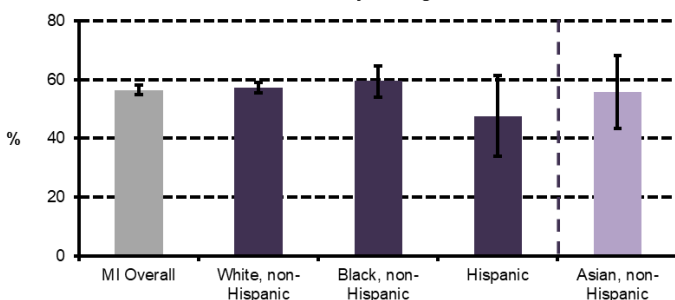
- ◆ In 2022, an estimated 55.5% of Asian adults in Michigan aged 50 years and older reported having a sigmoidoscopy or colonoscopy within the past five years, while 55.7% reported appropriate colorectal cancer screening, compared to 56.5% (95% CI: 54.9-58.1) and 75.1% (95% CI: 73.7-76.5) of all Michigan adults aged 50 years and older, respectively.
- ◆ The prevalence of having a sigmoidoscopy or colonoscopy in the past 5 years was higher among Asian females aged 50 years and older than among Asian males.
- ◆ The prevalence of appropriate colorectal cancer screening generally increased with increasing education and was similar among household income level groups.
- ◆ The prevalence of appropriate colorectal cancer screening among Asian adults (55.7%) was significantly lower than that of white, non-Hispanics (76.2%) and Black, non-Hispanics (76.5%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Had Sigmoidoscopy or Colonoscopy in Past 5 Years <sup>a</sup>		Had Appropriate Colorectal Cancer Screening <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Total</b>	55.5	(39.3-71.7)	55.7	(43.3-68.1)
<b>Gender</b>				
Male	43.9	(22.3-65.4)	53.2	(37.7-68.6)
Female	68.0	90.8726	58.6	(38.8-78.4)
<b>Education</b>				
High School graduate or less	46.0	(0.0-93.9)	42.3	(5.1-79.6)
Some college or more	56.5	(39.4-73.7)	57.7	(44.6-70.7)
<b>Household Income</b>				
< \$25,000	71.5	(37.0-100.0)	57.5	(16.9-98.1)
\$25,000 - \$49,000	35.6	(2.7-68.4)	50.5	(12.3-88.8)
\$50,000+	54.0	(31.1-77.0)	50.0	(32.6-67.5)

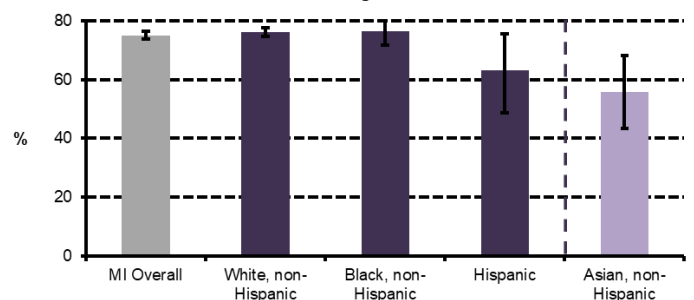
<sup>a</sup>Among Asian Pacific Islander adults aged 50 years and older, the proportion who reported having a sigmoidoscopy or colonoscopy within the past five years. (N = 71)

<sup>b</sup>Among Asian Pacific Islander adults aged 50 years and older, the proportion who reported having a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years. (N = 108)

Had Sigmoidoscopy or Colonoscopy in Past 5 Years by Race/Ethnicity, Michigan, 2022



Appropriate Colorectal Cancer Screening by Race/Ethnicity, Michigan, 2022



# Asthma

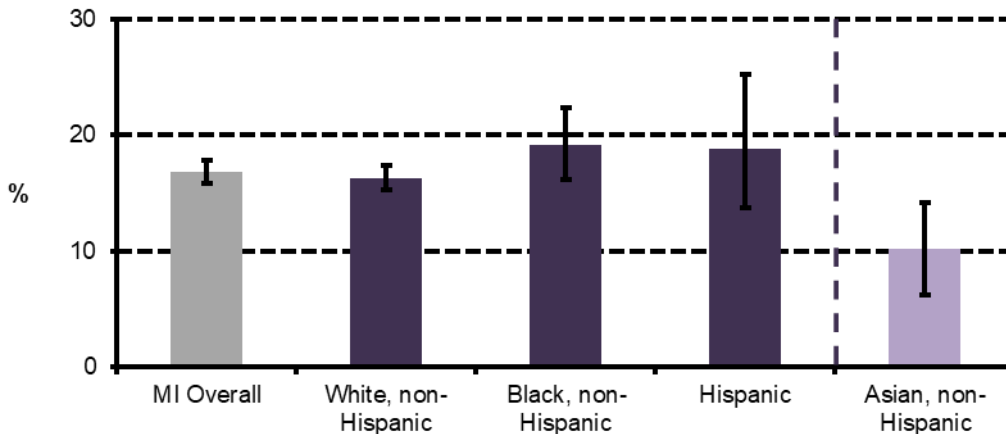
Asthma is a chronic inflammatory disorder of the lungs, characterized by wheezing, coughing, difficulty breathing, and chest tightness. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few of the potential risk factors that are associated with the development of asthma.<sup>29</sup>

- ◆ In 2022, an estimated 10.2% of Asian adults in Michigan reported that they had ever been diagnosed with asthma. This is compared to 16.8% (95% CI: 15.8-17.8) of all Michigan adults.
- ◆ The prevalence of lifetime asthma generally decreased with age.
- ◆ Although Asian females reported a higher prevalence of lifetime asthma than Asian males, the difference was not significant.
- ◆ In 2022, the prevalence of Asian adults (10.2%) who reported ever being diagnosed with asthma was significantly lower than that of white, non-Hispanics (16.3%) and Black, non-Hispanics (19.1%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Lifetime Asthma <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	10.2	(6.2-14.2)
<b>Age</b>		
18 - 44	13.8	(7.8-19.9)
45 - 64	5.7	(0.0-11.5)
65+	4.4	(0.0-11.0)
<b>Gender</b>		
Male	6.8	(2.6-11.0)
Female	13.7	(6.8-20.5)
<b>Education</b>		
High School graduate or less	12.8	(1.5-24.2)
Some college or more	9.5	(5.4-13.5)
<b>Household Income</b>		
< \$25,000	6.6	(0.0-15.7)
\$25,000 - \$49,000	5.9	(0.0-12.2)
\$50,000+	10.5	(4.0-17.0)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma. (N = 381)

Lifetime Asthma by Race/Ethnicity, Michigan, 2022



# Arthritis

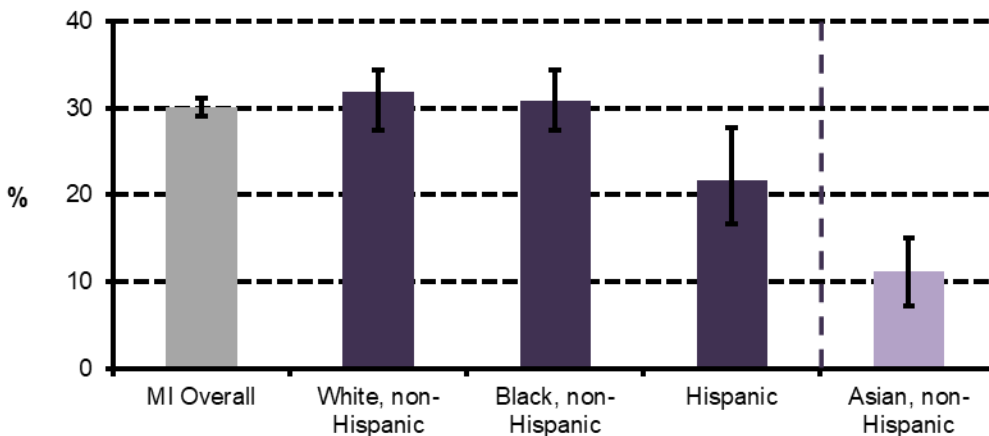
Arthritis and rheumatism are the leading causes of disability within the United States.<sup>30</sup>

- ◆ In 2022, an estimated 11.2% of Asian adults in Michigan reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, which is significantly less than the prevalence among all Michigan adults (30.1% [95% CI: 29.1-31.2]).
- ◆ The prevalence of arthritis among Asian adults generally increased with age.
- ◆ Although Asian females reported a higher prevalence of arthritis than Asian males, the difference was not significant.
- ◆ The prevalence of arthritis generally increased with increasing education and decreased with increasing household income levels.
- ◆ In 2022, Asian adults (11.2%) reported a significantly lower prevalence of arthritis than white, non-Hispanics (31.8%), Black, non-Hispanics (30.8%), and Hispanics (21.7%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Ever Told Arthritis <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	11.2	(7.2-15.1)
<b>Age</b>		
18 - 44	1.9	(0.3-3.6)
45 - 64	21.3	(11.0-31.7)
65+	35.5	(18.0-53.0)
<b>Gender</b>		
Male	9.7	(5.1-14.4)
Female	12.6	(6.2-19.0)
<b>Education</b>		
High School graduate or less	7.0	(0.7-13.2)
Some college or more	12.3	(7.7-17.0)
<b>Household Income</b>		
< \$25,000	18.0	(3.8-32.2)
\$25,000 - \$49,000	17.2	(5.0-29.4)
\$50,000+	11.0	(4.9-17.0)

<sup>a</sup>Among all Asian Pacific Islanders adults, the proportion who reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. (N = 377)

Ever Told Arthritis by Race/Ethnicity, Michigan, 2022



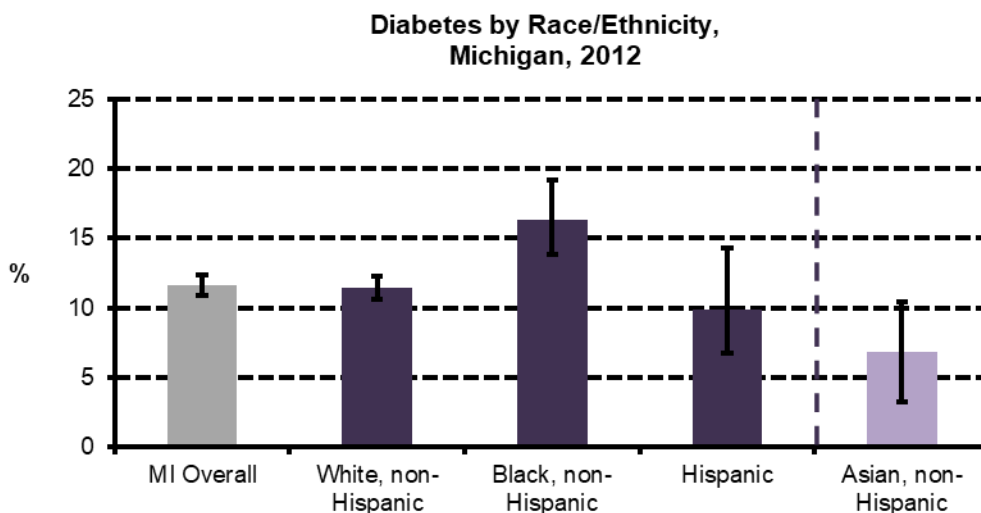
# Diabetes

In 2022, diabetes was the eighth leading cause of death in Michigan.<sup>31</sup> Obesity, poor diet, physical inactivity, and high blood pressure are just a few of the known risk factors that are associated with the development of diabetes.<sup>32</sup>

- ◆ In 2022, an estimated 6.8% of Asian adults in Michigan reported ever being told by a doctor that they had diabetes, compared to 11.6% (95% CI: 10.9-12.4) of all Michigan adults.
- ◆ The prevalence of diabetes was highest among Asian adults aged 45-64 years and was similar by gender among Asian adults.
- ◆ The prevalence of diabetes generally decreased with increasing education levels.
- ◆ In 2022, although the prevalence of Asian adults (6.8%) who reported ever being told they had diabetes was significantly lower than that of white, non-Hispanics (11.4%) and Black, non-Hispanics (16.3%) in Michigan.

Asian, non-Hispanic Demographic Characteristics	Ever Told Diabetes <sup>a</sup>	
	%	95% Confidence Interval
<b>Total</b>	6.8	(3.2-10.4)
<b>Age</b>		
18 - 44	0.8	(0.0-2.0)
45 - 64	18.1	(7.0-29.1)
65+	10.9	(3.3-18.6)
<b>Gender</b>		
Male	6.8	(2.3-11.4)
Female	6.8	(1.2-12.4)
<b>Education</b>		
High School graduate or less	11.4	(1.6-21.2)
Some college or more	5.6	(1.9-9.3)
<b>Household Income</b>		
< \$25,000	20.0	(0.0-41.8)
\$25,000 - \$49,000	17.6	(3.8-31.4)
\$50,000+	5.1	(0.3-9.9)

<sup>a</sup>Among all Asian Pacific Islander adults, the proportion who reported that they were ever told by a doctor that they had diabetes. Adults told they have prediabetes and women who had diabetes only during pregnancy were classified as not having been diagnosed. (N = 382)



# Depression

Depression is a common and treatable medical disorder that is more common among individuals with chronic conditions such as obesity, diabetes, and arthritis.<sup>33</sup>

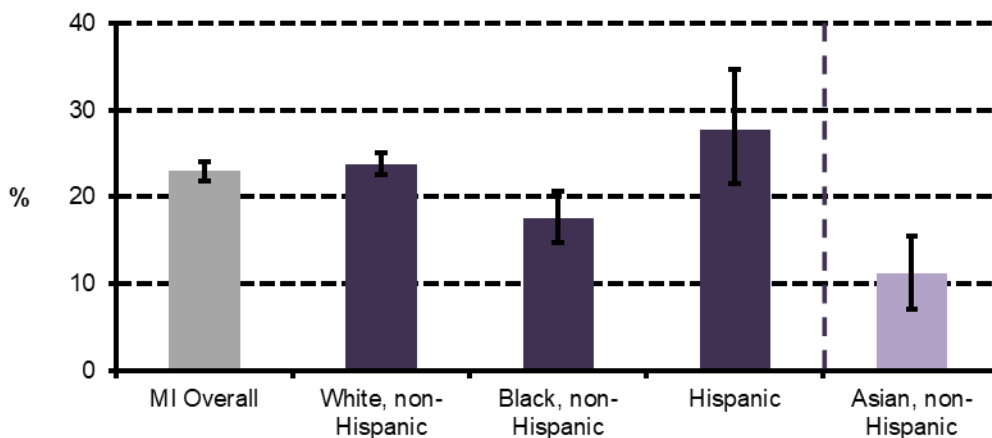
- ◆ In 2022, an estimated 11.3% of Asian adults in Michigan reported ever being told by a doctor that they had a depressive disorder, including depression, major depression, dysthymia, or minor depression. This was significantly lower than the prevalence among all adults (23.0% [95% CI: 21.9-24.1]) in Michigan.
- ◆ The prevalence of depression among Asian adults generally decreased with age.
- ◆ Asian females (17.5%) reported a significantly higher prevalence of depression than Asian males (5.1%). The prevalence of depression among Asian females was 3.4 times that of Asian males.
- ◆ Although the prevalence of depression was highest among those with an income of \$25,000-\$49,000, there was no significant difference among household income groups in Asian adults.
- ◆ In 2022, Asian adults (11.3%) reported a significantly lower prevalence of depression than white, non-Hispanics (23.8%), Black, non-Hispanics (17.5%), and Hispanics (27.7%) in Michigan. Thus, Asian adults reported depression 2.0 times lower than that of white, non-Hispanics, 2.1 times lower than that of Black, non-Hispanics, and 2.5 times lower than that of Hispanics.

## Ever Told Depression<sup>a</sup>

Asian, non-Hispanic Demographic Characteristics	%	95% Confidence Interval
<b>Total</b>	11.3	(7.0-15.5)
<b>Age</b>		
18 - 44	12.0	(6.2-17.9)
45 - 64	13.4	(4.8-22.1)
65+	4.0	(0.0-8.9)
<b>Gender</b>		
Male	5.1	(1.1-9.0)
Female	17.5	(10.1-25.0)
<b>Education</b>		
High School graduate or less	21.5	(7.0-36.0)
Some college or more	8.5	(5.1-11.8)
<b>Household Income</b>		
< \$25,000	9.1	(0.0-19.2)
\$25,000 - \$49,000	14.9	(4.0-25.8)
\$50,000+	8.2	(2.4-14.0)

<sup>a</sup>Among all Asian Pacific Islanders adults, the proportion who reported ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression. (N = 378)

Depression by Race/Ethnicity, Michigan, 2022



# Reactions to Race

“A person’s self-assigned race/ethnicity can often be distinct from their race assigned by society.

- ◆ In 2022, among self-assigned Asian adults in Michigan, an estimated 81.5% reported being classified by others in this country as Asian, non-Hispanic; 4.9% reported being classified as white; and 4.6% reported being classified as another race.
- ◆ There was no significant difference among gender groups for Asians in being classified as another race.
- ◆ The proportion of Asian adults who reported being socially assigned by others as White did not increase with increasing household income.
- ◆ Although the majority of Asian adults reported being treated the same as other races at work (86.1%), about 5.8% reported being treated worse than other races.
- ◆ Although the majority of Asians reported having health care experiences the same as other races (87.5%), about 4.9% reported treatment and experiences worse than those of other races, and 6.2% reported treatment and experiences better than those of other races.

## Reactions to Race

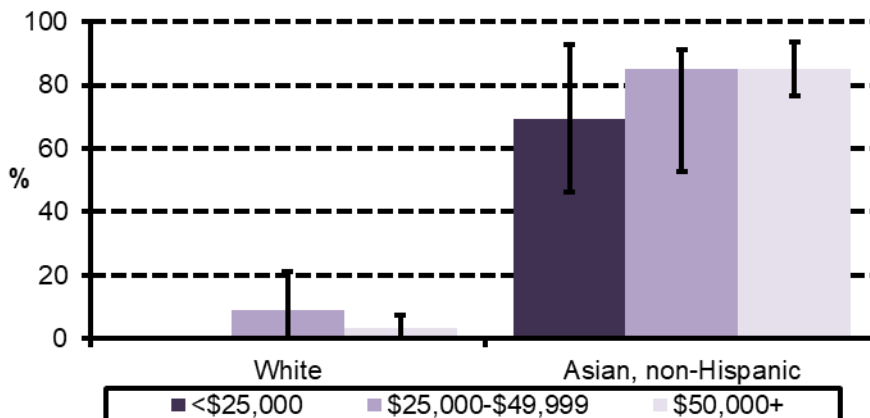
	%	95% Confidence Interval
<b>“Socially Assigned Race”<sup>a</sup></b>		
White	4.9	(1.0-8.8)
Asian, non-Hispanic	81.5	(75.0-87.9)
Other	4.6	(1.4-7.8)
<b>Treatment at Work Compared to Other Races<sup>b</sup></b>		
Worse than other races	5.8	(1.1-10.5)
The same as other races	86.1	(79.3-92.9)
Better than other races	2.9	(0.0-5.7)
<b>Health Care Experiences Compared to Other Races<sup>c</sup></b>		
Worse than other races	4.9	(0.7-9.0)
The same as other races	87.5	(82.1-92.9)
Better than other races	6.2	(2.8-9.7)
No health care in past 12 months	1.4	(0.0-3.1)

<sup>a</sup>Among all self-identified Asian Pacific Islander adults, their “socially assigned race” was measured by the response to the question, “How do other people usually classify you in this country?” (N = 230)

<sup>b</sup>Among all Asian Pacific Islander adults, how they reported they were treated at work compared to other races, in the past 12 months. (N = 140)

<sup>c</sup>Among all Asian Pacific Islander adults, how they reported their experiences, when seeking health care compared to other races, in past 12 months. (N = 217)

**“Socially Assigned Race” Among Self-Identified Asian non-Hispanic Adults by Income, Michigan, 2022**



# Reactions to Race, continued

How often a person thinks about their race can help explain the importance race plays in their daily interactions.<sup>35</sup> For example, a person who thinks frequently about their race would be expected to make choices more often based on their race, which could influence healthy behaviors.

- ◆ Approximately 56.5% of Asian adults reported thinking regularly about their race (at least monthly or more frequently), while 28.2% reported never thinking about their race.
- ◆ A similar proportion of Asian females and males reported never thinking about their race (28.1% and 28.2%, respectively) and thinking about their race once an hour to constantly (9.5% and 9.2%, respectively).
- ◆ An estimated 5.2% of Asian adults reported having physical symptoms as a result of how they were treated based on their race in the past 30 days, while 5.0% reported having emotional symptoms as a result of how they were treated based on race in the past 30 days.

## Reactions to Race

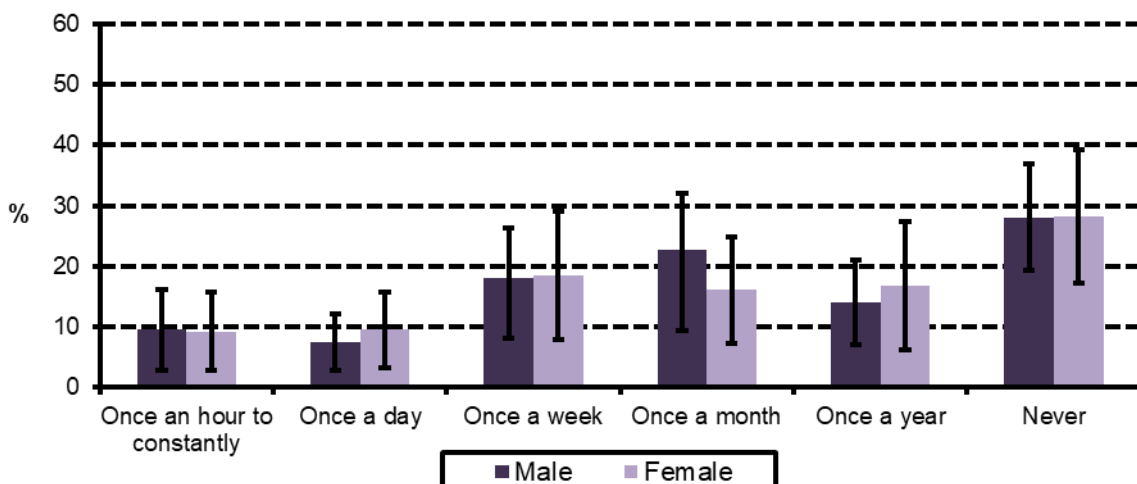
	%	95% Confidence Interval
<b>Race Consciousness<sup>a</sup></b>		
Once an hour to constantly	0.9	(0.0-2.2)
Once a day	8.5	(4.7-12.4)
Once a week	18.3	(11.6-24.9)
Once a month	19.4	(12.9-26.0)
Once a year	15.3	(9.0-21.7)
<b>Physical Symptoms Due to How Treated Based on Race<sup>b</sup></b>		
	5.2	(1.0-9.3)
<b>Emotional Symptoms Due to How Treated Based on Race<sup>c</sup></b>		
	5.0	(1.3-8.8)

<sup>a</sup>Among all Asian Pacific Islanders adults, race consciousness was measured by asking, "How often do you think about your race?" (N = 227)

<sup>b</sup>Among all Asian Pacific Islanders adults, the proportion who reported experiencing any physical symptoms, for example, a headache, an upset stomach, tensing of muscles, or a pounding heart, as a result of how they were treated based on their race within the past 30 days. (N = 188)

<sup>c</sup>Among all Asian Pacific Islander adults, the proportion who reported experiencing any emotional symptoms, for example angry, sad, or frustrated, as a result of how they were treated based on their race within the past 30 days. (N = 125)

Among Asian non-Hispanic Adults, How Often Think About Race by Gender, Michigan, 2022



# APIBRFS Methods

The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older, conducted to collect prevalence data related to risk factors and conditions associated with many of the leading causes of morbidity and mortality. The MiBRFS is a collaborative effort among the Population Health Surveillance Branch (PHSB) of the Centers for Disease Control and Prevention (CDC), the Michigan State University (MSU) Institute for Public Policy and Social Research (IPPSR) Office for Survey Research, and the Michigan Department of Health and Human Services (MDHHS). Michigan Behavioral Risk Factor Surveillance System (MiBRFSS) data contribute to the CDC Behavioral Risk Factor Surveillance System (BRFSS), which is conducted in every state, the District of Columbia, and several U.S. territories.

Although nearly 10,000 adults are interviewed each year in the MiBRFS, the sample contains relatively few respondents who are Asian. Without special oversampling, the typical MiBRFS sample includes too few Asian respondents to reliably estimate health outcomes and behaviors within this group. Due to the small number of Asian respondents, results for Asians are included in the “Other, non-Hispanic” or “Hispanic” group, depending on their reported ethnicity. Therefore, estimates for health outcomes and behaviors among Asian adults in Michigan are generally unavailable on a yearly basis and require combining data from multiple years.

The MI-TEaCH prioritizes improving the availability of health-related data for racial and ethnic minorities in Michigan. In keeping with this priority, MI-TEaCH arranged for a stand-alone survey among Asians and Pacific Islanders in Michigan. In 2022, the Asian and Pacific Islander Behavioral Risk Factor Survey (APIBRFS) was conducted in partnership with the Lifecourse Epidemiology and Genomics Division. The IPPSR Office for Survey Research assisted with interviewing all respondents. The APIBRFS included interviews from three different data sources: (1) interviews with Michigan Asian adults conducted via a stand-alone telephone survey overseen by the IPPSR Office for Survey Research (landline and cellphone), (2) online and mail-in survey responses from Michigan Asian adults collected through a separate stand-alone survey conducted by the IPPSR Office for Survey Research, and (3) Asian interviews included in the 2022 MiBRFS sample (landline and cellphone).

The sample of landline telephone numbers for the 2022 MiBRFS was selected using a list-assisted, random-digit-dial methodology with disproportionate stratification based on phone bank density and listing status. The sample of cellphone numbers for the 2022 MiBRFS was randomly selected from dedicated cellular telephone banks, sorted by area code and exchange.

For the 2022 APIBRFS, the survey was conducted in two phases. The first phase, conducted in 2022, was a stand-alone survey utilizing both landline and cellphone sampling. The sample of landline telephone numbers was randomly selected from directory-listed numbers belonging to households with surnames identified by the U.S. Census Bureau as Asian. Cell phone numbers were randomly selected from dedicated cellular telephone banks, sorted by area code and exchange, with only subscribed individuals with surnames identified as Asian being selected.

During the second phase of the APIBRFS, a methodology change was implemented due to low sample numbers from the first phase. The second phase was also a stand-alone survey, utilizing landline and cellphone sampling, along with online surveys. As in the first phase, the landline telephone numbers were randomly selected from directory-listed numbers belonging to households with Asian surnames, and cellphone numbers were selected similarly.

For the online survey, an address-based sampling strategy was employed. The percentage of Asian and Pacific Islander (API) households, based on U.S. Census data, was used to stratify census tracts for sampling. High-density strata were defined as census tracts where 10% or more of households had at least one adult who was Asian or Pacific Islander; medium-density strata were defined as census tracts with 5% to 9% of households containing one Asian or Pacific Islander adult; and low-density strata were composed of tracts with 3% to 4% of households containing one or more Asian adults. The address-based sample consisted of 75% from high-density strata, 15% from medium-density strata, and 10% from low-density strata. No strata below 3% density were included.

# APIBRFS Methods, continued

During the second phase, a large batch of mail was sent out to each of the census tracts selected via the address-based sampling. The initial batch of mail contained an invitation letter sent to households in each of the identified census tracts. If a respondent replied to the letter, they would receive a follow-up letter containing a screening questionnaire that included questions to verify the address, as well as questions regarding the age, sex, and race of each adult resident in the household. Based on screener responses, it was determined if anyone in the household was of Asian/Pacific Islander (API) descent. If so, one of the API members of the household was randomly selected using a method similar to the enumeration process used during phone screening. The screener was offered in English, Arabic, Spanish, Simplified Chinese, Korean, and Vietnamese. These languages were selected by MDHHS and its Asian/Pacific Islander board. Once an individual was selected, they would receive a third letter with instructions on how to access the online survey or a physical copy of the survey that could be returned to the Office for Survey Research (OSR).

As part of the second phase, incentives were offered to survey participants to encourage participation in the APIBRFS. For the telephone and cellphone sample, e-gift cards valued at \$10 were offered. For the web survey, stepwise incentives were provided: participants were offered a \$10 e-gift card for completing the core questionnaire, and an additional \$5 was offered for completing questions from optional modules.

A weighting methodology known as iterative proportional fitting, or raking, was used to account for the small sample size and to improve the accuracy of prevalence estimates based on MiBRFS and APIBRFS data. Estimates based on this weighting methodology were adjusted for the probabilities of selection, as well as a raking adjustment factor. This adjustment accounted for the distribution of the Michigan adult population by telephone source (landline or cellphone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status. For the online survey, estimates based on iterative proportional fitting were also used, following a methodology similar to the weighting of the landline and cellphone surveys.

For comparison purposes, statewide prevalence estimates, as well as estimates for White non-Hispanic and Black non-Hispanic populations, were used from the 2022 MiBRFS. The questionnaire for the 2022 APIBRFS stand-alone survey included additional questions that were not asked in the 2022 MiBRFS.

Some estimates by demographic subgroups for the 2022 APIBRFS indicators were not reported due to low reliability and precision. Estimates with a denominator of fewer than 50 respondents and/or a relative standard error greater than 50% were suppressed. When the prevalence estimate for the entire Asian population had a relative standard error greater than 30%, the indicator table with a breakdown by demographic subgroups was not included. Certain questions asked on the 2022 MiBRFS were not included in the 2022 APIBRFS stand-alone survey and thus were not included in this report, such as e-cigarette use, secondhand smoke exposure, cervical cancer screening, oral health, immunizations among adults 65 years and older, and HIV testing.

Prevalence estimates and asymmetric 95% confidence intervals (95% CIs) were calculated using SAS (version 9.4), a statistical computing program. Comparisons between estimates with non-overlapping 95% confidence intervals were considered significantly different. Due to the wide confidence intervals for many prevalence estimates, non-significant differences and trends were still noted for general comparison purposes. These differences were stated as non-significant in the text. When prevalence estimates had low reliability and precision (defined as a relative standard error > 30% and < 50%), a footnote was included to indicate caution when interpreting the results. Unless otherwise specified, respondents who indicated "don't know" or refused to answer were not included in the calculation of estimates.

## Sample Results for the 2022 APIBRFS

The total sample size for the 2022 APIBRFS was 383, consisting of 145 respondents from the stand-alone survey of Asian adults and 242 Asian interviews from the 2022 MiBRFS. The sample included 59 landline interviews, 245 cellphone interviews, and 80 online surveys. The AAPOR response rates for the stand-alone survey portion of the 2022 APIBRFS were 22.3% for landline interviews, 13.4% for cellphone interviews, and 55.6% for web-based surveys. The AAPOR response rates for the 2022 MiBRFS were 47.2% for landline interviews and 50.7% for cellphone interviews. The overall weighted AAPOR response rate (landline and cellphone combined) for the 2022 MiBRFS was 49.8%, compared to the overall weighted U.S. median response rate of 45.1% in 2022. The Asian stand-alone survey were offered in English, Chinese, Korean, and Vietnamese.

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