

HEALTH RISK BEHAVIORS AMONG ARAB AND CHALDEANS ADULTS WITHIN THE STATE OF MICHIGAN



2016 ARAB-CHALDEAN BEHAVIORAL RISK FACTOR SURVEY





2016 Arab-Chaldean Behavioral Risk Factor Survey

Health Risk Behaviors
Among Arab Adults
Within the State of Michigan

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Neumayer H, Weir S, Fussman C, McKane, P. 2017. Health Risk Behaviors Among Arab Adults Within the State of Michigan: 2016 Arab Behavioral Risk Factor Survey. Lansing, MI: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division and Health Disparities Reduction and Minority Health Section.

This project was a collaborative effort with help from Michigan State University, Wayne State University, Saginaw Valley State University, and the Arab Community Center for Economic and Social Services (ACCESS).

This publication was supported in part through Preventive Health Services Block Grant # 3B01DPOO9028-13W1 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

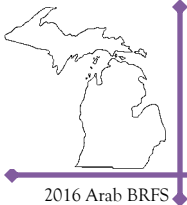




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Arab/Chaldeans in Michigan

2016 Arab BRFs

The term Arab is used to describe people who share a common language (Arabic) as well as geographic, historical, and cultural identity.¹ The Arab world consists of 22 nations including eight in Africa (e.g. Egypt, Libya, Sudan) and 14 in Asia (e.g. Iraq, Lebanon, Syria). Arab immigrants began settling in the United States in the 1880s and there are now at least 3.5 million nationwide (after adjusting for under-reporting).^{2,3} Since Arab Americans are usually classified as White in the United States Census, accurate estimates are difficult to obtain and are often adjusted to better reflect undercounting. Although Arab Americans live in every state, they are highly concentrated in specific regions of the United States. One-third of the Arab American population lives in Michigan, California, and New York and they primarily reside in large, metropolitan areas (ex. Detroit, Los Angeles, New York).²

Nationally, Arabs are mostly Christian and Chaldeans are primarily Catholic.^{2,4} Chaldeans are descendants of Semitic Babylonian and Assyrian populations and speak a dialect of Aramaic not Arabic. Chaldeans migrated to the United States primarily from northern Iraq, beginning in the early 1900s.⁴ Chaldeans are often included in national Arab American estimates, due to shared geography and culture.

Michigan is home to the second largest concentration of Arab Americans in North America, with an estimated population of over 500,000 after adjusting for under-reporting.² Over 80% of the population resides in the metropolitan Detroit area and nearly a third of the population in Dearborn are either Arab or Chaldean. While the majority of Arabs in Michigan originated from Lebanon, Iraq, Yemen, and Syria⁵, Chaldeans uniquely originated from Iraq. Unlike the national pattern, the majority of Arabs in Michigan are Muslim. Along with diversity in ancestry, there is generational diversity in the Arab community in the Detroit area and statewide, with many first, second, and third generation Americans. Automotive and other industries as well as a large concentration of Arab communities help attract Arabs to Southeast Michigan.

Previous studies and surveys among Arabs in Michigan found the population, on average, to be less healthy than the general population in Michigan.^{1,6-8} A statewide study of all deaths in Michigan from 1990-2007 found that Arab Americans had a higher mortality rate for all causes as well as due to chronic diseases such as cancer, diabetes, and cardiac disease compared to non-Arab and non-Hispanic Whites.⁸ In regional surveys, Arabs reported a higher proportion of cardiovascular disease and related risk factors as well as lower estimates of cancer screening and health care insurance than the general population in Michigan.^{1,7} In addition, the 2013 Michigan Arab Behavioral Risk Factor Survey (BRFS) oversample survey found Arabs to have a significantly higher prevalence of reporting fair or poor health than the overall Michigan population and also found lower prevalence of preventative screenings, such as cervical and colorectal screenings.⁹

Although the Arab/Chaldean population makes up an estimated 5% of the Michigan population, accurate and timely data at the population level is often not available. Data are necessary to help describe current health conditions and identify areas to focus prevention and intervention programs on to improve the health of Arabs/Chaldeans in Michigan. In 2013, the Michigan Department of Health and Human Services (MDHHS) conducted the first Behavioral Risk Factor Survey (BRFS) specific to the Arab/Chaldean population. Michigan is the only state that has conducted a statewide Arab/Chaldean BRFS and is also the only state Office of Minority Health to list Arab/Chaldeans as a minority group.

Michigan Behavioral Risk Factor Survey (MiBRFS)

Currently, the Michigan Behavioral Risk Factor Survey (MiBRFS) provides the state with data annually on various health behaviors, medical conditions, and preventive health care practices at the population level and by race/ethnicity. The MiBRFS is a collaborative effort between 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), and the Michigan Department of Health and Human Services (MDHHS). Due to the small number of Arab/Chaldean participants included in the MiBRFS annually, Arab/Chaldeans are included in the 'Other, non-Hispanic' or 'Hispanic' group, depending on their reported ethnicity. Estimates for Arabs/Chaldeans are not available on a yearly basis and are available only when multiple years of data are combined. Therefore, a stand-alone survey of Arab adults in Michigan was conducted to help identify the gaps in the data among this population. For the remainder of this report, the term 'Arab' will be used to describe adult respondents that are either Arab or Chaldean.

The 2016 Arab BRFS was coordinated by the MDHHS Health Disparities Reduction and Minority Health Section (HDRMHS) and Lifecourse Epidemiology and Genomics Division (LEGD). The project was a multidisciplinary effort with assistance from MSU IPPSR, MSU Office of University Outreach and Engagement, Wayne State University, Saginaw Valley State University, the Arab Community Center for Economic and Social Services (ACCESS), and the Michigan Public Health Institute (MPHI).

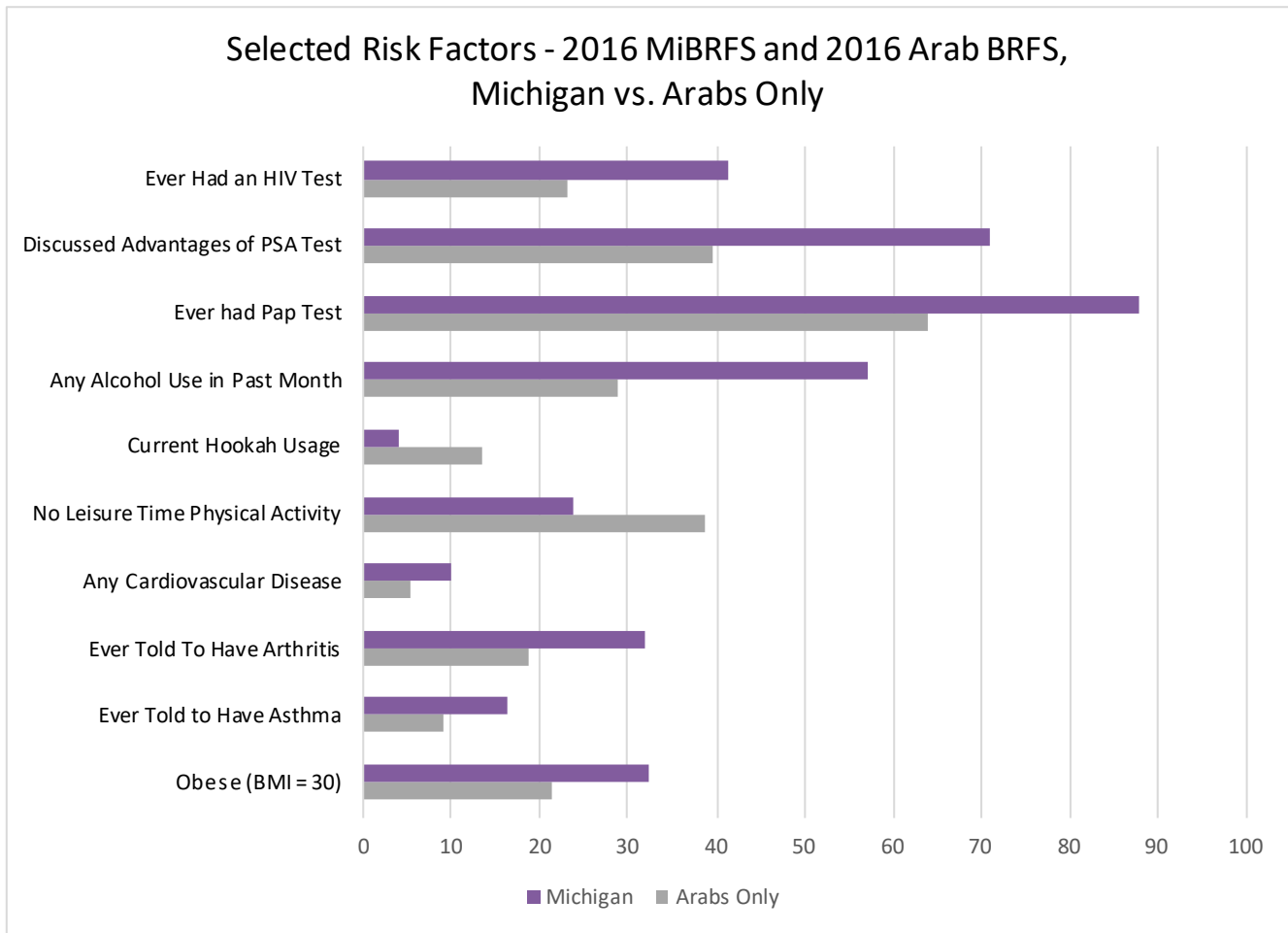


Summary

2016 Arab BRFs

This report presents estimates from the 2016 Arab BRFs, a statewide landline and cell phone bilingual survey of non-institutionalized Arab residents in Michigan aged 18 years and older. 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 focuses specifically on all Arab adults in Michigan. The first Arab BRFs report was conducted in 2013. A detailed description of the methodology of the survey is provided at the end of the report and the results are described in the subsequent pages. All of the results from the 2016 Arab BRFs presented within this report have been weighted as described in the methods section and can be interpreted as prevalence estimates for the Arab adult population in Michigan. If the results from an in-text comparison is statistically significant it will be explicitly stated in the report.

Differences in demographic characteristics can directly and indirectly influence the prevalence of certain health conditions and related risk factors and are important to consider.¹⁰ In 2016, the Arab adult population in Michigan was younger and reported a lower household income compared to all adults in Michigan. None of the estimates presented in this report have been adjusted for age.



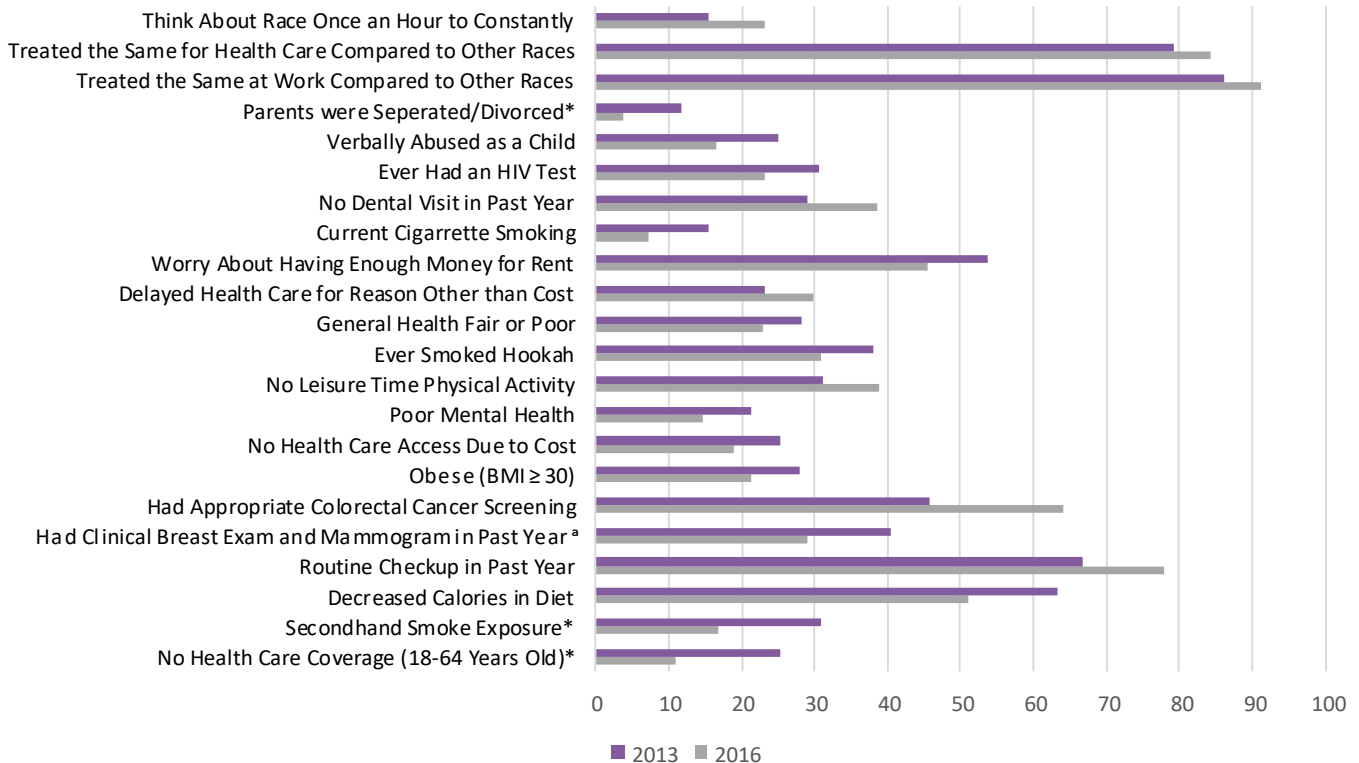
Note: The differences between Michigan and Arabs Only are all statistically significant for this figure.



Summary, continued

- ◇ In 2013 the first Arab BRFs was conducted. The 2013 BRFs had a total sample size of 536 (compared to a total sample size of 592 for the 2016 Arab BRFs).
- ◇ The demographic characteristics for the 2013 and 2016 Arab BRFs were similar, although the 2013 Arab BRFs consisted of a smaller prevalence of Arab origin (71.2% [95% CI: 62.7-78.4]) than the 2016 Arab BRFs (85.6% [95% CI: 80.9-89.3]) and a larger prevalence of Chaldean origin (24.0% [95% CI: 17.1-32.5]) than the 2016 Arab BRFs (11.7 [95% CI: 8.4-16.0]). The prevalence of being born in the United States was higher in the 2016 Arab BRFs (38.0% [95% CI: 23.8-54.7]) than the 2013 Arab BRFs (26.1% [95% CI: 18.7-35.2]).
- ◇ The table below presents the health and behavior indicators where there was at least a five percent change in the prevalence between the 2013 Arab BRFs and 2016 Arab BRFs.
- ◇ Note: There were changes in the weighting methodology between the 2013 Arab BRFs and the 2016 Arab BRFs, so it cannot be discerned whether changes are actual or due to methodology changes.

Selected Risk Factors - 2013 Arab BRFs and 2016 Arab BRFs



*The differences were statistically significant.

^a Among Women Aged 40+

◇ To view all 2013 Arab BRFs results visit:

http://www.michigan.gov/documents/mdch/Health_Risk_Behavior_Full_Arab_491350_7.pdf



Summary, continued

2016 Arab BRFS

◇ Nearly 1 in 7 Arab Adults report having been diagnosed with a depressive disorder.

In 2016, an estimated 15.6% of Arab adults reported having been told by a health care provider that they had a depressive disorder. Furthermore, an estimated 11.4% of Arab adults met the criteria for major depression based on criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.¹¹⁻¹² There are many stressors that Arab Americans face, including the political climate, discrimination and marginalization.¹³ A recent study based in southeast Michigan found that Arab Americans are among the least likely ethnic groups to seek care for depression from a mental health specialist¹¹. Religious factors as well as stigma surrounding mental health may be reasons for why Arab Americans may not seek mental health assistance.

◇ Nearly half of Arab adults report worrying about enough money to pay rent/mortgage.

In 2016, an estimated 45.5% of Arab adults reported worrying about having enough money to pay for their rent/mortgage within the past year, although this is a decrease from 2013 (53.7%) it is higher than the prevalence of all Michigan adults worried about having enough money for rent/mortgage in 2015 (31.2%). These findings are not unexpected when nearly half (47.9%) of Arab adults report a household income of less than \$25,000. Increased stress by way of financial difficulties can ultimately result in differences in health behaviors and health status.¹⁴

◇ Roughly 1 in 3 Arab adults report having ever smoked hookah in their lifetime.

In 2016, an estimated 30.8% of Arab adults in Michigan reported that they had ever smoked tobacco using a hookah in their lifetime, which has decreased since 2013 (38.1%). Current hookah usage among Arab adults in Michigan (13.5%[†]) is over three times the prevalence for Michigan overall from the 2016 MiBRFS (4.0%). Hookah usage originated in the Middle East but has rapidly increased in the United States. There is widespread misbelief that hookah smoking is a safe alternative to cigarette smoking.¹⁵ The ACCESS Substance Abuse program focuses on educating Arab American youth and parents in Southeast Michigan about the dangers of hookah usage with the goal to change community norms and decrease accessibility to minors.

◇ Levels of prostate cancer screening are low among Arab males in Michigan.

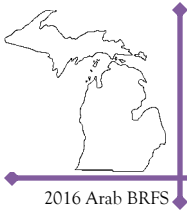
In 2016, Arab adults reported a lower percentage of cervical and prostate cancer screenings than all adults in Michigan. Approximately half (45.2%) of Arab men aged 50+ reported ever discussing the advantages of a prostate cancer screening test with a health professional compared to almost three quarters of Michigan men aged 50+ (71.1%).

◇ Levels of cervical cancer screening are low among Arab females in Michigan.

In 2016, 64.2% of Arab females reported having ever had a Pap test, compared to 88.1% of all females in Michigan. The percentage of Arab females reporting having ever had a Pap test decreased in 2016 (64.2%) from 2013 (67.9%), although the differences were not significant. Arab females not only experience barriers related to language and access, but may also face barriers related to discomfort, embarrassment, and fear of cancer being detected. ACCESS facilitates a breast and cervical cancer program to increase cancer education, prevention and screening services among Arab American women.

◇ Only 1 in 12 Arab adults meet physical activity guidelines.

In 2016, 8.3% of Arab adults met the U.S. Department of Health and Human Services physical activity guidelines, significantly lower than all adults in Michigan in 2015 (19.5%). The prevalence of meeting physical activity guidelines in the 2016 Arab BRFS was lower than the prevalence in the 2013 Arab BRFS (11.4%). Furthermore, over one-third (38.8%) of Arab adults report not partaking in leisure time physical activity, significantly lower than all adults in Michigan (23.9%). The prevalence of no leisure time physical activity increased in 2016 (38.8%) as compared to 2013 (31.2%).



Demographics

2016 Arab BRFS

Nationally, the Arab population is similar or slightly better in socioeconomic status to the general United States population.³ However, the Arab population in Michigan tends to be poorer. Differences in these demographic characteristics can directly and indirectly influence the prevalence of certain health conditions and related risk factors.¹⁰ For this report, the demographic profile of Arab participants involved in the 2016 Arab BRFS was compared to all participants involved in the 2016 MiBRFS.

- ◆ In 2016, the largest proportion of Arab adults were between the ages of 18 and 44 years (58.5%), significantly higher than the prevalence among all Michigan adults (43.7%).
- ◆ Among both populations, there was a relatively even distribution by gender.
- ◆ Distribution by education was similar for both Arab adults and all Michigan adults.
- ◆ Arab adults (47.9%) were significantly more likely to report having a household income of less than \$25,000 compared to all Michigan adults (27.8%). Similarly, Arab adults (31.5%) were significantly less likely to report having a household income of \$50,000 or more than all Michigan adults (46.0%).
- ◆ Although a higher proportion of Arab adults (54.4%) were married than all Michigan adults (50.6%), the difference was not significant.

| Demographic Characteristics | Michigan Overall ^a | | Arabs Only ^b | |
|-----------------------------|-------------------------------|-------------------------|-------------------------|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Age | | | | |
| 18 - 44 | 43.7 | (42.6-44.9) | 58.5 | (49.3-67.1) |
| 45 - 64 | 35.1 | (34.0-36.1) | 30.2 | (22.5-39.3) |
| 65+ | 21.2 | (20.4-21.9) | 11.3 | (7.7-16.2) |
| Gender | | | | |
| Male | 48.6 | (47.4-49.7) | 52.1 | (41.7-62.4) |
| Female | 51.4 | (50.3-52.6) | 47.9 | (37.6-58.3) |
| Education | | | | |
| HS graduate or less | 40.8 | (39.6-42.0) | 44.9 | (36.1-54.0) |
| Some college or more | 59.2 | (58.0-60.4) | 55.1 | (46.0-63.9) |
| Household Income | | | | |
| < \$25,000 | 27.8 | (26.6-29.0) | 47.9 | (36.7-59.3) |
| \$25,000 - \$49,999 | 26.2 | (25.2-27.4) | 20.5 | (14.2-28.7) |
| \$50,000+ | 46.0 | (44.7-47.2) | 31.5 | (20.9-44.5) |
| Marital Status | | | | |
| Married | 50.6 | (49.4-51.7) | 54.4 | (43.5-64.9) |
| Formerly married | 20.3 | (19.5-21.2) | 11.4 | (6.3-19.9) |
| Never married | 24.5 | (23.4-25.6) | 32.9 | (23.1-44.5) |
| Member of unmarried couple | 4.6 | (4.1-5.2) | 1.2 [†] | (0.4-3.4) |

^a Demographics of all participants in the 2016 MiBRFS. (N= 7,709,196)

^b Demographics of Arab adults in the 2016 Arab BRFS. (N = 588)

[†] This estimate should be used with caution due to its low reliability and precision.



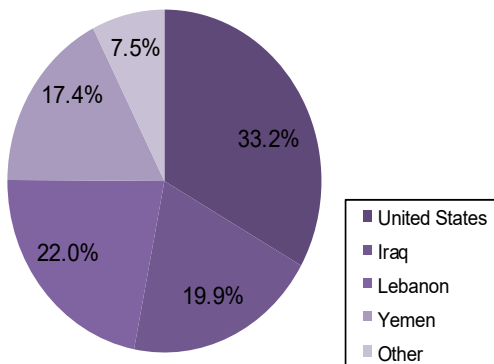
Cultural Characteristics

2016 Arab BRFS

Characteristics related to religion, country of origin, time in the United States and languages spoken are all important factors to consider when examining overall health status.

- ◆ Over half of Arab adults (65.3%) reported being Muslim, while 31.5% reported being Christian.
- ◆ The highest proportion of adults reported being of Arab origin (85.6%).
- ◆ The most common countries of origin were United States, Lebanon, and Iraq. The most common countries of origin for respondents' father and mother were Lebanon followed by Iraq (data not shown).
- ◆ The highest proportion of adults were born in the United States (38.0%) the remainder were split relatively evenly between decade groupings.
- ◆ The majority of Arab adults reported speaking Arabic in the home (82.9%), while only 12.6% reported speaking Chaldean in the home.
- ◆ Almost one-fifth (18.5%) of Arab adults reported not speaking English well or not at all.

Country of Origin, Arab Adults, Michigan, 2016



| Cultural Characteristics | % | 95% Confidence Interval |
|--|-------------------|-------------------------|
| Religious Affiliation^a | | |
| Muslim | 65.3 | (49.7-78.2) |
| Christian | 31.5 | (18.8-47.7) |
| Other | 1.3 [†] | (0.6-2.8) |
| None | 2.0 [†] | (1.0-3.7) |
| Arab/Chaldean Origin^b | | |
| Arab | 85.6 | (80.9-89.3) |
| Chaldean | 11.7 | (8.4-16.0) |
| Arab and Chaldean | 2.7 [†] | (1.4-5.1) |
| Country of Origin^b | | |
| United States | 33.2 | (20.7-48.7) |
| Lebanon | 22.0 | (17.2-27.7) |
| Iraq | 19.9 | (11.6-31.9) |
| Yemen | 17.4 | (10.1-28.3) |
| Other | 7.5 | (5.1-10.9) |
| When Came to US to Live^c | | |
| Born in the US | 38.0 | (23.8-54.7) |
| Within the last 10 years | 24.4 | (13.3-40.5) |
| 11-20 years ago | 20.0 | (15.0-26.2) |
| More than 20 years ago | 17.5 | (13.0-23.1) |
| Arabic Spoken in Home^d | | |
| Yes | 82.9 [†] | (67.1-92.1) |
| No | 17.1 [†] | (7.9-32.9) |
| Chaldean Spoken in Home^d | | |
| Yes | 12.6 | (9.0-17.2) |
| No | 87.4 | (82.8-91.0) |
| Fluency in English^e | | |
| Very well | 47.4 | (34.4-60.9) |
| Well | 34.1 | (22.8-47.6) |
| Not well or not at all | 18.5 | (13.8-24.2) |

^a Among all Arab adults, proportion who reported their religious affiliation. (N = 418).
^b Among all Arab adults, proportion who reported their Arab/Chaldean origin and country of origin. (N = 428)
^c Among all Arab adults, proportion who reported the time since they came to the US to live. (N = 353)
^d Among all Arab adults, proportion who reported speaking Arabic and/or Chaldean in the home. (N = 428)
^e Among all Arab adults, proportion who reported their fluency in English. (N = 422)
[†] This estimate should be used with caution due to its low reliability and precision.



General Health Status

2016 Arab BRFS

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.¹⁶

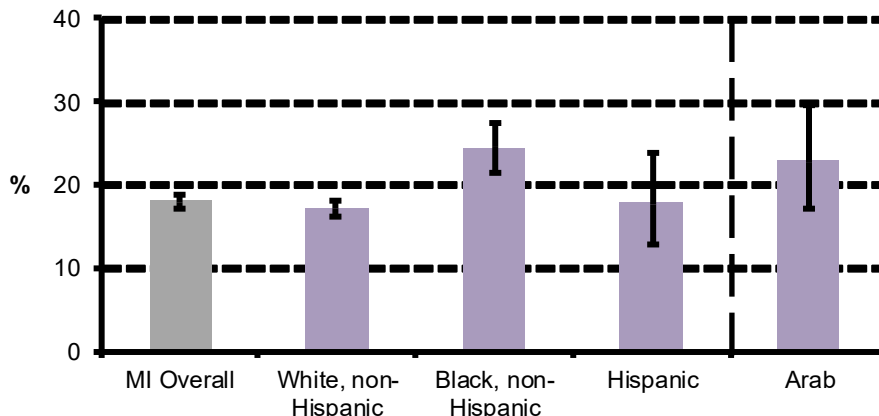
- ◆ In 2016, an estimated 22.8% of Arab adults reported that their general health was either fair or poor, significantly higher compared to 18.0% (95% CI: 17.2-18.9) of all Michigan adults.
- ◆ Arab adults aged 18-44 years (11.3%) were significantly less likely to report fair or poor health compared to Arab adults aged 45-64 years (36.6%) and aged 65 years and older (51.4%).
- ◆ Although the prevalence of fair or poor general health was higher among Arab males compared to Arab females, the difference was not significant.
- ◆ Arab adults with a high school education or less (34.4%) reported a significantly higher prevalence of fair or poor health than Arab adults with some college or more (12.8%).
- ◆ In 2016, Arab adults (22.8%) reported a higher prevalence of fair or poor general health than White, non-Hispanic adults (17.1%), the difference was not significant.

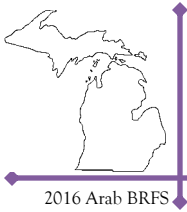
| Arab Demographic Characteristics | General Health, Fair or Poor ^a | |
|----------------------------------|---|-------------------------|
| | % | 95% Confidence Interval |
| Total | 22.8 | (17.2-29.5) |
| Age | | |
| 18 - 44 | 11.3 | (6.5-18.7) |
| 45 - 64 | 36.6 | (25.2-49.6) |
| 65+ | 51.4 | (33.2-69.2) |
| Gender | | |
| Male | 26.4 | (17.3-38.0) |
| Female | 18.6 | (12.9-26.0) |
| Education | | |
| HS graduate or less | 34.4 | (25.4-44.6) |
| Some college or more | 12.8 | (7.0-22.4) |
| Household Income | | |
| < \$25,000 | 30.4 | (21.2-41.6) |
| \$25,000 - \$49,999 [†] | 26.7 [†] | (11.3-51.1) |
| \$50,000+ [†] | 8.0 [†] | (3.5-17.1) |

^a Among all Arab adults, the proportion who reported that their health, in general, was either fair or poor. (N = 587)
[†] This estimate should be used with caution due to its low reliability and precision.

- ◆ The prevalence of fair or poor health among Arab adults did not significantly differ from that of Black, non-Hispanic and Hispanic adults in Michigan.

General Health, Fair or Poor, by Race/Ethnicity, Michigan, 2016





Quality of Life

2016 Arab BRFSS

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. Discrimination against Arabs may play a role in negative health outcomes including mental health.¹⁷⁻¹⁸

- ◆ In 2016, an estimated 15.4% of Arab adults reported poor physical health, slightly higher compared to all Michigan adults (14.1%). An estimated 14.8% of Arab adults reported poor mental health, slightly higher compared to all Michigan adults (13.4%).
- ◆ The prevalence of poor physical and mental health tended to increase with age. Arab adults aged 18-44 years (5.2%) had a significantly lower prevalence of reported poor physical health compared to Arab adults aged 45-64 years (31.5%) and those aged 65 years and older (29.4%).
- ◆ Males had a higher prevalence of poor mental health, while females had a higher prevalence of poor physical health.
- ◆ Arab adults with a high school education or less (18.8%) reported higher poor physical health than Arab adults with some college or more (12.5%).
- ◆ In 2016, Arab adults (14.8%) reported a higher prevalence of poor mental health than White, non-Hispanics (12.9%). The prevalence among Arab adults did not significantly differ from that of Black, non-Hispanic (15.2%) and was lower than Hispanic (17.0%) adults.
- ◆ In 2016, the prevalence of poor physical health among Arab adults did not significantly differ from that of any of the other racial/ethnic groups in Michigan (data not shown).

| Arab Demographic Characteristics | Poor Physical Health ^a | | Poor Mental Health ^b | |
|----------------------------------|-----------------------------------|-------------------------|---------------------------------|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 15.4 | (9.8-23.3) | 14.8 | (10.8-20.0) |
| Age | | | | |
| 18 - 44 | 5.2 [†] | (2.7-9.6) | 9.1 | (5.6-14.5) |
| 45 - 64 | 31.5 | (17.1-50.6) | 25.9 | (15.7-39.5) |
| 65+ | 29.4 | (18.6-43.2) | 16.1 | (8.6-27.9) |
| Gender | | | | |
| Male | 11.4 [†] | (6.2-20.2) | 16.4 | (10.1-25.5) |
| Female | 19.5 | (10.2-34.0) | 13.1 | (8.6-19.5) |
| Education | | | | |
| HS graduate or less | 18.8 | (12.1-28.0) | 22.1 | (14.6-31.9) |
| Some college or more | 12.5 [†] | (5.1-27.5) | 9.0 | (5.7-13.9) |
| Household Income | | | | |
| < \$25,000 | 20.1 | (13.4-28.9) | 21.2 | (14.0-30.8) |
| \$25,000 - \$49,999 | -- ^c | --- | 17.5 [†] | (8.7-32.3) |
| \$50,000+ | -- ^c | --- | 4.5 [†] | (8.0-10.0) |

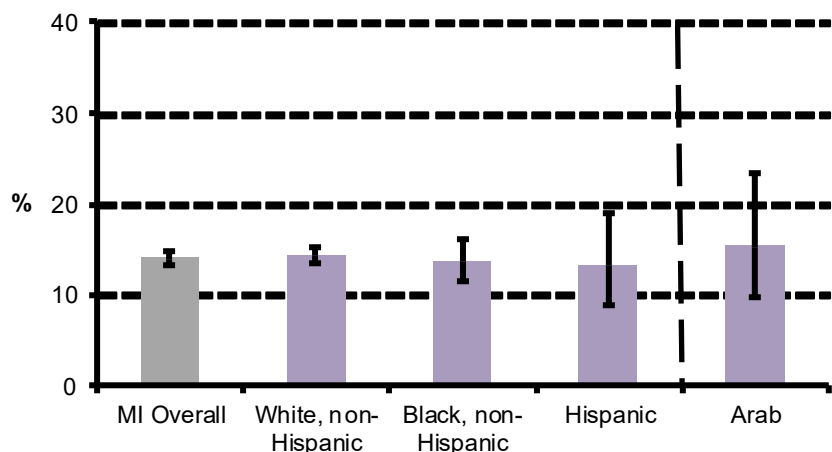
^a Among all Arab adults, the proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days. (N = 573)

^b Among all Arab 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 = 579)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Physical Health, Fair or Poor, by Race/Ethnicity, Michigan, 2016





Disability

2016 Arab BRFS

The Americans with Disabilities Act defines a disability as a physical or mental impairment that substantially limits one or more major life activities, having a history of such an impairment, or being perceived by others as having such an impairment.¹⁹

- ◆ In 2016, an estimated 26.7% of Arab adults 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, a wheelchair, a special bed, or a special telephone due to a health problem. This was comparable to 26.7% (95% CI: 25.7-27.8) of all Michigan adults.
- ◆ When looking at each component of the disability indicator, an estimated 23.6% (95% CI: 14.9-35.2) of Arab adults reported being limited in their activities, while 11.5% (95% CI: 6.4-19.8) reported that they required the use of special equipment due to a health problem.
- ◆ The prevalence of disability was highest in the 45-64 year old age group and was higher for females than males.
- ◆ Arab adults with a high school education or less (33.3%) had a higher prevalence of disability than Arab adults with some college or more (21.2%).
- ◆ In 2016, the prevalence of disability among Arab adults did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

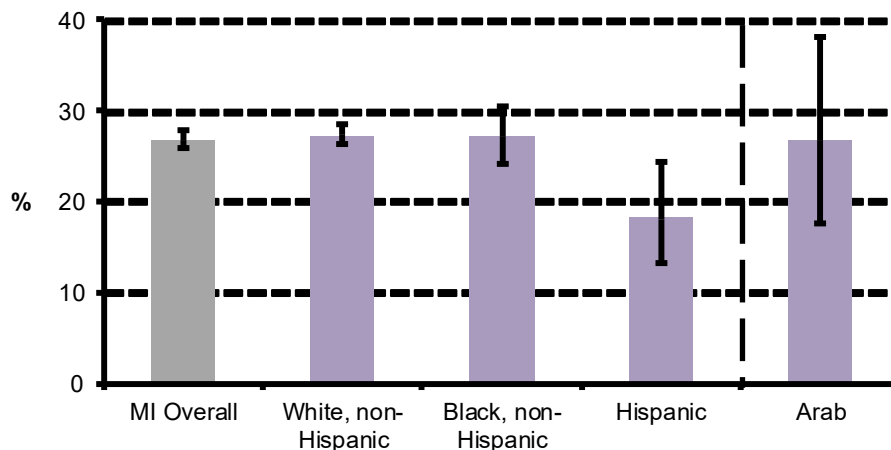
| Arab Demographic Characteristics | Total Disability ^a | |
|----------------------------------|-------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 26.7 | (17.7-38.0) |
| Age | | |
| 18 - 44 | 17.8 [†] | (7.5-36.7) |
| 45 - 64 | 40.9 | (25.7-58.1) |
| 65+ | 36.2 | (22.1-53.0) |
| Gender | | |
| Male | 21.3 | (13.1-32.5) |
| Female | 32.5 | (17.8-51.6) |
| Education | | |
| HS graduate or less | 33.3 | (23.9-44.4) |
| Some college or more | 21.2 [†] | (9.0-42.2) |
| Household Income | | |
| < \$25,000 | 27.7 | (19.1-38.4) |
| \$25,000 - \$49,999 | 19.2 [†] | (7.0-43.0) |
| \$50,000+ | -- ^b | --- |

^a Among all Arab 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 = 579)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Disability, by Race/Ethnicity, Michigan, 2016





Weight Status

2016 Arab BRFS

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.²⁰ The medical care costs associated with adult obesity in the United States is projected to be in the \$150 billion range.²¹ 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.

- ◆ In 2016, an estimated 21.4% of Arab adults were classified as obese, with an additional 38.1% (95% CI: 28.3-49.0) of Michigan Arab adults being classified as overweight. The prevalence of obesity among all adults in Michigan was 32.5% (95% CI: 31.4-33.6), while the prevalence of overweight was 35.0% (95% CI: 33.9-36.2).
- ◆ The prevalence of obesity among Arab adults was significantly higher among the 45-64 (35.9%) than the 18-44 (13.6%) year age group.
- ◆ The prevalence of obesity was higher for males (25.9%) than females (15.8%).
- ◆ The prevalence of obesity was significantly lower for Arab adults with some college or more (13.2%) than Arab adults that were high school graduates or less (32.3%).
- ◆ In 2016, the prevalence of obesity among Arab adults was significantly lower than the total Michigan population [32.5% (95% CI: 31.4-33.6)].

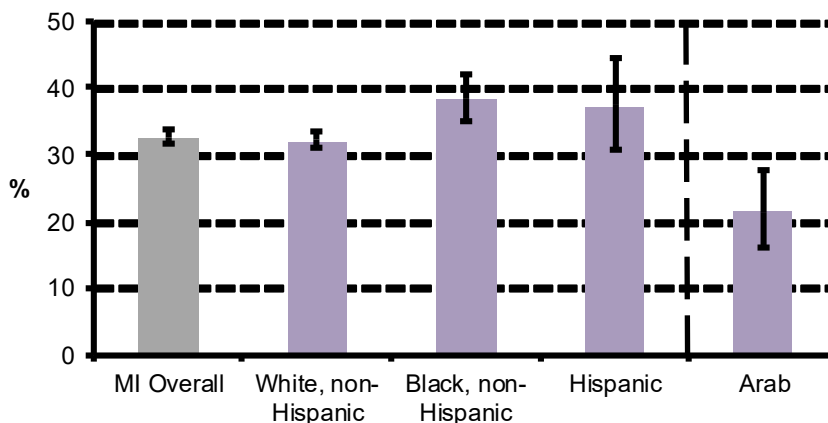
| Arab Demographic Characteristics | Obese ^a | |
|----------------------------------|--------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 21.4 | (16.2-27.8) |
| Age | | |
| 18 - 44 | 13.6 | (8.1-22.0) |
| 45 - 64 | 35.9 | (24.1-49.7) |
| 65+ | 28.5 | (16.3-44.9) |
| Gender | | |
| Male | 25.9 | (17.3-36.8) |
| Female | 15.8 | (10.6-22.9) |
| Education | | |
| HS graduate or less | 32.3 | (22.6-43.8) |
| Some college or more | 13.2 | (8.9-19.0) |
| Household Income | | |
| < \$25,000 | 17.1 | (10.9-25.8) |
| \$25,000 - \$49,999 | 30.3 [†] | (15.4-51.0) |
| \$50,000+ | 19.5 [†] | (10.3-33.9) |

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. Pregnant women were excluded.

^a Among all Arab adults, the proportion of respondents whose BMI was greater than or equal to 30.0. (N = 538)

[†] This estimate should be used with caution due to its low reliability and precision.

Obesity, by Race/Ethnicity, Michigan, 2016



All Arab prevalence estimates used data from the 2016 Arab BRFS while estimates for Michigan overall as well as White, Black, and Hispanic estimates used data from the 2016 Michigan BRFS.



No Health Care Coverage

2016 Arab BRFSS

Adults who do not have health care coverage are less likely to access health care services and are more likely to delay getting needed medical attention.²²

- ◆ In 2016, an estimated 11.0% of Arab adults aged 18-64 years reported having no health care coverage. This is higher than the prevalence for all of Michigan adults (9.9%).
- ◆ Arab females (6.2%) reported a lower prevalence of no health care coverage than Arab males (15.3%).
- ◆ The prevalence of no health care coverage was significantly lower among respondents with higher education levels.
- ◆ The prevalence of no health care coverage decreased with increasing age.
- ◆ In 2016, the prevalence of no health care coverage among Arab adults aged 18-64 years (11.0%) was higher than among White, non-Hispanic adults (8.2%) in Michigan. In other words, Arab adults reported no health care coverage 1.3 times that of White, non-Hispanic adults in Michigan. Prevalence was lower than Black, non-Hispanic (14.6%) and Hispanic (18.2%). The differences seen between the populations were not statistically significant.

No Health Care Coverage Among Adults 18-64 Years^a

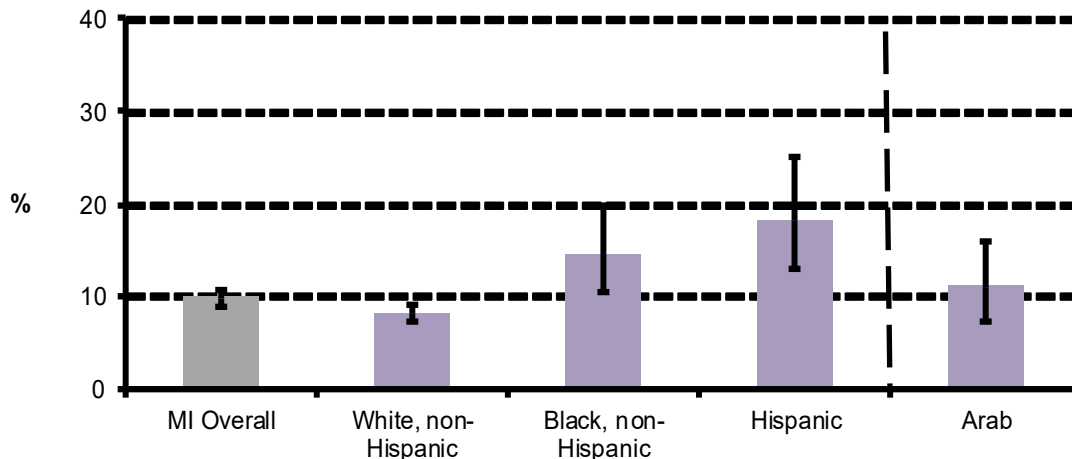
| Arab Demographic Characteristics | % | 95% Confidence Interval |
|----------------------------------|-------------------|-------------------------|
| Total | 11.0 | (7.4-16.0) |
| Age | | |
| 18 - 44 | 14.1 | (8.9-21.7) |
| 45 - 64 | 5.0 [†] | (2.4-10.1) |
| Gender | | |
| Male | 15.3 | (9.3-24.3) |
| Female | 6.2 [†] | (3.3-11.3) |
| Education | | |
| HS graduate or less | 20.0 | (12.4-30.6) |
| Some college or more | 4.8 | (2.7-8.4) |
| Household Income | | |
| < \$25,000 | 13.6 | (7.7-23.1) |
| \$25,000 - \$49,999 | 13.7 [†] | (5.6-30.0) |
| \$50,000+ | -- ^b | --- |

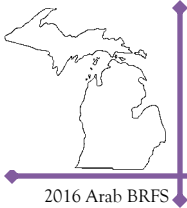
^a Among Arab adults aged 18-64 years, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare or Indian Health Services. (n=447)

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

[†] This estimate should be used with caution due to its low reliability and precision.

No Health Care Coverage Among Adults 18 to 64 Years by Race/Ethnicity, Michigan, 2016





Limited Health Care Coverage

2016 Arab BRFS

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.²³

- ◆ In 2016, an estimated 13.5% of Arab adults reported not having a personal health care provider, less than all Michigan adults (14.8%). An estimated 18.8% of Arab adults reported not seeing the doctor within the past 12 months due to cost, higher than among all Michigan adults (12.8%).
- ◆ The prevalence of both indicators generally decreased with age, with the exception of “No Access due to Cost” being highest in the 45-64 year age group. Arab adults aged 18-44 years (19.3%) reported a significantly higher prevalence of no personal health care provider than Arab adults aged 45-64 years (4.4%).
- ◆ Arab females reported a higher prevalence of no personal health care provider and Arab males reported a higher prevalence of no health care access due to cost.
- ◆ In 2016, the prevalence of Arab adults that reported no personal health care provider was slightly lower than Black, non-Hispanics (19.4%) and Hispanics (24.1%).
- ◆ In 2016, Arab adults (18.8%) reported a higher prevalence of not seeing the doctor within the past 12 months due to cost than White, non-Hispanics (11.8%), Black non-Hispanics (15.2%) and Hispanics (16.0%).

| Arab Demographic Characteristics | No Personal Health Care Provider ^a | | No Health Care Access Due to Cost ^b | |
|----------------------------------|---|-------------------------|--|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 13.5 | (7.8-22.4) | 18.8 | (11.5-29.3) |
| Age | | | | |
| 18 - 44 | 19.3 [†] | (10.0-34.0) | 16.6 [†] | (8.0-31.5) |
| 45 - 64 | 4.4 [†] | (2.3-8.4) | 26.8 [†] | (12.9-47.4) |
| 65+ | 7.8 [†] | (2.8-19.6) | 10.6 [†] | (5.2-20.6) |
| Gender | | | | |
| Male | 12.0 | (7.3-19.0) | 20.0 [†] | (10.2-35.3) |
| Female | 15.1 [†] | (6.0-33.4) | 17.6 [†] | (8.7-32.5) |
| Education | | | | |
| HS graduate or less | 13.9 | (8.6-21.8) | 16.6 | (10.0-26.2) |
| Some college or more | 12.8 [†] | (4.9-29.8) | 20.4 [†] | (9.4-38.6) |
| Household Income | | | | |
| < \$25,000 | 23.5 [†] | (10.9-43.6) | 27.4 [†] | (14.5-45.5) |
| \$25,000 - \$49,999 | 11.9 [†] | (4.7-27.4) | 9.0 [†] | (4.1-18.7) |
| \$50,000+ | 5.3 [†] | (2.4-11.4) | -- ^c | --- |

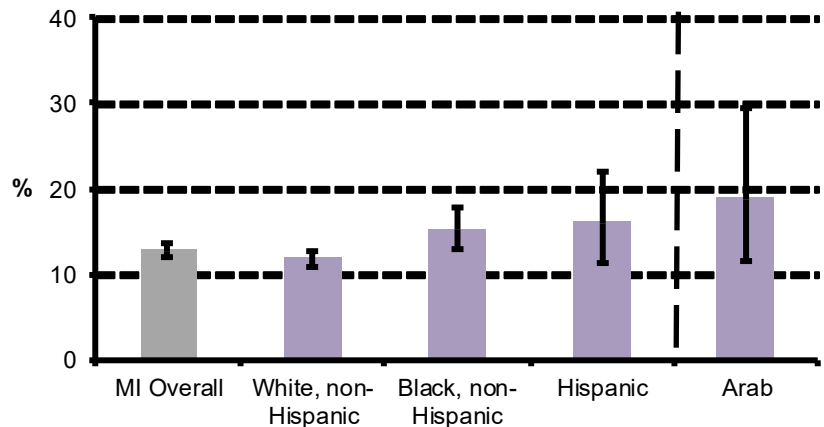
^a Among all Arab adults, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider. (N = 585)

^b Among all Arab 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= 585)

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

[†] This estimate should be used with caution due to its low reliability and precision.

No Health Care Access due to Cost, by Race/Ethnicity, Michigan, 2016





Delayed Health Care

2016 Arab BRFS

Factors other than cost can also contribute to delays in health care. For example, cultural differences and language difficulties can act as barriers to receiving appropriate and timely health care services.¹⁴

- ◆ In 2016, an estimated 29.2% of Arab adults reported delaying care for reasons other than cost.
- ◆ The prevalence of delaying care for reasons other than cost generally decreased with increasing age.
- ◆ Arab males reported a higher prevalence of delaying care for reasons other than cost compared to Arab females.
- ◆ The prevalence of delaying care for reasons other than cost generally decreased with increasing education and household income level.
- ◆ Adults with a household income of \$50,000 or more were significantly less likely to delay health care for reasons other than cost than those with a household income of less than \$25,000.

Delayed Health Care for Reason Other Than Cost^a

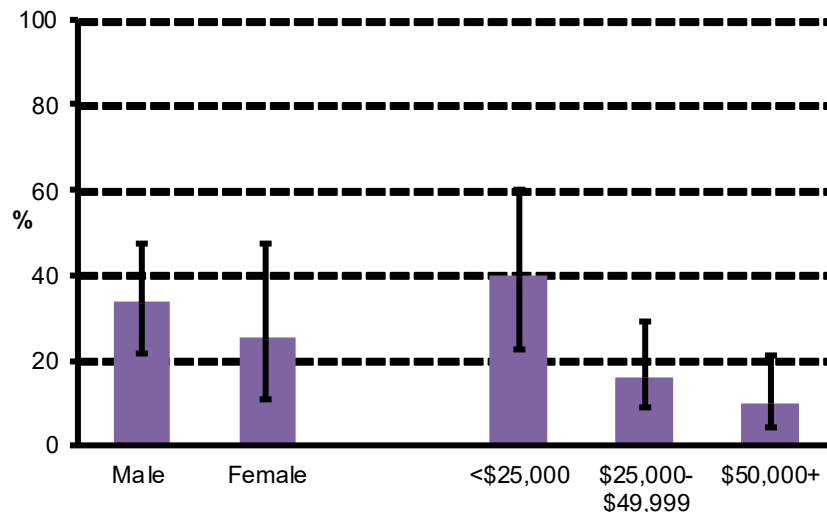
| Arab Demographic Characteristics | % | 95% Confidence Interval |
|----------------------------------|-------------------|-------------------------|
| Total | 29.2 | (18.5-42.7) |
| Age | | |
| 18 - 44 | 33.2 [†] | (15.9-56.6) |
| 45 - 64 | 24.7 | (16.5-35.2) |
| 65+ | 23.7 | (13.8-37.6) |
| Gender | | |
| Male | 32.1 [†] | (15.6-54.7) |
| Female | 27.0 | (15.0-43.7) |
| Education | | |
| HS graduate or less | 33.6 | (21.9-47.7) |
| Some college or more | 25.2 [†] | (11.0-47.9) |
| Household Income | | |
| < \$25,000 | 39.8 | (22.7-59.7) |
| \$25,000 - \$49,999 | 15.9 [†] | (8.9-29.0) |
| \$50,000+ | 9.8 [†] | (4.2-21.2) |

^a Among all Arab adults, the proportion who reported delaying health care in the past 12 months due to reasons other than cost. (N = 426)

[†] This estimate should be used with caution due to its low reliability and precision.

- ◆ These questions were not asked at the state level and therefore are not available for comparison.

Delayed Health Care for Reason Other than Cost, Arab Adults, Michigan, 2016





Health Care Location & Language

2016 Arab BRFS

Factors related to health care location, language used to communicate with doctor, and satisfaction with health care received can serve as additional context to better understand potential barriers and enablers to receiving health care.

- ◆ In 2016, the majority of Arab adults (78.0%) reported getting their health care most of the time at a private medical practice/doctor's office, followed by another health care clinic (9.3%), or an ACCESS clinic (4.1%).
- ◆ In 2016, an estimated 87.5%[†] (95% CI: 73.4-94.7) reported no or little difficulty understanding health provider in their preferred language, whereas 12.5%[†] (95% CI: 5.3-26.6) reported it was somewhat difficult, very difficult or that they could not get information in their preferred language.
- ◆ In 2016, estimated 81.6% (95% CI: 76.0-86.1) of Arab adults reported little or no difficulty getting written health information in their preferred language, whereas 9.6% (95% CI: 6.4-14.1) reported it was somewhat difficult, very difficult or that they could not get information in their preferred language. reported and 8.8% (6.1-12.5) reported not using written health information.
- ◆ An estimated 1.9%[†] (95% CI: 0.7-4.9) of Arab adults reported communicating with their doctor through a translator.
- ◆ The prevalence of speaking Arabic/Chaldean with the doctor increased with increasing age. Arab adults aged 65 years and older (60.7% [95% CI: 47.6-72.4]) were more likely to report speaking Arabic/Chaldean than those 18-44 years (28.7%[†] [95% CI: 14.0-49.8]).
- ◆ Arabs with some college or more (22.7%[†] [95% CI: 9.2-45.9]) were significantly less likely to speak Arabic with the doctor than Arabs with a high school graduate degree or less (62.2% [95%CI:49.2-73.7]).
- ◆ Arab adults with income levels of \$50,000 or more (7.0% [95%CI:2.8-16.5]) were significantly less likely to speak Arabic with providers than Arabs with incomes of less than \$25,000 (64.4% [95%CI:43.5-80.9]).

[†] This estimate should be used with caution due to its low reliability and precision.

| | % | 95% Confidence Interval |
|---|-----------------|-------------------------|
| Health Care Location^a | | |
| Private Practice/Doctor's Office | 78.0 | (65.8-86.7) |
| Hospital ER/Urgent Care | -- ^d | --- |
| ACCESS Clinic | 4.1 | (2.1-7.9) |
| Other Health Center | 9.3 | (6.5-13.0) |
| Language Used to Communicate with Doctor^b | | |
| Arabic/Chaldean | 41.7 | (30.8-53.4) |
| English or some other language | 58.3 | (46.6-69.2) |
| Satisfied with Health Care Received^c | | |
| Very Satisfied | 57.9 | (43.1-71.4) |
| Somewhat Satisfied | 40.9 | (27.5-55.9) |
| Not At All Satisfied | 1.2 | (0.6-2.4) |

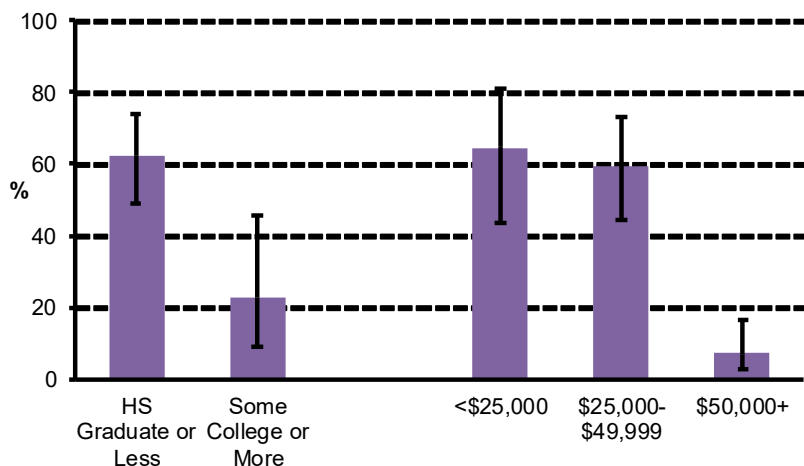
^a Among all Arab adults, the proportion who reported received their health care most of the time from: private medical practice/doctor's office, a hospital emergency room/urgent care clinic, an Arab Community Center for Economics and Social Services (ACCESS) clinic, or another community health center/health department clinic/hospital clinic/someplace else. (N = 420)

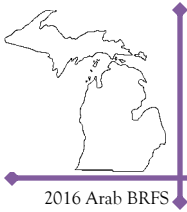
^b Among all Arab adults, the proportion who reported using Arabic/Chaldean or English/some other language as the language used to communicate with doctor. (N = 427)

^c Among all Arab adults, the proportion who reported their satisfaction, in general, with the health care received (N = 414)

^d This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

Spoke Arabic/Chaldean with Doctor among Arab Adults, Michigan, 2016





Social Context

2016 Arab BRFSS

Differences in health-related exposures and stresses throughout life often result in differences in underlying health status.¹⁴ As a result, it is important to look at the impact of social factors on the prevalence of health conditions and related risk factors.

- ◆ In 2016, an estimated 45.5% of Arab adults reported worrying about having enough money to pay their rent/ mortgage within the past year and an estimated 33.1% of Arab reported worrying about having enough money to purchase nutritious meals
- ◆ The prevalence of both of these indicators was significantly higher in the 45-64 year age group than the 65+ age group.
- ◆ The prevalence of both indicators were higher among Arab males than Arab females.
- ◆ The prevalence of both of these indicators decreased with increasing household income and increasing education levels.
- ◆ In 2016, Arab adults had a significantly higher prevalence of worrying about rent/mortgage than White, non-Hispanics.
- ◆ In 2016, Arab adults had a higher prevalence of worrying about having enough money to buy nutritious meals than Michigan overall (22.8%), White, non-Hispanics (20.4%), Black, non-Hispanics (33.7%) and Hispanics (35.3%), although the differences were not statistically significant (data not shown).

| Arab Demographic Characteristics | Worried About Having Enough Money to Pay Rent/Mortgage ^a | | Worried About Having Enough Money to Buy Nutritious Meals ^b | |
|----------------------------------|---|--------------------------|--|--------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 45.5 | (32.0-59.8) | 33.1 | (21.4-47.3) |
| Age | | | | |
| 18 - 44 | 42.7 | (21.3-67.2) | 31.1 | (13.4-56.8) [†] |
| 45 - 64 | 57.5 | (41.1-72.4) | 43.6 | (30.6-57.6) |
| 65+ | 22.5 | (13.8-34.5) | 13.1 | (7.2-22.5) |
| Gender | | | | |
| Male | 60.0 | (44.6-73.6) | 45.3 | (28.6-63.2) |
| Female | 36.2 | (21.0-54.8) | 25.4 | (13.2-43.2) [†] |
| Education | | | | |
| HS graduate or less | 57.3 | (45.3-68.4) | 41.9 | (29.5-55.5) |
| Some college or more | 33.9 | (15.7-58.6) [†] | 24.6 | (9.6-50.1) [†] |
| Household Income | | | | |
| < \$25,000 | 61.1 | (39.0-79.4) | 47.9 | (29.0-67.4) |
| \$25,000 - \$49,999 | 47.0 | (30.4-64.2) | 26.4 | (13.2-45.8) [†] |
| \$50,000+ | 9.3 | (3.9-20.8) [†] | -- ^c | --- |

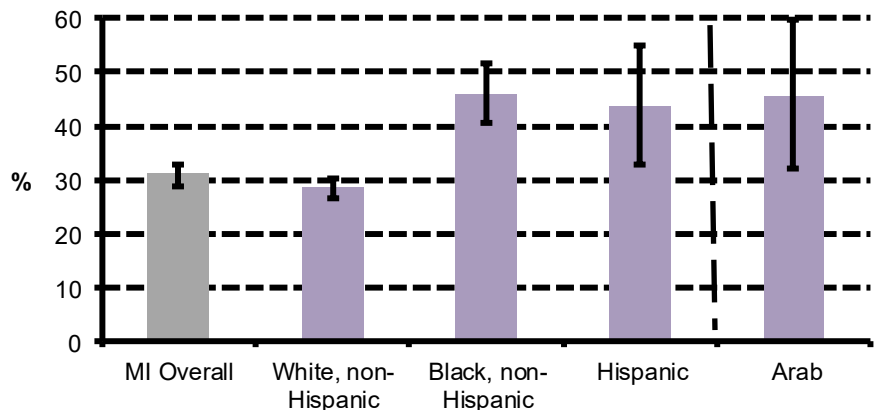
^a Among all Arab adults, the proportion who reported always, usually, or sometimes being worried about having enough money to pay rent/mortgage in the past year. (N = 362)

^b Among all Arab adults, the proportion who reported always, usually, or sometimes being worried about having enough money to buy nutritious meals in the past year. (N = 392)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Worried About Money to Pay Rent by Race/Ethnicity, Michigan 2015-2016





No Leisure Time Physical Activity

2016 Arab BRFs

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.²⁴

- ◆ In 2016, an estimated 38.8% of Arab adults reported no leisure time physical activity within the past month, compared to 23.9% of all Michigan adults (95% CI: 22.9-24.9).
- ◆ Arab adults aged 45-64 years had the highest prevalence of no leisure time physical activity.
- ◆ The prevalence of no leisure time physical activity was higher among Arab females (46.2%) compared to Arab males (32.0%).
- ◆ Arab adults with a high school education or less reported a higher prevalence of no leisure physical activity than Arab adults with some college or more.
- ◆ The prevalence of no leisure time physical activity generally decreased with increasing household income level.
- ◆ In 2016, Arab adults (38.8%) reported a significantly higher prevalence of no leisure time physical activity than White, non-Hispanics adults (22.9%) in Michigan.

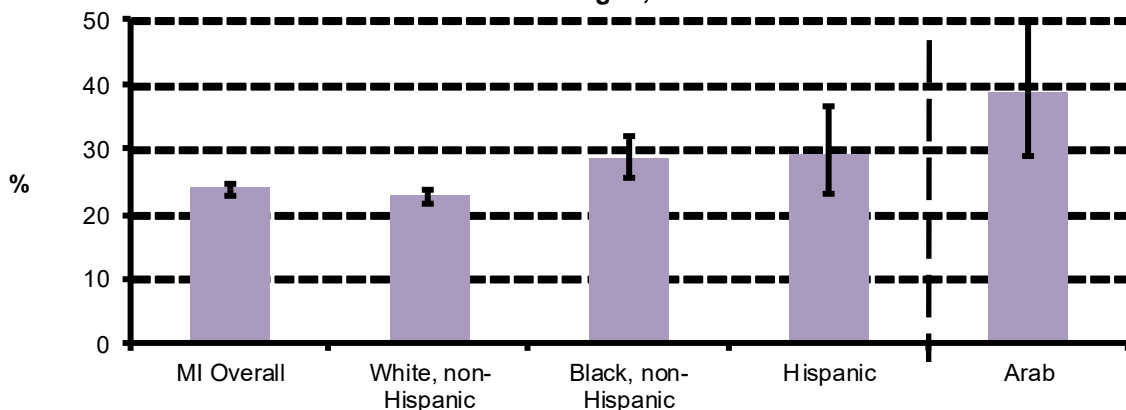
| Arab Demographic Characteristics | No Leisure Time Physical Activity ^a | |
|----------------------------------|--|-------------------------|
| | % | 95% Confidence Interval |
| Total | 38.8 | (28.8-49.8) |
| Age | | |
| 18 - 44 | 34.9 | (21.4-51.3) |
| 45 - 64 | 47.9 | (32.5-63.7) |
| 65+ | 30.9 | (18.9-46.3) |
| Gender | | |
| Male | 32.0 | (20.2-46.6) |
| Female | 46.2 | (30.4-62.8) |
| Education | | |
| HS graduate or less | 49.6 | (38.9-60.2) |
| Some college or more | 30.3 | (16.4-49.0) |
| Household Income | | |
| < \$25,000 | 50.9 | (37.0-64.6) |
| \$25,000 - \$49,999 | 28.5 [†] | (14.1-49.2) |
| \$50,000+ | 6.9 [†] | (3.5-13.5) |

^a Among all Arab 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 = 582)

[†] This estimate should be used with caution due to its low reliability and precision.

- ◆ The prevalence of no leisure time physical activity among Arab adults did not significantly differ from that of Black, non-Hispanic and Hispanic adults in Michigan.

No Leisure Time Physical Activity, by Race/Ethnicity, Michigan, 2016





Adequate Physical Activity

2016 Arab BRFS

In 2008, the U.S. Department of Health and Human Services released the new physical activity guidelines for Americans. These guidelines recommend that adults participate in moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities **and** also participate in muscle strengthening activities on two or more days per week.²⁵

- ◆ In 2016, an estimated 8.3% of Arab adults met both the aerobic and muscle strengthening components of the new physical activity guidelines (i.e., adequate physical activity).
- ◆ The prevalence of adequate physical activity was significantly lower for females than males.
- ◆ Adequate physical activity increased with increasing education and increasing household income levels.
- ◆ When assessing each component individually, an estimated 22.9% (95% CI: 17.9-28.7) of Arab adults met the aerobic physical activity component. An estimated 18.7% (8.9-35.0) Arab adults met the muscle strengthening recommendation.
- ◆ In 2016, Arab adults (8.3%) reported a significantly lower prevalence of adequate physical activity than White, non-Hispanic (19.3%), Black, non-Hispanic (21.2%), and Hispanics (18.8%), as well as Michigan overall (19.5%).

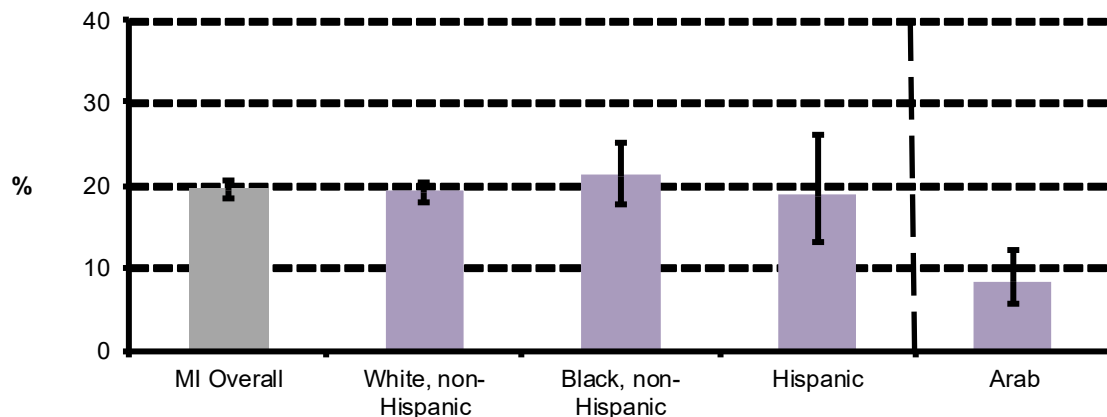
| Arab Demographic Characteristics | Adequate Physical Activity ^a | |
|----------------------------------|---|-------------------------|
| | % | 95% Confidence Interval |
| Total | 8.3 | (5.6-12.1) |
| Age | | |
| 18 - 44 | 10.1 | (5.7-17.4) |
| 45 - 64 | 5.9 [†] | (2.8-12.0) |
| 65+ | 6.9 [†] | (3.1-14.5) |
| Gender | | |
| Male | 14.6 | (8.6-23.7) |
| Female | 4.5 [†] | (2.3-8.5) |
| Education | | |
| HS graduate or less | 5.5 [†] | (2.8-10.7) |
| Some college or more | 11.0 | (6.4-18.5) |
| Household Income | | |
| < \$25,000 | 4.3 [†] | (1.8-9.9) |
| \$25,000 - \$49,999 | -- ^b | --- |
| \$50,000+ | 14.6 [†] | (6.6-29.2) |

^a Among all Arab adults, the proportion who reported that they do either moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities and also participate in muscle strengthening activities on two or more days per week. (N = 398)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Adequate Physical Activity, by Race/Ethnicity, Michigan, 2015-2016





Cigarette Smoking

2016 Arab BRFS

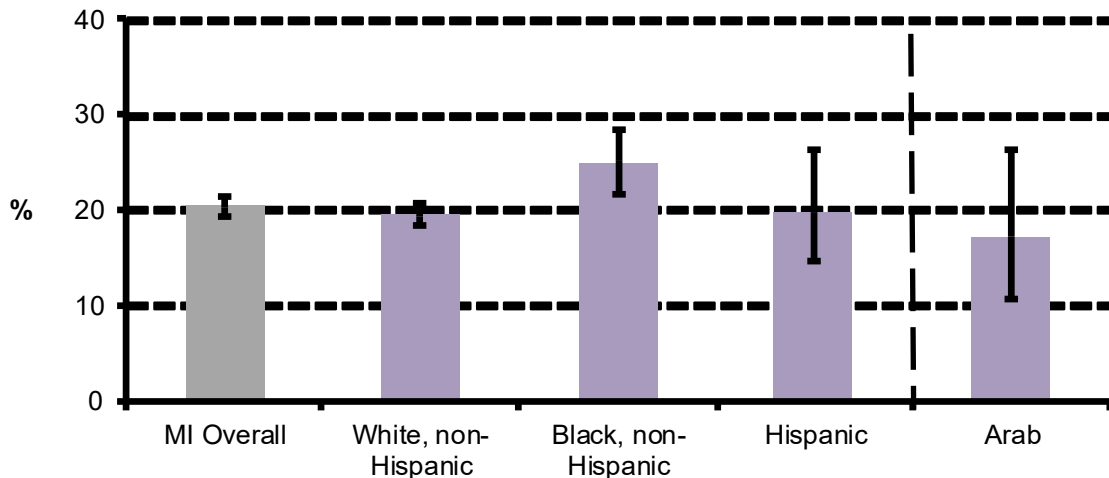
Cigarette smoking is the leading cause of preventable death in the United States, accounting for more than 480,000 deaths each year.²⁶

- ◆ In 2016, an estimated 17.2% of Arab adults reported that they currently smoke cigarettes on a regular basis, compared to 20.4% of all Michigan adults (95% CI: 19.4-21.4).
- ◆ The prevalence of current smoking tended to decrease with increasing age.
- ◆ The prevalence of current smoking was significantly higher among Arab males than Arab females.
- ◆ The prevalence of current smoking was higher among Arab adults with a high school education or less compared to those with some college or more.
- ◆ The prevalence of current smoking decreased with increasing household income level.
- ◆ In 2016, the prevalence of Arab adults that reported that they currently smoke cigarettes did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

| Arab Demographic Characteristics | Current Smoking ^a | |
|----------------------------------|------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 17.2 | (10.8-26.2) |
| Age | | |
| 18 - 44 | 21.4 | (11.5-36.5) |
| 45 - 64 | 13.6 | (8.1-21.8) |
| 65+ | 6.3 | (3.1-12.6) [†] |
| Gender | | |
| Male | 27.4 | (16.5-41.9) |
| Female | 6.1 | (3.6-10.2) |
| Education | | |
| HS graduate or less | 20.0 | (12.8-29.8) |
| Some college or more | 14.9 | (6.4-30.9) [†] |
| Household Income | | |
| < \$25,000 | 28.1 | (14.6-47.2) |
| \$25,000 - \$49,999 | 13.9 | (6.9-26.0) [†] |
| \$50,000+ | 9.5 | (4.1-20.5) [†] |

^a Among all Arab 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 = 580)
[†] This estimate should be used with caution due to its low reliability and precision.

Current Smoking, by Race/Ethnicity, Michigan, 2016





Secondhand Smoke Exposure

2016 Arab BRFS

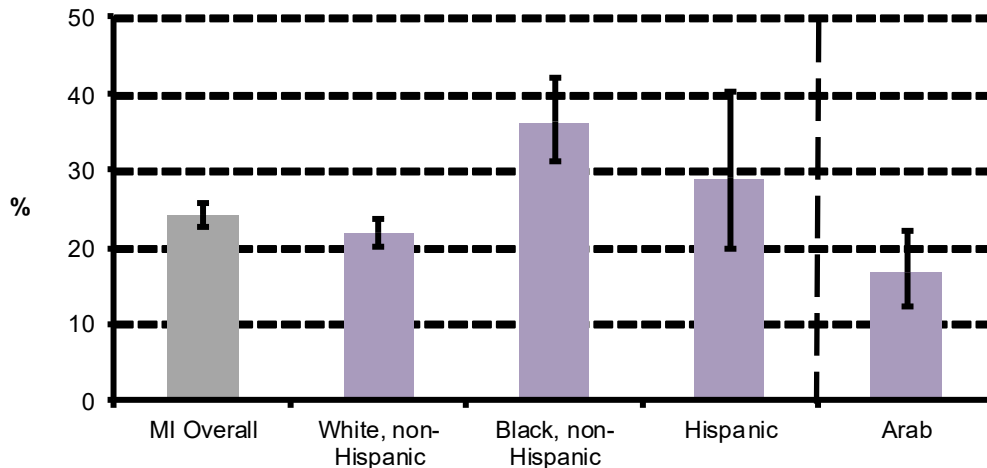
Among adults who have never smoked, secondhand smoke exposure causes an estimated 34,000 heart disease deaths and 7,300 lung cancer deaths within the United States each year.²⁶

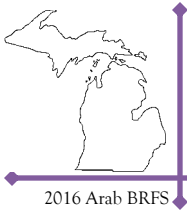
- ◆ In 2016, an estimated 16.7% of Arab adults reported that they were exposed to secondhand smoke in their home or car within the past seven days.
- ◆ Secondhand smoke exposure generally decreased with both increasing age and education.
- ◆ Arab males reported a higher prevalence of secondhand smoke exposure than Arab females.
- ◆ Arab adults with a household income of \$25,000-\$49,999 reported higher secondhand smoke exposure than Arab adults with a household income of less than \$25,000 or greater than \$50,000.
- ◆ In 2016, the Arab adults reported a significantly lower prevalence of secondhand smoke exposure than Michigan overall (24.3%) and Black, non-Hispanics (36.3%)

| Arab Demographic Characteristics | Secondhand Smoke Exposure ^a | |
|----------------------------------|--|-------------------------|
| | % | 95% Confidence Interval |
| Total | 16.7 | (12.3-22.3) |
| Age | | |
| 18 - 44 | 19.1 | (12.4-28.3) |
| 45 - 64 | 14.2 | (8.3-23.2) |
| 65+ | 11.7 [†] | (4.9-25.2) |
| Gender | | |
| Male | 23.3 | (15.6-33.3) |
| Female | 10.8 | (6.8-16.7) |
| Education | | |
| HS graduate or less | 22.5 | (15.3-31.8) |
| Some college or more | 11.9 | (7.2-18.9) |
| Household Income | | |
| < \$25,000 | 17.8 | (10.8-28.1) |
| \$25,000 - \$49,999 | 20.4 [†] | (10.5-35.9) |
| \$50,000+ | 10.6 [†] | (4.2-23.7) |

^a Among all Arab adults, the proportion who reported being exposed to secondhand smoke in their home or a car within the past seven days. (N = 493)
[†] This estimate should be used with caution due to its low reliability and precision.

Secondhand Smoke Exposure, by Race/Ethnicity, Michigan, 2015-2016





Hookah Usage

2016 Arab BRFs

Hookahs are water pipes that are used to smoke tobacco. There is widespread misbelief that hookah smoking is a safe alternative to cigarette smoking. However, hookah smoke offers many of the same health risks as cigarette smoke.¹⁵

- ◆ In 2016, an estimated 13.5% of Arab adults reported they had used a hookah in the past 30 days, significantly higher than 4.0% of all adults in Michigan (95% CI: 3.3-4.7).
- ◆ The prevalence of lifetime hookah usage generally decreased with increasing age and was significantly lower in the 65+ age group than in the 18-44 age group.
- ◆ Arab adults with some college or more were significantly more likely to have ever smoked a hookah than Arab adults that had a high school degree or less.
- ◆ The prevalence of current hookah usage generally increased with increasing household income.
- ◆ Arab males reported a significantly higher prevalence of current hookah usage than Arab females
- ◆ In 2016, Arab adults (13.5%) reported a significantly higher prevalence of current hookah usage than White, non-Hispanic adults 3.5% (95% CI: 2.9-4.3).

| Arab Demographic Characteristics | Ever Smoked Hookah ^a | | Current Hookah Use ^b | |
|----------------------------------|---------------------------------|-------------------------|---------------------------------|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 30.8 | (18.4-46.9) | 13.5[†] | (5.8-28.6) |
| Age | | | | |
| 18 - 44 | 43.8 | (22.5-67.7) | -- ^c | --- |
| 45 - 64 | 18.0 | (11.2-27.8) | 7.2 [†] | (3.2-15.4) |
| 65+ | 10.8 [†] | (5.7-19.6) | -- ^c | --- |
| Gender | | | | |
| Male | 46.1 | (29.5-63.5) | 30.1 [†] | (13.3-54.8) |
| Female | 21.4 [†] | (7.4-48.0) | 3.5 [†] | (1.9-6.3) |
| Education | | | | |
| HS graduate or less | 13.7 | (8.6-21.1) | 6.4 [†] | |
| Some college or more | 47.9 | (25.5-71.1) | -- ^c | --- |
| Household Income | | | | |
| < \$25,000 | 25.5 [†] | (10.3-50.7) | | |
| \$25,000 - \$49,999 | 34.5 | (21.1-50.9) | 23.3 [†] | (12.0-40.2) |
| \$50,000+ | 53.6 [†] | (22.5-82.2) | 7.4 [†] | (59.8-88.0) |

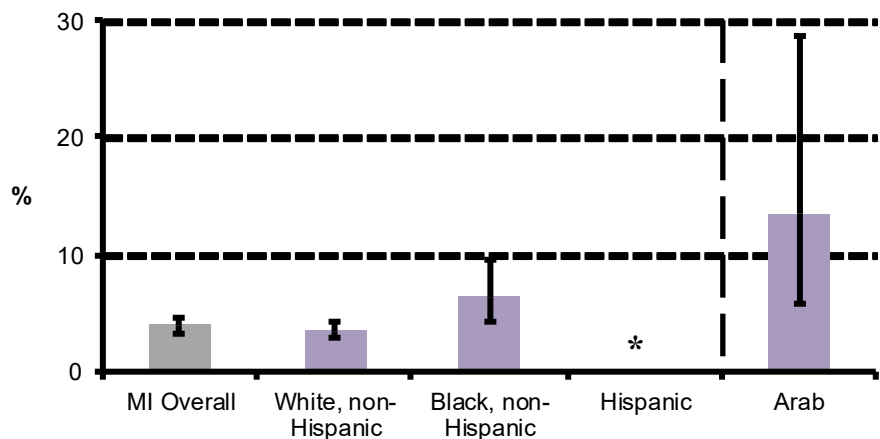
^a Among all Arab adults, the proportion who reported ever smoking tobacco from a hookah, narghile, or water pipe. (N = 400)

^b Among all Arab adults, the proportion who reported using hookah on at least one or more day in the past 30 days. (N = 398)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Current Hookah Use, by Race/Ethnicity, Michigan, 2016



*The prevalence estimates were excluded from the graph due to the denominator being less than 50 and/or a relative standard error of greater than 30%.



Alcohol Consumption

2016 Arab BRFSS

Excessive alcohol use contributes to approximately 88,000 deaths each year within the United States.²⁷ 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. For Muslims, there are strict prohibitions related to drinking alcohol, therefore religious and social discouragement are factors to consider when examining reported alcohol consumption.

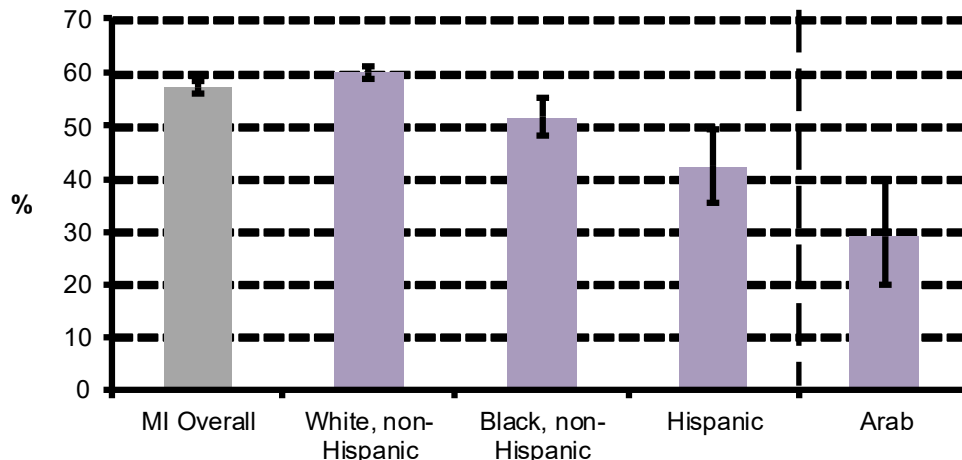
- ◆ In 2016, an estimated 29.0% of Arab adults reported some form of alcohol consumption within the past month, significantly lower than 57.2% (95% CI: 56.0-58.3) of all Michigan adults. Furthermore, an estimated 11.7%[†] (95% CI: 5.4-23.5) of Arab adults reported binge drinking on at least one occasion in the past month, lower than 19.0% (95% CI: 18.1-20.0) of all adults in Michigan.
- ◆ Arab males reported a higher prevalence of any alcohol consumption than Arab females.
- ◆ Arab adults with a household income of \$50,000 or more reported a significantly higher prevalence of any alcohol consumption than Arab adults with a household income of less than \$25,000.
- ◆ In 2016, Arab adults (29.0%) reported a significantly lower prevalence of any alcohol consumption compared to White, non-Hispanics (59.9%) and Black, non-Hispanics (51.4%).

| Arab Demographic Characteristics | Any Alcohol Consumption ^a | |
|----------------------------------|--------------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 29.0 | (20.0-39.9) |
| Age | | |
| 18 - 44 | 35.0 | (21.4-51.5) |
| 45 - 64 | 15.8 | (9.7-24.6) |
| 65+ | 34.0 [†] | (15.4-59.2) |
| Gender | | |
| Male | 35.3 | (25.0-47.3) |
| Female | 22.3 [†] | (9.5-44.1) |
| Education | | |
| HS graduate or less | 22.3 | (14.6-32.5) |
| Some college or more | 34.4 | (20.2-52.1) |
| Household Income | | |
| < \$25,000 | 14.4 | (8.1-24.4) |
| \$25,000 - \$49,999 | 35.5 | (18.8-56.7) |
| \$50,000+ | 58.5 | (35.3-78.4) |

^a Among all Arab adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month. (N = 577)

[†] This estimate should be used with caution due to its low reliability and precision.

Any Alcohol, by Race/Ethnicity, Michigan, 2016





Hypertension Awareness and Medication Use

2016 Arab BRFS

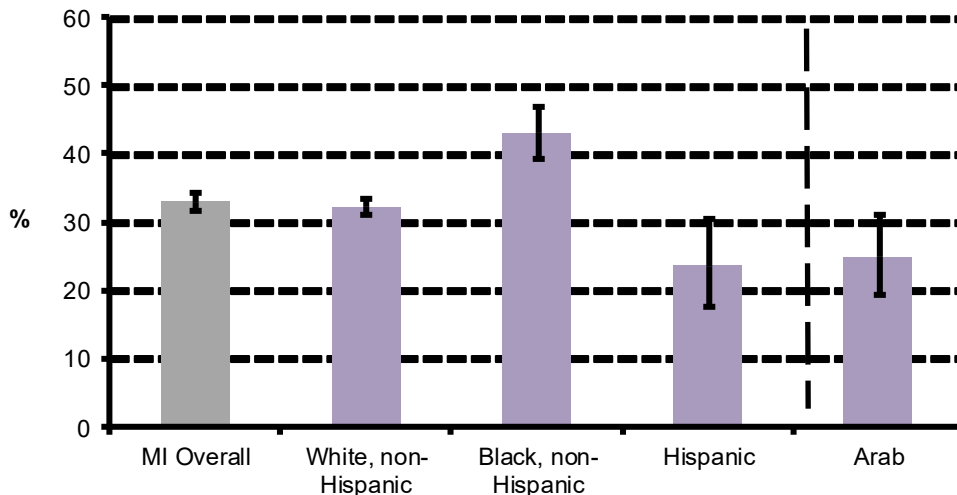
Adults with high blood pressure (HBP) are at a higher risk for heart disease, stroke, congestive heart failure, and end-stage renal disease.²⁸

- ◆ In 2016, an estimated 25.0% of Arab adults reported ever being told by a doctor that they had HBP.
- ◆ The prevalence of HBP was significantly higher in the 45-64 year and 65+ year age groups than in the 18-44 year age group.
- ◆ The prevalence of HBP was significantly higher among Arab adults with a high school education or less compared to Arab adults with some college or more.
- ◆ The prevalence of HBP generally decreased with increasing household income level and was higher among males than females.
- ◆ In 2016, Arab adults (25.0%) had a significantly lower prevalence of being told they had HBP than Black, non-Hispanics (43.0%).

| Arab Demographic Characteristics | Ever Told HBP ^a | |
|----------------------------------|----------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 25.0 | (19.5-31.3) |
| Age | | |
| 18 - 44 | 6.5 [†] | (3.6-11.6) |
| 45 - 64 | 46.5 | (33.5-60.0) |
| 65+ | 51.0 | (38.2-63.8) |
| Gender | | |
| Male | 30.8 | (19.0-45.8) |
| Female | 20.7 | (14.4-28.8) |
| Education | | |
| HS graduate or less | 39.1 | (29.5-49.6) |
| Some college or more | 12.4 | (7.8-19.1) |
| Household Income | | |
| < \$25,000 | 30.9 | (20.1-44.2) |
| \$25,000 - \$49,999 | 23.8 [†] | (12.3-41.1) |
| \$50,000+ | 14.8 [†] | (6.7-29.7) |

^a Among all Arab adults, the proportion who reported that they were ever told by a doctor that they had high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered to not have been diagnosed. (N = 426)
[†] This estimate should be used with caution due to its low reliability and precision.

Ever Told High Blood Pressure, by Race/Ethnicity, Michigan, 2015-2016





Preventive Health Behaviors

2016 Arab BRFS

Weight management, diet, and adequate physical activity have been shown to help prevent and control many chronic diseases such as diabetes, heart disease, stroke, and some forms of cancer.²⁹⁻³⁰

- ◆ In 2016, an estimated 62.2% (95% CI: 47.5-75.0) of Arab adults reported trying to control or lose weight within the past 12 months.
- ◆ Arab adults aged 65+ years reported the lowest prevalence of increased physical activity or exercise, while Arab adults aged 45-64 reported the highest prevalence of increased physical activity or exercise.
- ◆ Arab males reported a higher prevalence of increasing physical activity, whereas Arab females reported a higher prevalence of decreasing calories in diet.
- ◆ Arab adults with some college or more reported a higher prevalence of increased physical activity compared to Arab adults with a high school education or less, while Arab adults with high school graduate or less reported a higher prevalence of reducing calories in diet.
- ◆ Adults in the \$25,000-\$49,999 income group reported the highest prevalence of both increasing physical activity and reducing calories in diet.
- ◆ These questions were not asked at the state level and therefore not available for comparison.

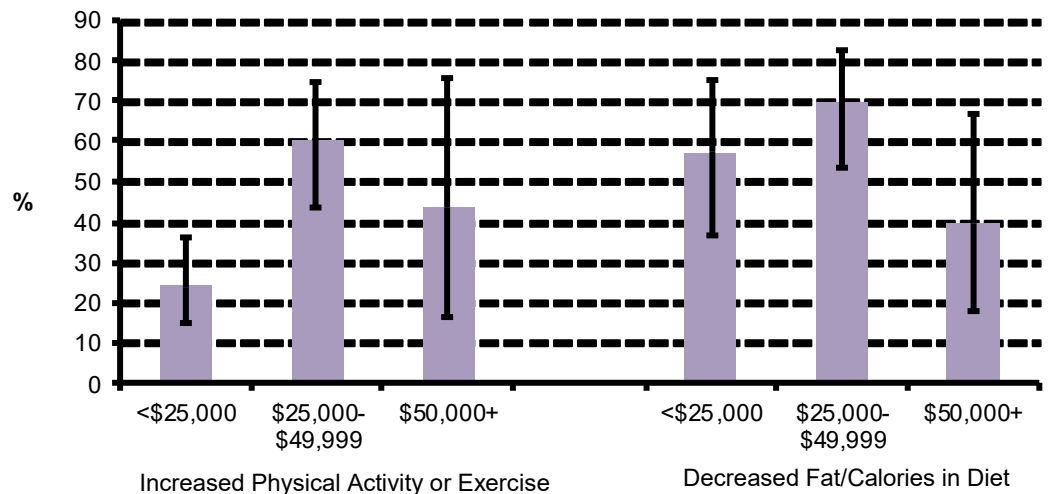
| Arab Demographic Characteristics | Increased Physical Activity or Exercise ^a | | Decreased Fat/Calories in Diet ^b | |
|----------------------------------|--|-------------------------|---|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 34.6 | (24.9-45.6) | 51.1 | (38.5-63.5) |
| Age | | | | |
| 18 - 44 | 31.5 | (20.4-45.1) | 46.6 | (26.4-68.0) |
| 45 - 64 | 41.7 | (26.9-58.1) | 56.5 | (40.7-71.1) |
| 65+ | 27.1 | (16.5-41.0) | 55.3 | (41.7-68.0) |
| Gender | | | | |
| Male | 35.7 | (23.6-49.9) | 48.5 | (32.7-64.7) |
| Female | 33.9 | (20.5-50.4) | 52.7 | (34.2-70.4) |
| Education | | | | |
| HS graduate or less | 33.4 | (24.1-44.2) | 55.4 | (42.5-67.6) |
| Some college or more | 35.8 | (19.5-56.3) | 47.1 | (26.2-69.1) |
| Household Income | | | | |
| < \$25,000 | 24.0 | (14.9-36.3) | 57.0 | (36.9-75.0) |
| \$25,000 - \$49,999 | 60.2 | (43.9-74.5) | 69.7 | (53.2-82.3) |
| \$50,000+ | 43.8 [†] | (16.6-75.3) | 39.8 [†] | (18.1-66.5) |

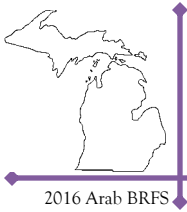
^a Among all Arab adults, the proportion who reported increasing their physical activity or exercise in the past 12 month. (N = 398)

^b Among all Arab adults, the proportion who reported reducing the amount of fat or calories in their diet in the past 12 months. (N = 396)

[†] This estimate should be used with caution due to its low reliability and precision.

Preventative Health Behaviors by Household Income, Arab Adults in Michigan, 2016





Food Access

2016 Arab BRFS

The CDC recommends that adults eat at least 1.5-2.0 cups per day of fruit and 2.0-3.0 cups per day of vegetables. A diet rich in fruits and vegetables can help reduce the risk of heart disease, type two diabetes, and obesity.³¹ According to a CDC report published in 2017, only 1 in 10 adults in the United States get enough Fruits or Vegetables.³²

- ◆ The majority of Arab adults (93.5%) report sometimes, rarely or never having difficulty buying quality fresh fruits and vegetables due to the distance their home is from a full service grocery store.
- ◆ The majority of Arab adults report that they can always or usually find good quality dark green (89.7%) and orange (83.1%) vegetables at the grocery store in the neighborhood where they typically shop.
- ◆ The majority of Arab adults report that there is a variety of fresh, frozen, or canned fruits available at the location where they typically shop (88.9%).
- ◆ The availability of quality foods is relatively even among dark green vegetables, orange vegetables, and fruit.

| | % | 95% Confidence Interval |
|--|-------------------|-------------------------------|
| Distance Makes it Difficult to Get Fruit/Vegetables^a | | |
| Always or Usually | 6.5 | (4.1-10.2) |
| Sometimes, Rarely, Never | 93.5 | (89.9-95.9) |
| Availability of Dark Green Vegetables^b | | |
| Always or Usually | 89.7 [†] | (76.4-95.9) |
| Sometimes, Rarely, Never | 10.3 [†] | (4.1-23.6) |
| Availability of Orange Vegetables^c | | |
| Always or Usually | 83.1 | (70.8-90.8) |
| Sometimes, Rarely, Never | 16.9 | (9.2-29.2) |
| Availability of Fruit^d | | |
| Always or Usually | 88.9 [†] | (75.9-95.3) |
| Sometimes, Rarely, Never | 11.1 [†] | (4.7-24.1) |

^a Among all Arab adults, the proportion who reported difficulty buying the variety of quality fresh fruits and vegetables that they would like due to distance from home. (n=398)

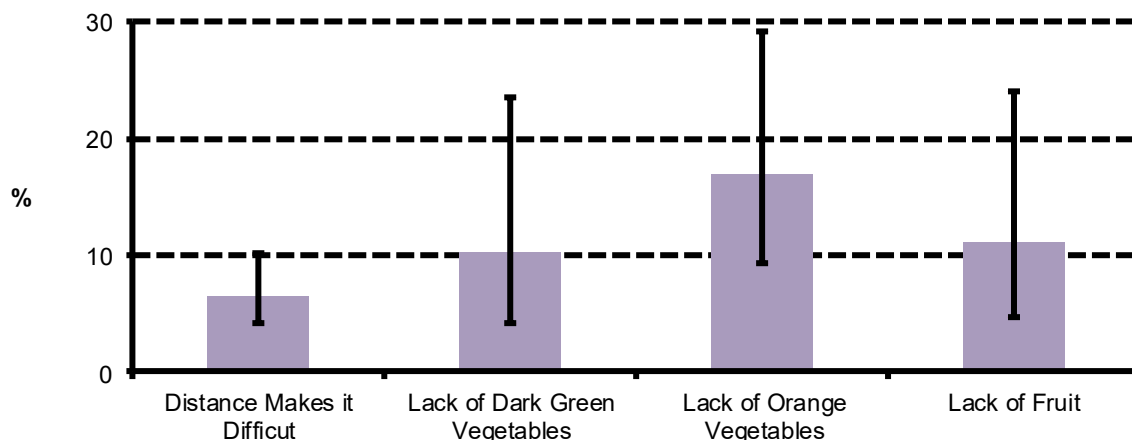
^b Among all Arab adults, the proportion who reported a variety of good quality dark green vegetables at the store they typically shop at. (n=399)

^c Among all Arab adults, the proportion who reported a variety of good quality orange vegetables at the store they typically shop at. (n=397)

^d Among all Arab adults, the proportion who reported a variety of fresh, frozen or canned fruits at the store they typically shop at. (n=399)

[†] This estimate should be used with caution due to its low reliability and precision.

Limited Food Access Among Arab Adults, Michigan, 2016





Routine Checkup in Past Year

2016 Arab BRFSS

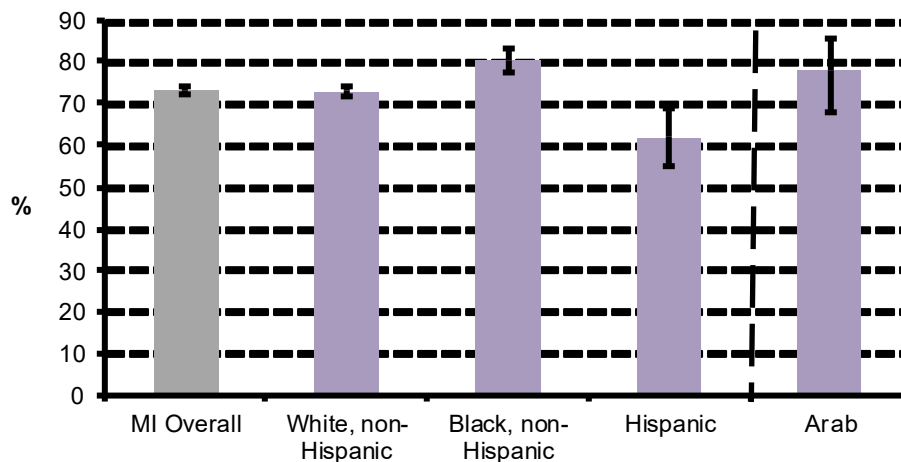
The benefits of having an annual checkup include early diagnosis and treatment of existing conditions and prevention of future medical problems.³³

- ◆ In 2016, an estimated 78.0% of Arab adults reported having a routine medical checkup within the past year, similar to 73.1% of all Michigan adults (95% CI: 72.0-74.1).
- ◆ The prevalence of having a routine checkup within the past year generally increased with age.
- ◆ Arab females reported a higher prevalence of having a routine checkup within the past year compared to Arab males.
- ◆ The prevalence of having a routine checkup within the past year decreased with increasing education.
- ◆ Having a routine checkup in the past year increased with increasing household income level.
- ◆ In 2016, the prevalence of Arab adults that reported having a routine medical checkup in the past year did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

| Arab Demographic Characteristics | Had a Routine Checkup Within The Past Year ^a | |
|----------------------------------|---|-------------------------|
| | % | 95% Confidence Interval |
| Total | 78.0 | (67.7-85.7) |
| Age | | |
| 18 - 44 | 69.6 | (53.2-82.2) |
| 45 - 64 | 88.6 | (81.1-93.4) |
| 65+ | 92.0 [†] | (80.9-96.9) |
| Gender | | |
| Male | 73.1 | (59.2-83.6) |
| Female | 83.2 [†] | (65.7-92.8) |
| Education | | |
| HS graduate or less | 82.5 | (74.4-88.4) |
| Some college or more | 74.7 [†] | (57.2-86.8) |
| Household Income | | |
| < \$25,000 | 63.8 | (46.1-78.4) |
| \$25,000 - \$49,999 | 80.5 [†] | (64.9-90.3) |
| \$50,000+ | 87.1 [†] | (75.6-93.6) |

^a Among all Arab adults, the proportion who reported that they had a routine medical checkup within the past year. (N = 585)
[†] This estimate should be used with caution due to its low reliability and precision.

Routine Checkup in Past Year, by Race/Ethnicity, Michigan, 2016





Cholesterol Screening and Awareness

2016 Arab BRFs

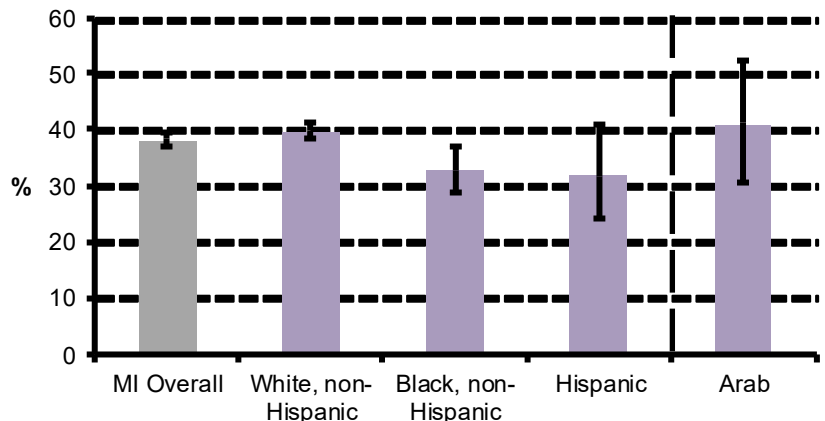
High blood cholesterol is a major risk factor for coronary heart disease, the leading cause of death in the United States.³⁴

- ◆ In 2016, an estimated 74.6% of Arab adults reported having their cholesterol checked within the past five years compared to 79.2% (95% CI: 77.9-80.3) of all Michigan adults in 2015.
- ◆ Among Arab adults who have ever had their cholesterol checked, an estimated 41.2% have been told by a doctor that they had high blood cholesterol, less than all adults in Michigan 38.2% (95% CI: 36.8-39.5).
- ◆ The prevalence of both indicators increased with increasing age. Arab adults aged 18-44 were significantly less likely to have reported having been told they had high cholesterol than Arab adults aged 45-64 and Arab adults aged 65+.
- ◆ The prevalence of both indicators were higher among Arab males than Arab females.
- ◆ The prevalence of having cholesterol checked within the past five years and having been told they have high cholesterol was higher for Arab adults with high school graduate degrees or less than Arab adults with some college or more.
- ◆ With increasing household income level, the prevalence of cholesterol screening within the past five years generally increased while the prevalence of having been told to have high cholesterol generally decreased.
- ◆ In 2016, the prevalence of Arab adults that had been told by a doctor that they had high blood cholesterol did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

| Arab Demographic Characteristics | Cholesterol Checked Within the Past 5 Years ^a | | Ever Told High Cholesterol ^b | |
|----------------------------------|--|-------------------------|---|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 74.6 | (58.8-85.8) | 41.2 | (31.0-52.3) |
| Age | | | | |
| 18 - 44 | 55.3 | (32.4-76.2) | 14.7 [†] | (7.4-27.1) |
| 45 - 64 | 95.4 [†] | (89.6-98.1) | 57.5 | (41.4-72.1) |
| 65+ | -- ^c | --- | 73.9 | (61.8-83.8) |
| Gender | | | | |
| Male | 79.0 [†] | (60.9-90.1) | 47.7 | (28.6-67.6) |
| Female | 70.4 | (41.8-88.7) | 36.1 | (23.9-50.4) |
| Education | | | | |
| HS graduate or less | 79.0 [†] | (60.9-90.1) | 57.9 | (48.5-66.8) |
| Some college or more | 70.4 [†] | (41.8-88.7) | 25.1 | (14.6-39.5) |
| Household Income | | | | |
| < \$25,000 | 67.5 [†] | (43.2-85.0) | 62.3 | (52.0-71.6) |
| \$25,000 - \$49,999 | 82.4 | (64.7-92.3) | 44.6 | (28.5-61.9) |
| \$50,000+ | 92.9 [†] | (82.7-97.3) | 22.2 [†] | (9.7-43.3) |

^a Among all Arab adults, the proportion reporting that they have had their blood cholesterol checked within the past five years. (N=410)
^b Among Arab adults who have had their blood cholesterol checked, the proportion reporting that a doctor, nurse, or other health professional had told them that their cholesterol was high. (N=370)
^c This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.
[†] This estimate should be used with caution due to its low reliability and precision.

Ever Told High Cholesterol, by Race/Ethnicity, Michigan 2015-2016





Breast Cancer Screening

2016 Arab BRFS

Breast cancer is the second leading cause of cancer deaths among United States women.³⁵ In 2015, there were 1,369 deaths in Michigan due to breast cancer, second only to that of lung cancer.³⁶ Early detection of breast cancer can occur through the use of screening tools such as mammography and clinical breast exams.

- ◆ In 2016, an estimated 75.8% of Arab women 40 years and older reported having a mammogram in the past two years, similar to 74.0% (95% CI: 72.4-75.5) of all women aged 40 years and older in Michigan.
- ◆ An estimated 29.1% of Arab women 40 years and older reported having both a clinical breast exam and a mammogram within the past year.
- ◆ The prevalence of Arab adult women that reported having a mammogram and clinical breast exam in the past year generally increased with increasing income level and decreased with increasing age and education level.
- ◆ The prevalence of Arab women 40 years and older who reported having a mammogram within the past two years did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

| Arab Demographic Characteristics | Had Mammogram in the Past Two Years Among Women Aged 40 Years and Older ^a | | Had Clinical Breast Exam and Mammogram in Past Year Among Women Aged 40 Years and Older ^b | |
|----------------------------------|--|-------------------------|--|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 75.8 | (56.4-88.4) | 29.1 | (19.9-40.4) |
| Age | | | | |
| 40 - 59 | 72.2 [†] | (43.4-89.8) | 33.1 | (19.5-50.2) |
| 60+ | 81.6 [†] | (62.6-92.2) | 21.4 | (13.3-32.4) |
| Education | | | | |
| HS graduate or less | 76.0 | (64.7-84.5) | 31.0 | (22.0-41.8) |
| Some college or more | -- ^c | --- | 21.7 [†] | (7.7-48.1) |
| Household Income | | | | |
| < \$25,000 | 82.1 | (71.6-89.3) | 29.6 | (19.3-42.4) |
| \$25,000 - \$49,999 | -- ^c | --- | 55.6 | (31.2-77.5) |
| \$50,000+ | -- ^c | --- | -- ^c | --- |

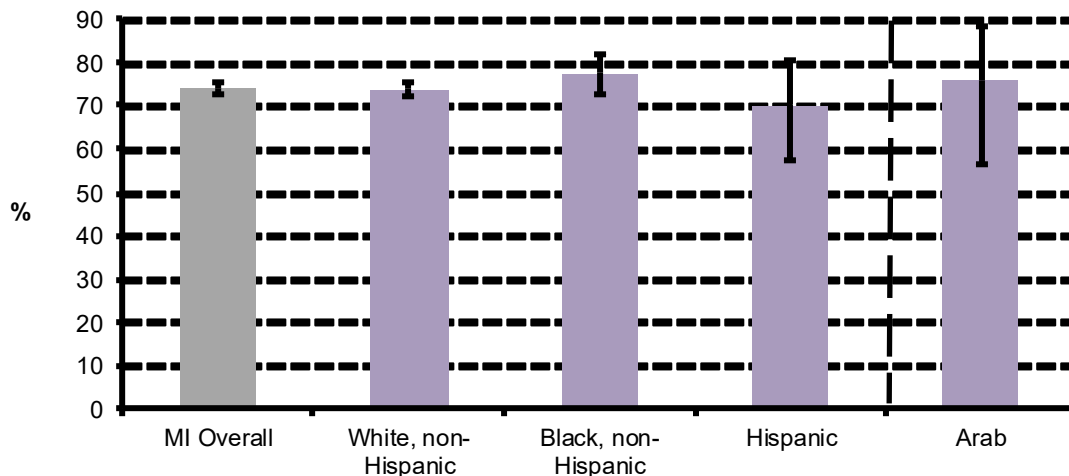
^a Among Arab women aged 40 years and older, the proportion who reported having a mammogram within the past two years. (N = 194)

^b Among Arab women aged 40 years and older, the proportion who reported having a clinical breast exam and a mammogram within the past year. (N = 180)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Had Mammogram in Past 2 Years, by Race/Ethnicity, Michigan, 2016





Cervical Cancer Screening

2016 Arab BRFS

Current guidelines for cervical cancer screening recommend that Pap testing should begin within three years after the onset of sexual intercourse, or at least by 21 years of age. Once three or more annual tests have been normal, at the discretion of the physician, Pap tests can be performed less frequently, but at least once every three years.³⁷

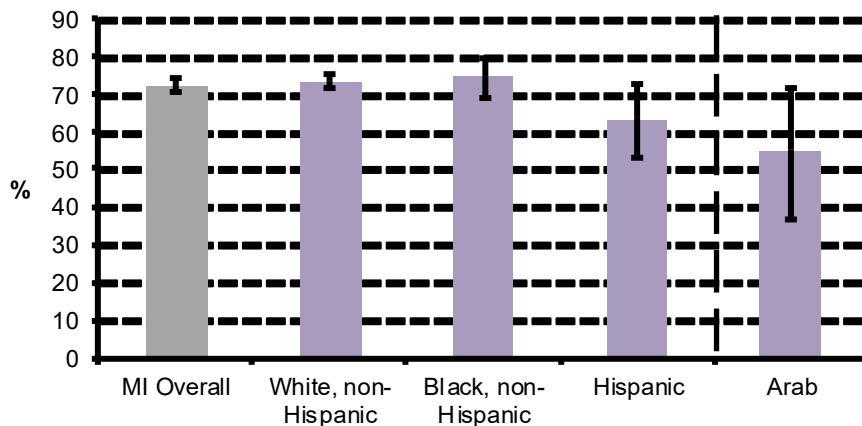
- ◆ In 2016, an estimated 64.2% of Arab women aged 18 years and older reported ever having a Pap test, significantly lower than 88.1% (95% CI: 86.6-89.6) of all women in Michigan aged 18 years and older.
- ◆ An estimated 54.9% of Arab women reported having had a Pap test within the past three years, lower than 72.5% (95% CI: 70.7-74.3) of all women in Michigan aged 18 years and older.
- ◆ The prevalence of both indicators increased with increasing household incomes.
- ◆ In 2016, the prevalence of Arab women 18 years and older (64.2%) who reported ever having a Pap test was significantly lower than White, non-Hispanic (90.5%). The prevalence for Arab women was also lower than Black non-Hispanic (83.0%) and Hispanic (78.0%) women, although the differences were not significant (data not shown).

| Arab Demographic Characteristics | Ever Had a Pap Test ^a | | Had Appropriately Timed Pap Test ^b | |
|----------------------------------|----------------------------------|-------------------------|---|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 64.2 | (45.2-79.6) | 54.9 | (37.1-71.6) |
| Age | | | | |
| 18 - 49 | 61.3 [†] | (37.1-80.9) | 56.3 | (32.7-77.3) |
| 50+ | 68.8 [†] | (37.4-89.1) | 52.6 | (28.7-75.2) |
| Education | | | | |
| HS graduate or less | 69.4 | (58.8-78.3) | 50.5 | (40.2-60.9) |
| Some college or more | 60.1 [†] | (29.9-84.1) | 58.7 [†] | (29.0-83.2) |
| Household Income | | | | |
| < \$25,000 | 49.1 | (27.9-70.7) | 40.4 | (23.0-60.6) |
| \$25,000 - \$49,999 | 71.9 [†] | (49.9-86.8) | 58.6 | (37.9-76.7) |
| \$50,000+ | -- ^c | --- | -- ^c | --- |

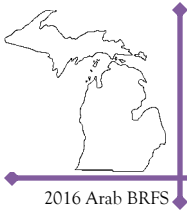
^a Among Arab women aged 18 years and older, the proportion who reported ever having a Pap test. (N=292)
^b Among Arab women aged 18 years and older, the proportion who reported having a Pap test within the previous three years. (N=296)
^c This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.
[†] This estimate should be used with caution due to its low reliability and precision.

- ◆ In 2016, the prevalence of Arab women 18 years and older (54.9%) who reported having a Pap test within the three past year was lower than White, non-Hispanic (73.5%), Black, non-Hispanic (74.8%), and Hispanic (63.3%) women in Michigan 18 years and older, although the differences were not statistically significant.

Appropriately Timed Pap Smear, by Race/Ethnicity, Michigan, 2016



All Arab prevalence estimates used data from the 2016 Arab BRFS while estimates for Michigan overall as well as White, Black, and Hispanic estimates used data from the 2016 Michigan BRFS.



Prostate Cancer Screening

2016 Arab BRFS

Prostate cancer is the second leading cause of cancer deaths among males in Michigan; there were 945 deaths in 2015.³⁶

- ◆ In 2016, an estimated 39.6% (95% CI: 26.7-54.1) of Arab men aged 40+ reported discussing the advantages of a Prostate-specific antigen (PSA) test with a health professional.
- ◆ The prevalence of discussing the advantages of a PSA test generally increased with increasing age, education, and household income level.
- ◆ In 2016, approximately half of men aged 50+ reported discussing the advantages of a PSA test with a health professional (45.2% [95% CI: 29.7-61.6]), significantly lower than the overall Michigan population (71.1% [95% CI: 69.0-73.1]).^c
- ◆ Arab males aged 50+ reported a significantly lower prevalence of speaking with health professional about the advantages of a PSA test than White, non-Hispanics (72.0 [95% CI: 69.7-74.1]) and Black, non-Hispanics (70.3 [95% CI: 62.5-77.1]).^c

^c In 2016, The Michigan Behavioral Risk Factor Survey analyzed prostate screening questions for men aged 50+, for that reason, the comparisons between the Arab BRFS and Michigan BRFS pertains to men aged 50+.

Ever Discussed Advantages of PSA Test with Doctor^a

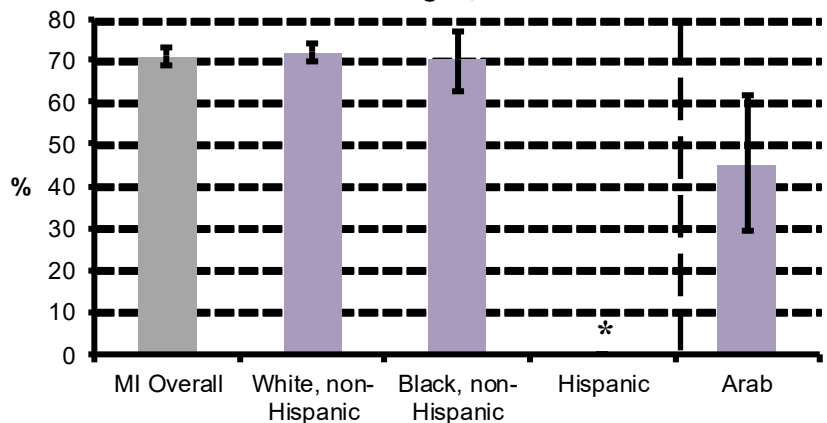
| Arab Demographic Characteristics | % | 95% Confidence Interval |
|----------------------------------|-------------------|-------------------------|
| Total | 39.6 | (26.7-54.1) |
| Age | | |
| 40-49 | 27.3 [†] | (11.2-52.7) |
| 50-59 | 30.5 | (17.8-46.9) |
| 60-69 | 46.4 | (26.7-67.3) |
| 70+ | -- ^b | --- |
| Education | | |
| HS graduate or less | 25.6 | (13.4-43.3) |
| Some college or more | 53.7 | (35.2-71.2) |
| Household Income | | |
| < \$25,000 | 26.3 | (14.1-43.7) |
| \$25,000 - \$49,999 | 44.5 [†] | (17.0-75.9) |
| \$50,000+ | 58.2 | (38.9-75.3) |

^a Among men aged 40 years and older, the proportion ever discussing the advantages of a PSA test with a doctor, nurse, or other health professional.

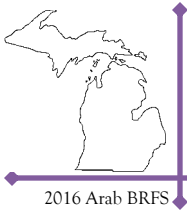
^b This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

[†] This estimate should be used with caution due to its low reliability and precision.

Ever Discussed Advantage of PSA Test, Among Men Aged 50+, by Race/Ethnicity, Michigan, 2016



*The prevalence estimates were excluded from the graph due to the denominator being less than 50 and/or a relative standard error of greater than 30%.



Colorectal Cancer Screening

2016 Arab BRFS

In 2015, colorectal cancer was the second leading cause of cancer-related deaths in Michigan with 1,716 deaths.³⁶ 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.³⁸

- ◆ In 2016, an estimated 56.4% of Arab adults aged 50 years and older reported having a sigmoidoscopy or colonoscopy within the past five years, similar 54.1% (95% CI: 52.7-55.6) of all Michigan adults aged 50 years and older.
- ◆ In 2016, an estimated 64.1% of Arab adults aged 50 years or older reported appropriate colorectal cancer screening, similar to 69.7% (95% CI: 68.3-71.0) of all Michigan adults aged 50 years and older.
- ◆ The prevalence of both indicators were lower among Arab males than Arab females.
- ◆ The prevalence for both colorectal cancer screenings were lower among Arab adults with a high school education or less compared to those with a college degree or more, although only the difference for appropriate colorectal screening was significant.
- ◆ There were no significant differences for having had a sigmoidoscopy or colonoscopy in the past 5 years for Arab adults than other racial/ethnic groups in Michigan.
- ◆ In 2016, the prevalence of appropriate colorectal cancer screening among Arab adults (64.1%) was lower than all of the other racial/ethnic groups (White, non-Hispanic (70.7%), Black, non-Hispanic (65.8%), Hispanic (66.0%) in Michigan, although the differences were not significant.

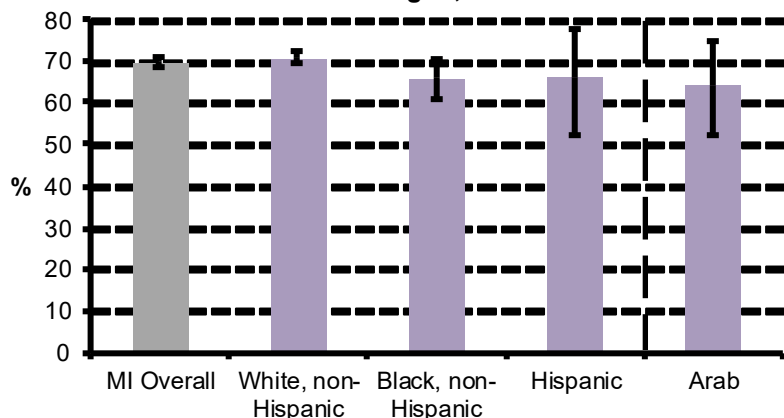
| Arab Demographic Characteristics | Had Sigmoidoscopy or Colonoscopy in Past 5 Years ^a | | Had Appropriate Colorectal Cancer Screening ^b | |
|----------------------------------|---|-------------------------|--|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 56.4 | (43.1-68.9) | 64.1 | (52.2-74.4) |
| Age | | | | |
| 50 - 64 | 57.0 | (39.4-73.0) | 65.7 | (50.0-78.5) |
| 65+ | 55.1 | (36.4-72.5) | 60.9 | (43.3-76.0) |
| Gender | | | | |
| Male | 49.1 | (33.4-65.0) | 62.8 | (48.4-75.2) |
| Female | 63.5 | (43.9-79.5) | 65.3 | (46.4-80.4) |
| Education | | | | |
| HS graduate or less | 45.4 | (34.9-56.5) | 50.6 | (39.9-61.2) |
| Some college or more | 68.3 | (47.3-83.8) | 78.8 | (62.0-89.5) |
| Household Income | | | | |
| < \$25,000 | 52.7 | (40.2-64.8) | 55.1 | (42.9-66.8) |
| \$25,000 - \$49,999 | 63.7 [†] | (33.7-85.8) | 69.0 [†] | (39.9-88.2) |
| \$50,000+ | 57.9 [†] | (27.8-83.1) | 76.0 [†] | (51.1-90.5) |

^a Among Arab adults aged 50 years and older, the proportion who reported having a sigmoidoscopy or colonoscopy within the past five years. (N = 277)

^b Among Arab 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 = 283)

[†] This estimate should be used with caution due to its low reliability and precision.

Appropriate Colorectal Screening, by Race/Ethnicity, Michigan, 2016





Oral Health

2016 Arab BRFS

Oral health is an important part of one's general health and quality of life. Regular dental care includes preventive dental services such as teeth cleaning, and permits early diagnosis and treatment of tooth decay and periodontal diseases.³⁹ It has been estimated that low income adults are 2.5 times more likely to have at least one untreated decayed tooth compared with higher income adults (40% vs. 16%).⁴⁰

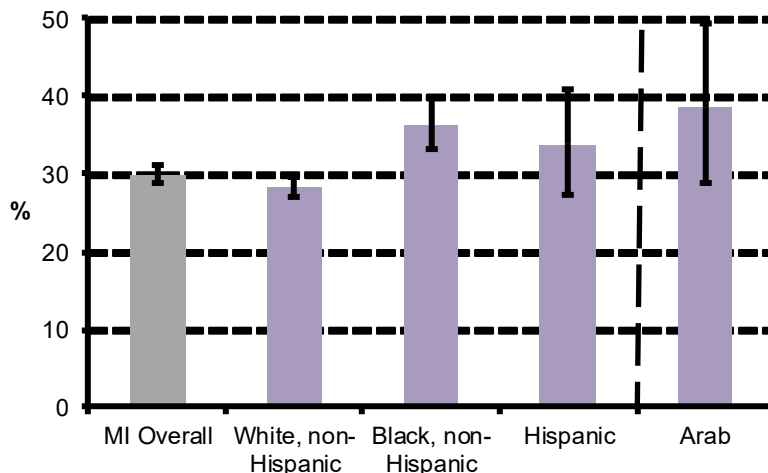
- ◆ In 2016, an estimated 38.6% of Arab adults reported not having had a dental visit within the past year, higher than 29.9% (95% CI: 28.8-31.0) of all Michigan adults. An estimated 12.5% (95% CI: 8.5-17.9) of Arab adults reported having 6 or more teeth missing, lower than all Michigan adults (16.0% [95% CI: 15.2-16.8]).
- ◆ The prevalence of not having had a dental visit within the past year was higher among males than females.
- ◆ The prevalence of not having had a dental visit within the past year was higher among Arab adults with some college or more than Arab adults with high school degree or less.
- ◆ In 2016, the prevalence of not having a dental visit within the past year among Arab adults (38.6%) was higher than White, non-Hispanic (28.2%) Hispanic (33.8%) and Black, non-Hispanic (36.3%) adults in Michigan, although the differences were not significant.

| Arab Demographic Characteristics | No Dental Visit in Past Year ^a | |
|----------------------------------|---|-------------------------|
| | % | 95% Confidence Interval |
| Total | 38.6 | (28.8-49.3) |
| Age | | |
| 18 - 44 | 44.1 | (30.3-59.0) |
| 45 - 64 | 30.9 | (19.0-46.1) |
| 65+ | 32.5 | (19.5-48.9) |
| Gender | | |
| Male | 44.3 | (31.5-57.8) |
| Female | 32.3 | (17.9-51.1) |
| Education | | |
| HS graduate or less | 32.9 | (23.7-43.6) |
| Some college or more | 43.4 | (28.7-59.2) |
| Household Income | | |
| < \$25,000 | 52.4 | (38.8-65.7) |
| \$25,000 - \$49,999 | 37.5 | (21.0-57.6) |
| \$50,000+ | -- ^b | --- |

^a Among all Arab adults, the proportion who reported that they had not visited a dentist or dental clinic for any reason in the previous year. (N = 584).

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

No Dental Visit in Past Year, by Race/Ethnicity, Michigan, 2016





HIV Testing

2016 Arab BRFS

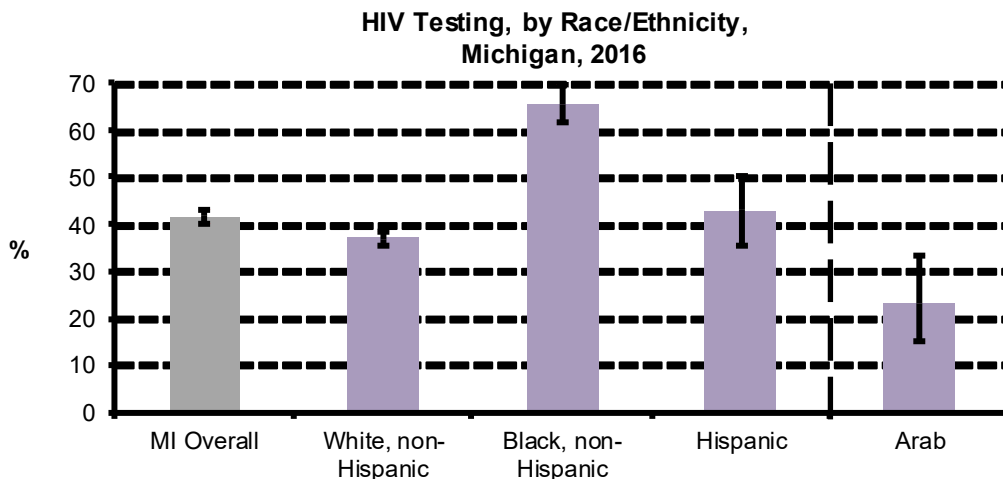
Early awareness of an HIV infection through HIV testing can prevent further spread of the disease, and an early start on antiretroviral therapy can increase the quality of life among those who are living with HIV/AIDS.⁴¹

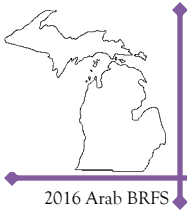
- ◆ In 2016, an estimated 23.1% of Arab adults aged 18-64 years reported ever being tested for HIV significantly lower than (41.4%) of all Michigan adults aged 18-64 years (95% CI: 40.0-42.9).
- ◆ The prevalence of HIV testing tended to increase with increasing age.
- ◆ Arab females reported a lower prevalence of HIV testing than Arab males.
- ◆ The prevalence of HIV testing was significantly higher among Arab adults with some college or more compared to Arab adults with a high school degree or less.
- ◆ The prevalence of HIV testing generally increased with increasing household income level.
- ◆ In 2016, Arab adults (23.1%) reported a significantly lower prevalence of HIV testing than Black, non-Hispanics (65.6%). In other words, Black, non-Hispanic adults reported ever being tested for HIV 2.8 times that of Arab adults in Michigan. The prevalence of testing among Arab adults did not significantly differ from that of White, non-Hispanic and Hispanic adults.

| Arab Demographic Characteristics | Ever Had an HIV Test ^a | |
|----------------------------------|-----------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 23.1 | (15.2-33.6) |
| Age | | |
| 18 - 44 | 17.4 | (11.4-25.7) |
| 45 - 64 | 33.5 | (17.3-54.9) |
| Gender | | |
| Male | 25.7 | (17.0-36.9) |
| Female | 20.4 [†] | (8.7-40.8) |
| Education | | |
| HS graduate or less | 10.5 | (5.8-18.2) |
| Some college or more | 33.7 | (20.1-50.6) |
| Household Income | | |
| < \$25,000 | 17.9 | (10.8-28.2) |
| \$25,000 - \$49,999 | 28.2 [†] | (12.1-52.8) |
| \$50,000+ | 27.4 [†] | (10.7-54.4) |

^a Among Arab adults aged 18-64 years, the proportion who reported that they ever had been tested for HIV, apart from tests that were part of a blood donation. (N = 537)

[†] This estimate should be used with caution due to its low reliability and precision.





Asthma

2016 Arab BRFSS

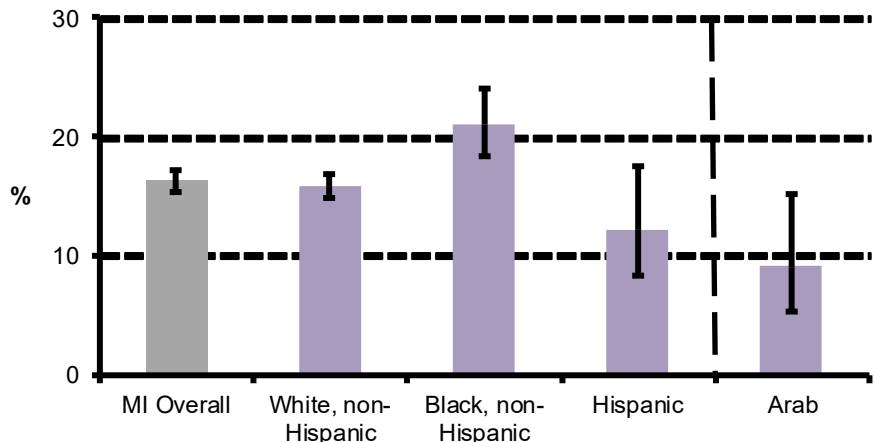
Asthma is a chronic inflammatory disorder of the lungs, characterized by wheezing, coughing, difficulty breathing, and chest tightness. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few of the potential risk factors that are associated with the development of asthma.⁴²

- ◆ In 2016, an estimated 9.1% of Arab adults reported that they were ever diagnosed with asthma, significantly lower than 16.3% (95% CI: 15.4-17.2) all Michigan adults.
- ◆ Arab adults (6.3%) reported a lower prevalence of current asthma than 10.9% (95% CI: 10.2-11.7) all Michigan adults, although the differences were not significant.
- ◆ The prevalence of lifetime and current asthma tended to increase with increasing age.
- ◆ The prevalence of lifetime asthma generally increased with increasing education level.
- ◆ Arab males reported a higher prevalence of lifetime asthma than Arab females.
- ◆ In 2016, the prevalence of Arab adults who reported ever being diagnosed with asthma was significantly lower than Black, non-Hispanic adults (21.0% [95% CI: 18.2-24.0]).
- ◆ In 2016, the prevalence of Arab adults who reported current asthma did not significantly differ from that of any of the other racial/ethnic groups in Michigan (data not shown).

| Arab Demographic Characteristics | Lifetime Asthma ^a | | Current Asthma ^b | |
|----------------------------------|------------------------------|-------------------------|-----------------------------|-------------------------|
| | % | 95% Confidence Interval | % | 95% Confidence Interval |
| Total | 9.1 | (5.3-15.2) | 6.3[†] | (3.0-12.9) |
| Age | | | | |
| 18 - 44 | 5.9 | (3.5-9.9) | 2.3 [†] | (1.0-4.9) |
| 45 - 64 | 11.2 [†] | (4.6-25.0) | 9.8 [†] | (3.6-24.3) |
| 65+ | -- ^c | --- | -- ^c | --- |
| Gender | | | | |
| Male | 11.2 [†] | (5.1-23.1) | -- ^c | --- |
| Female | 6.8 | (4.0-11.1) | 4.4 [†] | (2.3-8.1) |
| Education | | | | |
| HS graduate or less | 6.8 [†] | (2.6-16.8) | -- ^c | --- |
| Some college or more | 10.6 [†] | (5.3-20.0) | -- ^c | --- |
| Household Income | | | | |
| < \$25,000 | 8.4 | (4.8-14.4) | 4.9 [†] | (2.3-9.9) |
| \$25,000 - \$49,999 | -- ^c | --- | -- ^c | --- |
| \$50,000+ | 6.0 [†] | (2.6-13.1) | -- ^c | --- |

^a Among all Arab adults, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma. (N = 590)
^b Among all adults, the proportion reporting that they still have asthma. (N = 586)
^c This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.
[†] This estimate should be used with caution due to its low reliability and precision.

Lifetime Asthma, by Race/Ethnicity, Michigan, 2016





Arthritis

2016 Arab BRFSS

Arthritis and rheumatism are the leading causes of disability within the United States. These conditions have been diagnosed in an estimated 50 million U.S. adults.⁴³

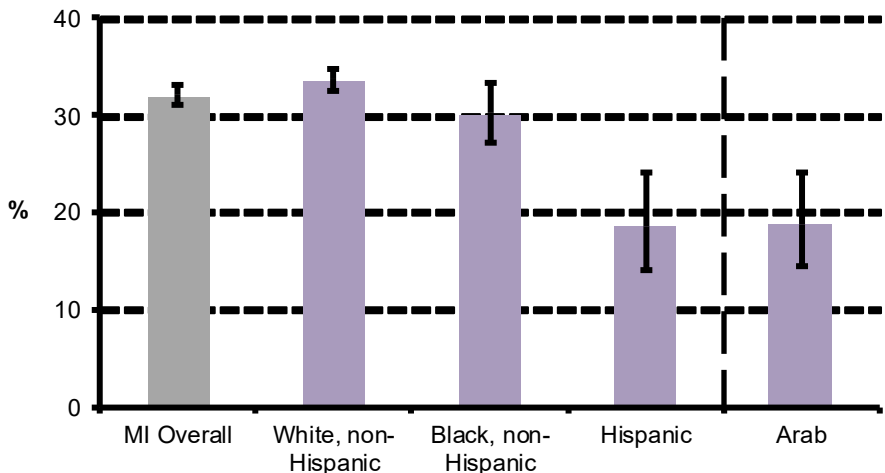
- ◆ In 2016, an estimated 18.8% of Arab adults reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, significantly less than all Michigan adults (32.0% [95% CI: 31.0-33.0]).
- ◆ The prevalence of arthritis among Arab adults increased with age. Arab adults aged 18 to 44 years (6.4%) were significantly less likely to report having arthritis compared to Arab adults aged 45 to 64 years (35.8%) and 65 years and older (42.9%).
- ◆ Arab females reported a higher prevalence of arthritis than Arab males.
- ◆ Arab adults with a high school education or less (31.3%) were significantly more likely to have arthritis than Arab adults with some college or more (8.2%).
- ◆ The prevalence of arthritis generally decreased with increasing household income level.
- ◆ In 2016, Arabs (18.8%) reported a significantly lower prevalence of arthritis than White, non-Hispanics (33.6%) and Black, non-Hispanics (30.1%). Thus, White, non-Hispanics had a prevalence 1.8 times that of Arabs and Black, non-Hispanics had a prevalence 1.6 times that of Arabs in Michigan.

| Arab Demographic Characteristics | Ever Told Arthritis ^a | |
|----------------------------------|----------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 18.8 | (14.5-24.0) |
| Age | | |
| 18 - 44 | 6.4 | (3.6-11.2) |
| 45 - 64 | 35.8 | (24.6-48.8) |
| 65+ | 42.9 | (27.0-60.3) |
| Gender | | |
| Male | 14.6 | (8.8-23.2) |
| Female | 23.7 | (16.8-32.3) |
| Education | | |
| HS graduate or less | 31.3 | (23.1-40.9) |
| Some college or more | 8.2 | (5.4-12.3) |
| Household Income | | |
| < \$25,000 | 25.7 | (17.8-35.7) |
| \$25,000 - \$49,999 | 14.0 | (7.6-24.5) |
| \$50,000+ | 9.6 [†] | (4.7-18.6) |

^a Among all Arab 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 = 583)

[†] This estimate should be used with caution due to its low reliability and precision.

Arthritis, by Race/Ethnicity, Michigan, 2016





Cardiovascular Disease

2016 Arab BRFSS

Heart disease and stroke are the first and fourth leading causes of death, respectively, in both Michigan and the United States.⁴⁴

- ◆ In 2016, an estimated of 3.6% (95% CI: 2.1-6.0) of Arab adults had ever been told by a doctor that they had a heart attack, and 3.3% (95% CI: 2.0-5.5) had ever been told they had angina or coronary heart disease. This compared to 5.0% (95% CI: 4.5-5.4) and 5.1% (95% CI: 4.7-5.6) of all adults in Michigan, respectively.
- ◆ When combining all three measures into one indicator, an estimated 5.3% of Arab adults have ever been told by a doctor that they had some form of cardiovascular disease, significantly lower than 9.9% (95% CI: 9.3-10.5) of all Michigan adults.
- ◆ The prevalence of cardiovascular disease generally increased with age.
- ◆ The prevalence of cardiovascular disease generally decreased with increasing education and household income levels.
- ◆ In 2016, the prevalence of Arab adults who reported ever being diagnosed with cardiovascular disease was significantly lower than White, non-Hispanic (10.3% [95% CI: 9.6-11.0]) adults in Michigan.

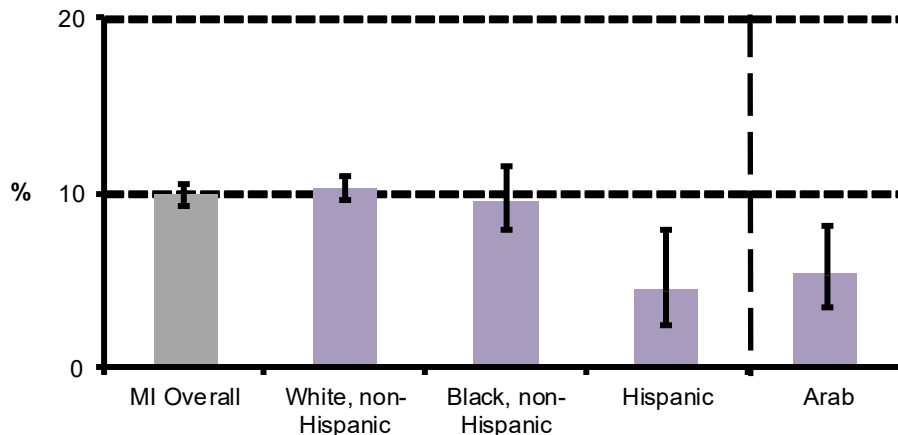
| Arab Demographic Characteristics | Ever Told Some Form of Cardiovascular Disease ^a | |
|----------------------------------|--|-------------------------|
| | % | 95% Confidence Interval |
| Total | 5.3 | (3.5-8.1) |
| Age | | |
| 18 - 44 | -- ^b | --- |
| 45 - 64 | 9.4 | (5.2-16.4) |
| 65+ | 11.0 | (6.0-19.3) |
| Gender | | |
| Male | 6.3 | (3.7-10.6) |
| Female | 4.2 [†] | (2.0-8.9) |
| Education | | |
| HS graduate or less | 6.2 | (3.4-10.8) |
| Some college or more | 4.7 | (2.5-8.8) |
| Household Income | | |
| < \$25,000 | 8.4 | (4.8-14.5) |
| \$25,000 - \$49,999 | -- ^b | --- |
| \$50,000+ | 3.2 [†] | (1.2-8.5) |

^a Among all Arab adults, the proportion who reported that had been told by a doctor that they had a heart attack or myocardial infarction, they had angina or coronary heart disease, or they had a stroke. (N = 585)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Ever Told Any CVD, by Race/Ethnicity, Michigan, 2016



All Arab prevalence estimates used data from the 2016 Arab BRFSS while estimates for Michigan overall as well as White, Black, and Hispanic estimates used data from the 2016 Michigan BRFSS.



Diabetes

2016 Arab BRFS

Diabetes is the seventh leading cause of death in both Michigan and the United States.⁴⁴ 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.⁴⁵

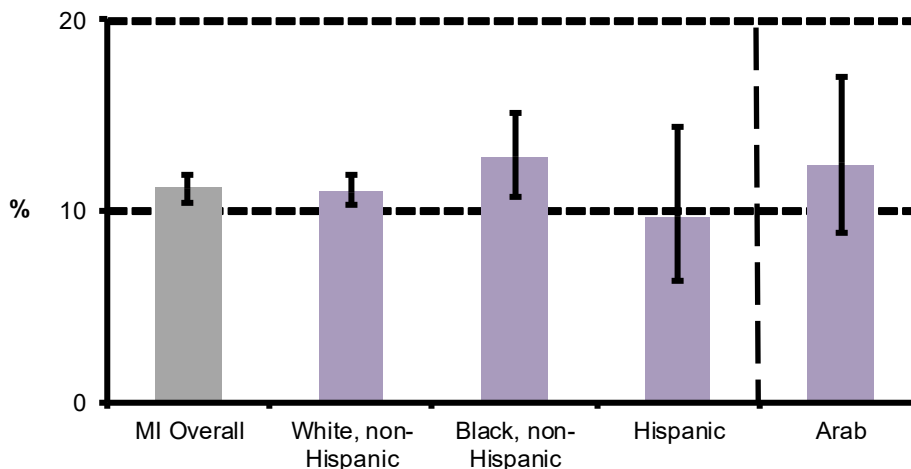
- ◆ In 2016, an estimated 12.4% of Arab adults reported ever being told by a doctor that they had diabetes, similar to 11.2% (95% CI: 10.5-11.8) of all Michigan adults.
- ◆ The prevalence of diabetes was significantly lower among Arab adults aged 18-44 (2.9%) than Arab adults aged 45-64 (22.2%) and Arab adults aged 65+ (36.4%).
- ◆ The prevalence of diabetes was significantly lower among Arab adults with some college or more than Arab adults with a high school degree or less.
- ◆ The prevalence of diabetes generally decreased with increasing household income level.
- ◆ Males reported a higher prevalence of ever being told they had diabetes than females.
- ◆ In 2016, the prevalence of Arab adults who reported ever being diagnosed with diabetes did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

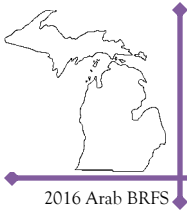
| Arab Demographic Characteristics | Ever Told Diabetes ^a | |
|----------------------------------|---------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 12.4 | (8.9-17.0) |
| Age | | |
| 18 - 44 | 2.9 [†] | (1.4-6.2) |
| 45 - 64 | 22.2 | (13.1-35.1) |
| 65+ | 36.4 | (22.4-53.1) |
| Gender | | |
| Male | 13.0 | (7.7-21.3) |
| Female | 11.7 | (7.7-17.3) |
| Education | | |
| HS graduate or less | 19.5 | (13.0-28.3) |
| Some college or more | 6.6 | (4.1-10.7) |
| Household Income | | |
| < \$25,000 | 16.2 | (10.5-24.0) |
| \$25,000 - \$49,999 | 10.5 [†] | (5.3-19.7) |
| \$50,000+ | 6.7 [†] | (2.8-14.8) |

^a Among all Arab 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 = 590)

[†] This estimate should be used with caution due to its low reliability and precision.

Diabetes, by Race/Ethnicity, Michigan, 2016





Depression

2016 Arab BRFSS

Depression is a common and treatable medical disorder that is more common among individuals with chronic conditions such as obesity, diabetes, and arthritis.⁴⁶

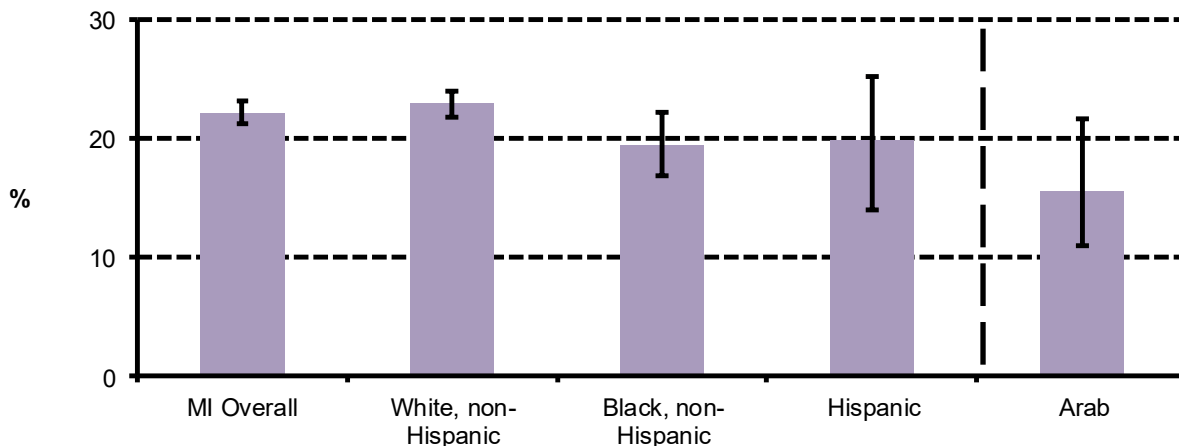
- ◆ In 2016, an estimated 15.6% of Arab adults reported ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression. This compared to 22.0% of all adults in Michigan (95% CI: 21.1-23.0).
- ◆ Arab females reported a lower prevalence of depression than Arab males, although the difference was not significant.
- ◆ The prevalence of depression was significantly lower among Arab adults with some college or more than Arab adults with a high school degree or less.
- ◆ The prevalence of depression was significantly lower among Arab adults with a household income of \$50,000+ (5.6%) than among Arab adults with a household income of <\$25,000 (20.1%).
- ◆ In 2016, the prevalence of Arab adults who reported ever being diagnosed with depression did not significantly differ from that of any of the other racial/ethnic groups in Michigan.

| Arab Demographic Characteristics | Ever Told Depression ^a | |
|----------------------------------|-----------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 15.6 | (11.0-21.7) |
| Age | | |
| 18 - 44 | 10.5 | (6.0-17.5) |
| 45 - 64 | 27.4 | (16.1-42.5) |
| 65+ | 11.9 [†] | (6.4-20.9) |
| Gender | | |
| Male | 19.1 | (11.3-30.4) |
| Female | 11.8 | (7.9-17.4) |
| Education | | |
| HS graduate or less | 24.7 | (16.0-36.1) |
| Some college or more | 8.2 | (5.2-12.6) |
| Household Income | | |
| < \$25,000 | 20.1 | (13.2-29.4) |
| \$25,000 - \$49,999 | 19.6 [†] | (7.3-42.9) |
| \$50,000+ | 5.6 [†] | (2.5-11.9) |

^a Among all Arab 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 = 529)

[†] This estimate should be used with caution due to its low reliability and precision.

Depression, by Race/Ethnicity, Michigan, 2016





Major Depression

2016 Arab BRFS

Major depression is a common and treatable mental disorder. Current major depression is determined based on responses to the Patient Health Questionnaire 8 (PHQ-8), which covers eight of the nine criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) for diagnosis of major depressive disorder.¹¹⁻¹²

- ◆ In 2016, an estimated 11.4% of Arab adults scored at least 10 points or greater, resulting in a classification of major depression.
- ◆ Arab males reported a higher prevalence of major depression than Arab females.
- ◆ The prevalence of major depression was lower among Arab adults with some college or more than Arab adults with a high school degree or less.
- ◆ The prevalence of major depression generally increased with increasing age and decreased with increasing household income.

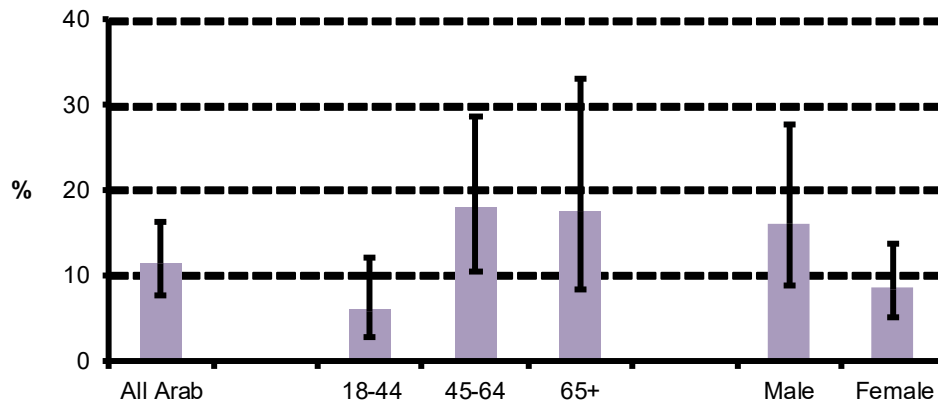
| Arab Demographic Characteristics | Major Depression ^a | |
|----------------------------------|-------------------------------|-------------------------|
| | % | 95% Confidence Interval |
| Total | 11.4 | (7.8-16.4) |
| Age | | |
| 18 - 44 | 5.9 [†] | (2.8-12.1) |
| 45- 64 | 17.8 | (10.6-28.4) |
| 65+ | 17.4 [†] | (8.3-33.0) |
| Gender | | |
| Male | 16.1 | (8.9-27.5) |
| Female | 8.4 | (5.1-13.7) |
| Education | | |
| HS graduate or less | 15.7 | (9.8-24.3) |
| Some college or more | 7.3 [†] | (3.9-13.4) |
| Household Income | | |
| < \$25,000 | 17.7 | (10.4-28.5) |
| \$25,000 - \$49,999 | 12.4 [†] | (5.7-24.8) |
| \$50,000+ | -- ^b | --- |

^a Calculated from responses to Q.1-8 of the CDC BRFSS Anxiety and Depression optional module. Responses in number of days were converted to points (0-1 days=0 points, 2-6 days=1 point, 7-11 days=2 points, 12-14 days=3 points). Points were summed across the eight questions and a total of 10 points or greater was classified as major depression. (N = 395)

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

[†] This estimate should be used with caution due to its low reliability and precision.

Major Depression Among Arab Adults, Michigan, 2016





Adverse Childhood Experiences

2016 Arab BRFs

Adverse childhood experiences can include physical, verbal, or sexual abuse, as well as family dysfunction (e.g., physical abuse in the household between adults, parent separation/divorce, someone in the family had substance abuse problems, mental illness, incarceration).⁴⁷ These have been linked to adverse health outcomes later in adulthood, including depression, substance abuse, chronic conditions such as diabetes, cardiovascular disease and cancer, as well as premature mortality.⁴⁸⁻⁵⁰

- ◆ In 2016, an estimated 10.6% of Arab adults reported being physically abused one or more times as a child, compared to 17.2% (95% CI: 15.6-18.9) of all Michigan adults in 2013.
- ◆ In 2016, an estimated 16.5% of Arab adults reported being verbally abused one or more times as a child, compared to 35.3% (95% CI: 33.2-37.4) of all adults in Michigan in 2013.
- ◆ In 2016, an estimated 3.7% of Arab adults reported their parents were separated or divorced.

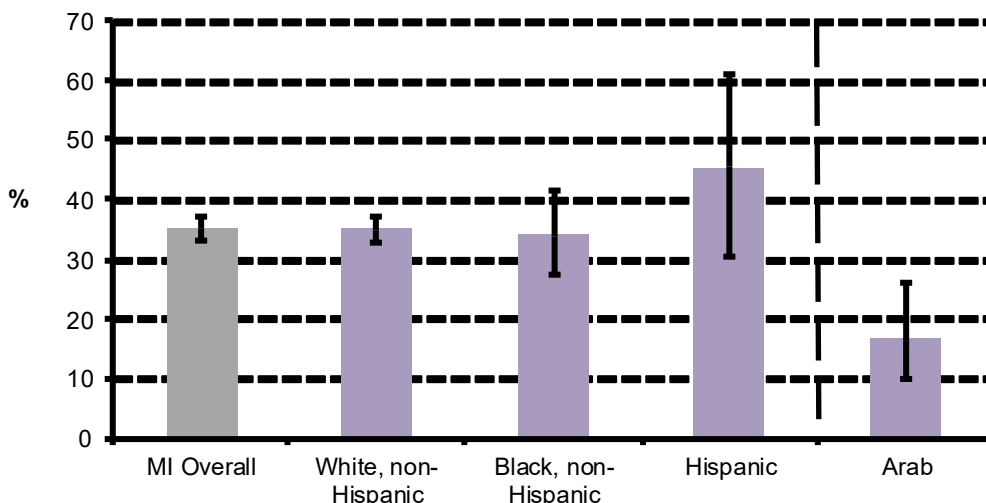
| | % | 95% Confidence Interval |
|--|--------------|-------------------------|
| Physically Abused as a Child^a | 10.6† | (5.1-20.9) |
| Verbally Abused as a Child^b | 16.5 | (10.0-26.1) |
| Parents Were Separated/Divorced^c | 3.7 | (2.2-6.2) |

Adverse childhood experiences referred to the time period before the respondents were 18 years of age. Among all Arab adults the proportion who reported: ^a being physically abused as a child one or more times (N = 444), ^b being verbally abused as a child one or more times (N = 440), ^c that their parents separated or divorced as a child (N = 449)

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

- ◆ In 2016, the prevalence of being verbally abused one or more times as a child among Arab adults (16.5%) was significantly lower compared to all other racial/ethnic groups in Michigan in 2013.

Verbally Abused as a Child by Race/Ethnicity, Michigan, 2013-2016





Reactions to Race

2016 Arab BRFS

“Race” can be a strong predictor of health outcomes, even though “race” is widely recognized as a social construct.⁵¹ A person’s self-assigned race/ethnicity can often be distinct from their race assigned by society. Research using BRFSS data from various states found advantages in health status among Hispanics socially assigned as White compared to those socially assigned as Hispanic.⁵¹

- ◆ In 2016, among self-identified Arab adults, an estimated 64.4% reported being classified by others in this country as Arab/Chaldean and 27.9% reported being classified as White.
- ◆ The frequency of Arab adults being identified by others as White generally increased with increasing age, household income and education level, although the differences were not significant.
- ◆ Arab females (31.9% [95% CI: 14.3-56.7]) reported a higher prevalence of being classified as White than Arab males (21.5% [95% CI: 13.2-33.2]).
- ◆ Although the majority of Arab adults reported being treated the same as other races at work (91.2%) and having a similar health care experience as other races (84.3%), about 5% reported treatment at work and about 2% reported health care experiences worse than other races.

| | % | 95% Confidence Interval |
|--|------------------|-------------------------|
| “Socially Assigned Race”^a | | |
| Arab/Chaldean | 64.4 | (48.1-78.0) |
| White | 27.9 | (15.7-44.6) |
| Other | -- ^d | --- |
| Treatment at Work Compared to Other Races^b | | |
| Worse than other races | 5.0 [†] | (2.2-10.7) |
| The same as other races | 91.2 | (84.4-95.2) |
| Better than other races | 3.3 [†] | (1.5-7.0) |
| Worse than some races, better than others | | |
| Health Care Experiences Compared to Other Races^c | | |
| Worse than other races | 1.9 [†] | (0.8-4.8) |
| The same as other races | 84.3 | (78.1-89.0) |
| Better than other races | 13.1 | (8.9-18.9) |
| No health care in past 12 months | -- ^d | --- |

^a Among all self-identified Arab adults, their “socially assigned race” was measured by the response to the question, “How do other people usually classify you in this country?” (N = 344)

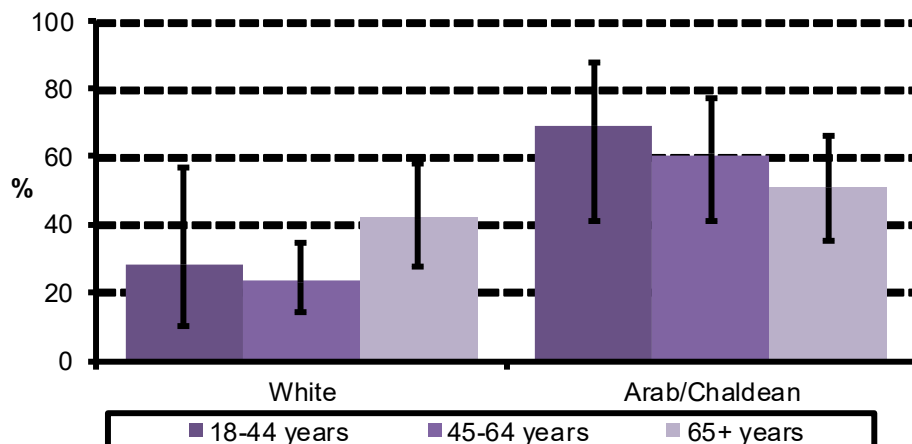
^b Among all Arab adults, how they reported they were treated at work compared to other races, in the past 12 months. (N = 151)

^c Among all Arab adults, how they reported their experiences, when seeking health care compared to other races, in past 12 months. (N = 367)

^d This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%.

[†] This estimate should be used with caution due to its low reliability and precision.

“Socially Assigned Race” Among Self-Identified Arab/Chaldean Adults by Age Group, Michigan, 2016





Reactions to Race, continued

2016 Arab BRFSS

How often a person thinks about their race can help explain the importance race plays in their daily interactions.⁵² 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. A study using BRFSS data from various states found that persons who constantly thought about their race were less likely to be screened for colorectal cancer.⁵²

- ◆ Almost half (47.5%) of Arab adults reported never thinking about their race while 23.2% reported thinking about their race once an hour to constantly.
- ◆ A higher proportion of Arab females reported never thinking about their race (50.0% [95% CI: 30.6-69.4]) compared to Arab males (43.6% [95% CI: 28.5-59.9]).
- ◆ A higher proportion of Arab males (34.9% [95% CI: 17.4-57.8])[†] reported thinking about their race once an hour to constantly compared to Arab females (16.0% [95% CI: 10.2-24.0]).
- ◆ A higher proportion of Arab adults with less than a high school education (63.6% [95% CI: 52.0-73.8]) reported never thinking about their race compared to Arab adults with some college or more (33.0% [95% CI: 15.4-57.1]).

| | % | 95% Confidence Interval |
|--|-------------------|-------------------------|
| Race Consciousness^a | | |
| Once an hour to constantly | 23.2 | (13.5-36.9) |
| Once a week to once a day | 19.5 [†] | (8.5-38.6) |
| Once a month | 6.3 | (4.2-9.5) |
| Once a year | 3.4 [†] | (1.9-6.2) |
| Never | 47.5 | (33.9-61.6) |
| Physical Symptoms Due to How Treated Based on Race^b | | |
| | 6.7 | (4.5-10.0) |
| Emotional Symptoms Due to How Treated Based on Race^c | | |
| | 4.2 | (2.5-7.0) |

^a Among all Arab adults, race consciousness was measured by asking, "How often do you think about your race?" (N = 370)

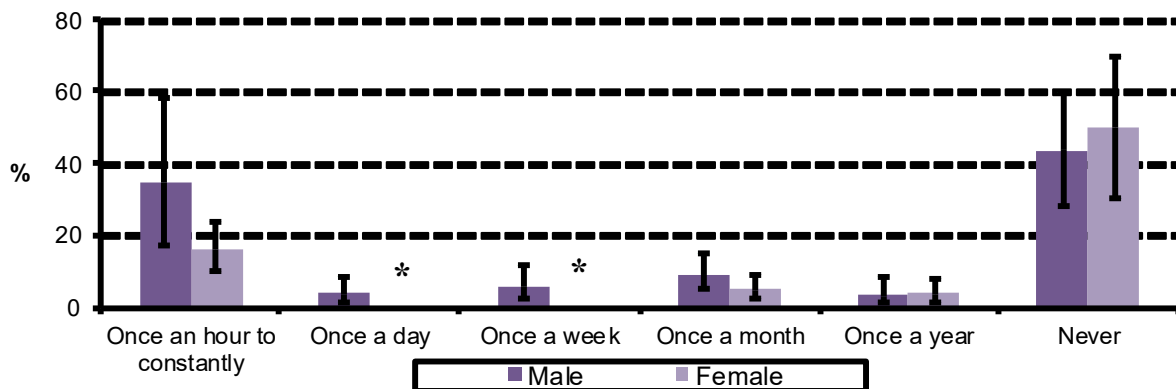
^b Among all Arab adults, the proportion who reported experiencing any physical symptoms, for example, a headache, an upset stomach, tensing of muscles, or a pounding heart, as a result of how they were treated based on their race within the past 30 days. (N = 397)

^c Among all Arab adults, the proportion who reported experiencing emotionally upset, for example angry, sad, or frustrated, as a result of how they were treated based on their race within the past 30 days. (N = 397)

[†] This estimate should be used with caution due to its low reliability and precision.

- ◆ An estimated 6.7%[†] of Arab adults reported having physical symptoms as a result of how they were treated based on their race in the past 30 days, while 4.2% reported having emotional symptoms as a result of how they were treated based on race in the past 30 days.

Among Arab Adults, How Often Think About Race by Gender, Michigan, 2016



*The prevalence estimates were excluded from the graph due to the denominator being less than 50 and/or a relative standard error of greater than 50%.



Arab BRFS Methods

2016 Arab BRFS

The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of non-institutionalized Michigan adults, aged 18 years and older, conducted to collect prevalence data of the adult population 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 of the Centers for Disease Control and Prevention (CDC), the Michigan State University Institute for Public Policy and Social Research (IPPSR), and the Michigan Department of Health and Human Services (MDHHS). Michigan Behavioral Risk Factor Surveillance System (MiBRFSS) data contribute to the CDC Behavioral Risk Factor Surveillance System (BRFSS) that is conducted within every state, the District of Columbia, and within several U.S. territories.

Although roughly 9,000 adults are interviewed each year in the MiBRFS, the sample contains relatively few respondents who are Arab. Without special over-sampling, the typical MiBRFS sample cannot reliably estimate health outcomes and behaviors within this group. Therefore, estimates for health outcomes and behaviors among Arab adults in Michigan are generally not available on a yearly basis and multiple years of data must be combined.

The MDHHS Health Disparities Reduction and Minority Health Section (HDRMHS) has as a priority to improve the availability of health related data for racial and ethnic minorities in Michigan. In keeping with this priority, the HDRMHS arranged for a stand-alone survey among Arabs in Michigan, and in 2016, the Arab Behavioral Risk Factor Survey (BRFS) was conducted in partnership with the Lifecourse Epidemiology and Genomics Division. The project was a multidisciplinary effort with assistance from MSU IPPSR, MSU Office of University Outreach and Engagement, MSU Department of Sociology, Wayne State University, Saginaw Valley State University, and the Arab Community Center for Economic and Social Services (ACCESS). The Arab BRFS included interviews from two different data sources: (1) interviews from Michigan Arab adults conducted by a stand-alone survey overseen by the IPPSR and (2) Arab interviews included in the 2016 MiBRFS sample.

Sampling companies have developed surname targeted databases for populations such as Hispanics/Latinos and Asians/Pacific Islanders, but they have not done so for Arab/Chaldeans. Dr. Kendra Schwartz at Wayne State University's School of Medicine and a team under her direction developed an Arab/Chaldean surname database used primarily for medical studies. The surname database was developed by compiling the first and last names of individuals who identified their race/ethnicity as Arab or Chaldean or their birthplace/ancestry from a country in the Arab League (Algeria, Bahrain, Djibouti, Egypt, Ethiopia, the Gaza Strip, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, North Africa, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen, and the Western Sahara). Names were extracted from sources including birth and death certificates, cancer registries, telephone directories, internet queries, and lists from local community/religious centers.⁵² The resulting database contained 9,225 unique surnames, which was later enhanced to include more than 12,000 unique surnames.⁵³⁻⁵⁴ The surname database was found to have a validity of 90.8%.⁵⁴

For purposes of sampling, the percentage of the population with Arab/Chaldean ancestry was examined for each census tract in Michigan using data from the American Community Survey. Those tracts in which the percentage of residents with Arab/Chaldean ancestry was greater than or equal to 10% were aggregated to form a high density stratum. Those in which the percentage was greater than or equal to 4% but less than 10% were aggregated to form a medium density stratum. Lastly, those with a percentage of the population less than 4% were aggregated to form a low density stratum. Addresses of the directory-listed subscribers were placed into the stratum in which each listed phone number belonged. Telephone numbers were randomly selected from within each of the three strata, with the low density stratum being sampled at a lower rate. The name and address of the listed subscriber for each sampled telephone number was extracted along with the phone number. The resulting samples of phone numbers and subscriber names were then evaluated by Schwartz's team to identify subscriber names that matched surnames in the surname database. Those that matched were identified for subsequent calling. Those that did not match were excluded from subsequent calling as ineligible. Although this study did not include a sample of unlisted landline phone numbers, a disproportionately stratified cell phone sample was selected and called. Since cell phone numbers cannot be directly connected to the street address of the subscriber, the geographic stratification to correspond to that used for the landline sample was an approximation at best.

The first screening of landline-listed samples against Schwartz's surname database yielded low response rates, so a second sample had to be ordered. The second sample only included medium and high stratum density strata. The results of both samples found 5,116 matches for the 18,600 listed phone numbers in the high density stratum. The medium density stratum had 1,712 matches for the 27,001 listed phone numbers and the low density stratum had 596 matches for the 31,050 listed phone numbers.



Arab BRFSS Methods, continued

2016 Arab BRFSS

OSR mailed advance notice letters in both English and Arabic to the address listed portions of the sample roughly one week prior to releasing a random subset of the entire available sample for calling. Interviews were conducted in both Arabic and English.

A detailed description of the 2016 MiBRFS methodology can be found in the annual report that is available online (www.michigan.gov/brfs). OSR used the 2016 CDC BRFSS Raking methodology weighting procedure was used to weight the data. This weighting methodology differs from the 2013 Arab BRFSS weighting methodology, so comparisons to previous year must be done with caution. This weighting methodology assigns a stratum weight to the data based on the probability of selection from the sampling frame within a stratum. The design weight is calculated from the stratum weight by taking into account the household probability of selection. The stratum weight and design weight are identical for the cell sampling frame and a correction is made to take into account overlapping sampling frames (landline, cellphone). The iterative proportional fitting weighting methodology was also conducted to maximize the representativeness of the sample findings by adjusting the sample to match: telephone usage group, age recorded in three categories, gender, homeowner status, marital status recorded in three categories, education recorded in four categories, age recorded in seven categories by gender. The population numbers used for weighting were from the American Community Survey, 2015 5-year estimates.

Prevalence estimates and asymmetric 95% confidence intervals (95% CIs) were calculated using SAS-Callable SUDAAN (version 11.0.1), a statistical computing program that was designed for analyzing data from multistage sample surveys.⁵⁵ If the 95% CIs for two estimates from different subpopulations did not overlap, they were considered to be statistically different. When prevalence estimates had low reliability and precision, general comparisons and trends were noted. Unless otherwise specified, respondents who answered that they did not know or refused to answer were not included in the calculation of estimates. For comparison purposes, the statewide prevalence estimates as well as White non-Hispanic, Black non-Hispanic, and Hispanic prevalence estimates were used from the 2016 MiBRFS. For the indicators related to high blood pressure, cholesterol awareness, adequate physical activity, and secondhand smoke exposure the 2015 MiBRFS was used for comparison, because these questions were not asked in 2016 MiBRFS.

The questionnaire for the 2016 Arab BRFSS stand-alone survey included additional questions not asked in the 2015 or 2016 MiBRFS; therefore, the following indicators had results from the stand-alone survey interviews only: cultural characteristics, food access, health care location, language used with doctor, preventive health behaviors, social context and reactions to race. Some of the 2016 Arab BRFSS indicators were not reported due to low reliability and precision and these included: chronic obstructive pulmonary disease (COPD), cancer, and kidney disease. There were additional questions in the 2016 Arab BRFSS that were not included in the 2013 Arab BRFSS, so those indicators are not available for comparison between the two years, including the major depression and food access modules.

In addition to this report, the MDHHS HDRMHS will also be releasing Briefs that highlight additional results from the 2016 Arab BRFSS. These publications will be posted on the MiBRFSS website (www.michigan.gov/brfs) and the HDRMHS website (www.michigan.gov/minorityhealth).

Sample Results for the 2016 Arab BRFSS

The total sample size for the 2016 Arab BRFSS was 592 (stand-alone survey of Arab adults=428, Arab interviews from 2016 MiBRFS=164). The AAPOR⁵⁶ completion rate for the stand-alone survey portion of the 2016 Arab BRFSS was 20.0%. The overall weighted AAPOR response rate (landline and cell phones combined) for the 2016 MiBRFS was 49.6%, while the overall weighted U.S. median response rate for 2016 was 47.0%.⁵⁷ Over a third (38.0%) of the Arab BRFSS interviews were conducted in Arabic. Five Arab respondents included in the sample from the 2016 MiBRFS were both Arabic and Hispanic. These respondents were included in both the Hispanic and Arab group estimates. Therefore, Arab respondents in this report are of both Hispanic and non-Hispanic origin.



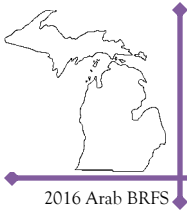
2016 Arab BRFSS

Acknowledgements

Data were collected for the 2016 Arab Behavioral Risk Factor Survey by the Institute for Public Policy and Social Research, Office for Survey Research, at Michigan State University. The authors are grateful to Linda Stork, Debra Rusz, Delicia Solis and the many BRFSS interviewers for conducting the survey. In addition, the authors would like to thank Kimberly Hekman, the former Health Disparities Epidemiologist. This project was a collaborative effort with help from the Michigan State University Outreach and Engagement (Miles McNall), Michigan State University Department of Sociology (Stephanie Nawyn), Saginaw Valley State University (Rosina Hassoun), Arab Community Center for Economic and Social Services (ACCESS) (Madiha Tariq, Mona Makki), National Arab American Medical Association (NAAMA) (Adnan Hammad). The authors would like to thank Dr. Abdul El-Sayed of Columbia University and Dr. May Darwish-Yassine of MPHI for their assistance with reviewing the report.

The MiBRFS-related assistance provided by the Population Health Surveillance Branch at the Centers for Disease Control and Prevention in Atlanta, Georgia is also appreciated.

We are especially grateful to the residents of Michigan who agreed to participate in this survey.



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2016 Arab BRFSS

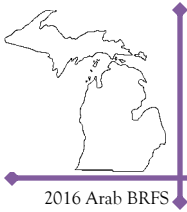
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