MAYO CLINIC

Community Health Needs Assessment

Mayo Clinic in Arizona

November 2016

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Executive Summary

***Enterprise Overview**:*

Mayo Clinic is a not-for-profit, worldwide leader in patient care, research and education. Each year, Mayo Clinic serves more than 1 million patients from communities throughout the world, offering a full spectrum of care from health information, preventive and primary care to the most complex medical care possible. Mayo Clinic provides these services through many campuses and facilities, including 21 hospitals located in communities throughout the United States, including Arizona, Florida, Minnesota, Wisconsin and Iowa.

Mayo Clinic provides a significant benefit to all communities, local to global, through its education and research endeavors. Mayo Clinic reinvests its net operating income funds to advance breakthroughs in treatments and cures for all types of human disease and quickly bring this new knowledge to patient care. With its expertise and mission in integrated, multidisciplinary medicine and academic activities, Mayo Clinic is uniquely positioned to advance medicine and bring discovery to practice more efficiently and effectively. Through its Centers for the Science of Health Care Delivery and Population Health Management, Mayo Clinic explores and advances affordable, effective health care models to improve quality, efficiency and accessibility in health care delivery to people everywhere.

Entity Overview:

Mayo Clinic Hospital, completed in the fall of 1998, was the first hospital planned, designed and built by Mayo Clinic in Arizona. Today the hospital is a seven-story facility with 268 licensed beds, 21 operating rooms and a Level II emergency department.

Mayo Clinic Hospital is located in northeast Phoenix, 14 miles from the Mayo Clinic campus in Scottsdale. The Phoenix campus of Mayo Clinic also houses a specialty clinic and another outpatient clinic that is home to the Mayo Clinic Cancer Center, whose proton beam technology provides an advanced form of cancer treatment that precisely targets tumors while sparing healthy tissues and organs.

Mayo Clinic Hospital was ranked #1 hospital in Arizona by *U.S. News & World Report* in 2016; Mayo Clinic overall was ranked #1 in the U.S.

Mayo Clinic's Arizona campus ranked nationally in: cancer (26); cardiology and heart surgery (40); diabetes and endocrinology (50); ear, nose and throat (28); gastroenterology and gastroenterology surgery (8); geriatrics (16); nephrology (28); neurology and neurosurgery (45); orthopedics (46); pulmonology (30); and urology.

Summary of Community Health Needs Assessment:

This Community Health Needs Assessment (CHNA) identifies and prioritizes significant health needs of the community served by Mayo Clinic in Arizona. The priorities help guide the hospital's community health improvement programs and activities, as well as its collaborative efforts with other organizations that share a mission to improve health. Beginning in early 2015, Mayo Clinic, in partnership with the Maricopa County Coordinated Health Needs Assessment (CCHNA) collaborative, the Health Improvement Partnership of Maricopa County (HIPMC) and the Maricopa County Department of Public Health (MCDPH), conducted an assessment of the health needs of residents of Maricopa County.

Mayo Clinic in Arizona, Adelante Healthcare, Banner Health, Dignity Health, Health Care for the Homeless, Mountain Park Health Center, Native Health and Phoenix Children's Hospital joined forces with Maricopa County Department of Public Health (MCDPH) and the Maricopa County Health Improvement Partnership (HIPMC) to identify the communities' strengths and greatest needs in this coordinated community health needs assessment.

The process began with a review of nearly 100 indicators to measure health outcomes and associated health factors of Maricopa County residents. The indicators included demographic data, social and economic factors, health behaviors, physical environment, health care and health outcomes. Health needs were identified through the combined analysis of secondary data and community input. Based on the review of the secondary data, a consultant team developed a primary data collection guide used in focus groups, which were made up of representatives of minority and underserved populations who identified community concerns and assets.

Prioritization process

To be a considered a health need, a health outcome or factor had to meet two criteria: existing data had to demonstrate a worsening trend in recent years or indicate an apparent health disparity; and the health outcome or factor had to be mentioned in a substantial way in focus groups and key stakeholder meetings. Findings from primary and secondary data were reviewed and prioritized by the Mayo Clinic Community Advisory Board, Mayo Clinic in Arizona's Community and Business Relations Work Group and were approved by the Executive Operations Team.

Prioritized needs

In order of priority, the CHNA identified these community health needs for Mayo Clinic in Arizona:

1. **Access to Care**: Focus group participants overwhelmingly felt that access to care is an important issue for the community. In Maricopa County one out of every five residents lack health insurance and nearly 30% utilize publicly funded health insurance programs.[2] Additionally, there are disparities experienced across members of certain racial/ethnic backgrounds, with Hispanics and American Indians being least likely to have health insurance. The number of adults reporting they have a usual source of health care is decreasing, with one out of every three reporting they do not have a regular doctor they see for care.[3]

2. **Cancer:** While advancements continue to be made in the fight against cancer, it remains the leading cause of death for residents in Maricopa County since 2010. The highest site-specific cancer mortality rate is due to lung cancer.[4] Nationally, cancer mortality is higher among men than women with the highest rates in African-American men and the lowest rates in Asian/Pacific Islander women, which indicates a potential health disparity in cancer diagnoses, treatments or preventative care.[5]

3. **Cardiology:** Heart disease costs the United States about $207 billion each year.[6] This includes the cost of health care services, medications and lost productivity. In Maricopa County, heart disease is the second-leading cause of death.[7] Although white, non-Hispanics have the highest rates of cardiovascular disease-related mortality, African-Americans have the highest rate of emergency department visits, which indicates a potential health disparity in cardiovascular disease diagnoses, treatments or preventative care.[8]

4. **Chronic disease:** The overall rates of chronic disease in Maricopa County have remained stagnant since 2008. The primary risk factors for most chronic diseases include diabetes, overweight/obesity and hypertension. In 2013, 10.2 percent of Maricopa County adults responding to the Behavioral Risk Factor Surveillance System survey (BRFSS) reported having been told they have diabetes by a health care professional.[9] The percentage of adults who report being overweight and obese is decreasing. However, Hispanic residents continue to experience disparities related to obesity, and in 2013, 34.1 percent reported being obese.[10] Just over 28 percent of adults report being told they had high blood pressure by a health care professional.[11]

5. **Homelessness:** Maricopa County makes up 61 percent of Arizona's population, but an estimated 71 percent of the state's homeless population. In 2015, 5,631 individuals experienced homelessness in the county. Poverty, domestic violence, chronic health conditions, mental health issues and substance use commonly are attributed as driving factors in an individual or family becoming homeless. An astounding 37 percent of Maricopa County's homeless people are families, usually a single mom with kids. Homeless children are twice as likely to experience health problems. Chronically homeless individuals are the highest users of emergency rooms and hospital services.

6. **Neurology:** Neurological disorders rapidly have become a significant and growing problem. According to the World Health Organization, neurological impairments and their accompanying behavioral problems affect more that 450 million individuals worldwide as of 2010. Alzheimer's disease was the 5th leading cause of death of in Maricopa in 2013. In addition, the number of deaths due to Parkinson's disease increased from 2009-2013. The rate of inpatient admissions has decreased for many neurological disorders, such as migraines, epilepsy and seizures. However, the number of stroke-related emergency department visits has increased.

7. **Transplant:** Despite advances in medicine and technology and increased awareness of organ donation and transplantation, the gap between supply and demand continues to widen. In 2015, there were 2,130 individuals registered on the waitlist for solid organ transplant in

Arizona with over 80 percent waiting for a kidney transplant. The average wait time for a transplant is one to two years; however many individuals have been on the list for over five years.

This CHNA report was adopted by the Mayo Clinic-Arizona Executive Operations Team board on November 30, 2016. It is available to the public on the hospital's web site, (www.mayoclinic.org.) A paper copy also may be requested from Mayo Clinic Office of Public Affairs. Written comments on this report can be submitted to Marion K. Kelly, director Community & Business Relations, Mayo Clinic 13400 E. Shea Blvd., Scottsdale, AZ 85259, or by email at: kelly.marion@mayo.edu.

Our Community

Geographic Area:

The geographic area for this CHNA is Maricopa County, the common community for all partners participating in the CCHNA collaborative. The overwhelming majority of patients served by Mayo Clinic in Arizona are from Maricopa County. In addition, patients also are drawn from the rest of the state, surrounding states of the Southwest and internationally.

By population, Maricopa County is the fourth largest county in the United States. With an estimated population of 4 million and growing, it is home to more than half of Arizona's residents. The county encompasses 9,224 square miles and 27 cities and towns, as well as all or part of five sovereign American Indian reservations.

Demographics:

Maricopa County is ethnically and culturally diverse, home to more than 1.2 million Hispanics (30 percent), 197,000 African-Americans, 156,000 Asian-Americans and 65,000 American Indians. According to the U.S. Census Bureau, 14 percent of the population does not have a high school diploma, 17 percent are living below the federal poverty level and over 600,000 are uninsured.[1] Based on the census, the county had a 24 percent increase in population from 2000 to 2010. (Table 1.)

Table 1. Maricopa County and Arizona Resident Demographics

	Maricopa County	Arizona
Population: estimated 2009-2013	4,009,412	6,479,703
Gender		
• **Male**	49.5%	49.7%
• **Female**	50.5%	50.3%
Age		
• **0 to 9 years**	14.0%	13.9%
• **10 to 19 years**	14.0%	14.0%
• **20 to 34 years**	21.3%	20.5%
• **35 to 64 years**	37.3%	37.3%
• **65 to 84 years**	11.7%	12.7%
• **85 years and over**	1.7%	1.7%
Race		
• **White**	57.6%	57.3%
• **Asian/Pacific Islander**	3.9%	3.0%
• **Black or African American**	4.9%	3.9%
• **American Indian/Alaska Native**	1.6%	4.0%
• **Other**	2.0%	1.9%
Ethnicity		
• **Hispanic**	30.0%	29.9%

Source: U.S. Census Bureau

Assessing the Needs of the Community

Process and Methods:

This Community Health Needs Assessment used a mixed-methods approach that included the collection of secondary or quantitative data from existing data sources and community input or qualitative data from focus groups, and meetings with internal leadership. Both secondary and primary data were used to help inform each other. The advantage of using this approach is that it validates data by cross-verifying from a multitude of sources.

Secondary data

Many of the challenging health problems facing the United States in the 21st century require an understanding of the health, not just of individuals, but also of communities. The challenge of maintaining and improving community health has led to the development of a "population health" perspective.[18] A focus on population health encompasses a concern for the determinants of health for both individuals and communities. The health of a population grows directly out of the community's social and economic conditions, as well as the quality of its medical care. As a result, the CHNA used a community health framework for this report to develop criteria for indicators used to measure health needs.

CCHNA partners selected nearly 100 data indicators to help examine the health needs of the community (Appendix B.) These indicators were based on the Center for Disease Control and Prevention's (CDC) *Community Health Assessment for Population Health Improvement: Most Frequently Recommended Health Metrics* report.[20] These were the five data categories examined by the CHNA (Table 2):

- **Health outcomes** include: morbidity, which refers to how healthy people are by measuring disease burden and quality of life (e.g. obesity rates, hospitalization rates, and low-birth weight babies, etc.); and mortality, which measures causes of death by density rates (e.g. cancer mortality, motor vehicle deaths, etc.)
- **Health care** includes access, which refers to factors that impact people's access to timely, affordable clinical care (e.g. primary care physicians, number of federally qualified health centers, etc.); and health insurance coverage
- **Health behavior** refers to the personal behaviors that influence an individual's health, either positively or negatively (e.g. breastfeeding, physical activity, eating fruits and vegetables, etc..) This also includes delivery, which measures clinical care being delivered to the community (e.g. rate of preventive screenings, ambulatory care sensitive discharges, etc.)
- **Demographics and social environment** measures the population's characteristics (e.g. total population, age breakdowns, limited English proficiency, etc..) This category also includes measures of social status, educational attainment and income, all of which have a significant impact on an individual's health.

- **Physical environment** measures characteristics of the built environment of a community that can affect its health, either positively or negatively (e.g. parks, grocery stores, walkability, etc..)

Health Outcome Metrics		**Health Determinants and Correlate Metrics**			
Mortality	***Morbidity***	***Access to Health Care***	***Health Behaviors***	***Demographics & Social Environment***	***Physical Environment***
Leading Causes of Death	Hospitalization Rates	Health Insurance Coverage	Tobacco Use/Smoking	Age	Air Quality
Infant Mortality	Obesity	Provider Rates	Physical Activity	Sex	Water Quality
Injury-related Mortality	Low Birth Rates	Quality of Care	Nutrition	Race/Ethnicity	Housing
Motor Vehicle Mortality	Cancer Rates		Unsafe Sex	Income	
Suicide	Motor Vehicle Injury		Alcohol Use	Poverty Level	
Homicide	Overall Health Status		Seatbelt Use	Educational Attainment	
	STDs		Immunizations & Screenings	Employment Status	
	AIDS			Foreign Born	
	Tuberculosis			Homelessness	
				Language Spoken at Home	
				Marital Status	
				Domestic Violence and Child Abuse	
				Violence and Crime	
				Social Capital/Social Support	

Table 2. Data Categories Examined for CHNA

Source: CDC's Community Health Assessment for Population Health Improvement: Most Frequently Recommended Health Metrics

Table 3. Results of Indicator Review

2013 Measures	Maricopa County	Arizona
Health Outcomes		
Mortality		
Years of potential life lost	6,100	6,800
Infant mortality rate	5.2	6
Morbidity		
Percentage of adults who report poor or fair health	15%	19%
Average number of poor physical health days	3.5	3.9
Average number of poor mental health days	3.4	3.7
Low birth weight infants	6.9%	7%
Diabetes prevalence	10.2%	10.7%
High blood pressure prevalence	28.1%	30.7%
HIV prevalence rate	284	237
Adult obesity	24.5%	26.8%
Health Determinants		
Access to Care		
Uninsured adults (18-64)	23.7%	23.5%
Uninsured youth (<18)	11.2%	11.9%
Medicaid/Medicare Patients	29.9%	33.9%
Primary care physicians ratio	1,410:1	1,510:1
Dentist ratio	1,570:1	1,720:1
Mental health providers ratio	800:1	800:1
Health Behaviors		
Adult smoking	15.5%	16.3%
Physical Activity (met guidelines)	59.8%	61.5%
Food insecurity	16%	18%
Sexually transmitted infections rate	480.4	466.4
Teen births rate (15-19)	43	45
Binge drinking	14%	13.4%
Social & Economic Factors		
Median Household Income	$53,596	$58,897
Persons below poverty level	16.7%	17.9%
Persons under 18 in Poverty	25.5%	26.5%
No HS Diploma, Persons Age 25+	13.6%	14.3%
Unemployment	6.1%	6.3%
Limited English Proficiency	10%	9.5%
Physical Environment		
Air pollution – particulate matter	9.9	10.1
Severe housing problems	20%	20%

Sources: U.S. Census Bureau, American Community Survey (ACS), Bureau of Labor Statistics, United States Department of Agriculture, Centers for Medicare and Medicaid Services, Arizona Department of Health Services, Vital Records and Statistics

Mayo Clinic also considered the top 10 leading causes of death for Maricopa County in its secondary data review (Table 4.)

Table 4. Top 10 Leading Causes of Death in Maricopa County, 2009-2013

Rank	2009	2010	2011	2012	2013
1	Heart Disease	Cancer	Cancer	Cancer	Cancer
2	Cancer	Heart Disease	Heart Disease	Heart Disease	Heart Disease
3	Alzheimer's	Alzheimer's	Alzheimer's	Chronic Lower Respiratory	Chronic Lower Respiratory
4	Chronic Lower Respiratory	Chronic Lower Respiratory	Chronic Lower Respiratory	Alzheimer's	Alzheimer's
5	Unintentional Injury	Stroke	Stroke	Unintentional Injury	Stroke
6	Stroke	Unintentional Injury	Unintentional Injury	Stroke	Unintentional Injury
7	Diabetes	Diabetes	Diabetes	Diabetes	Diabetes
8	Suicide	Suicide	Suicide	Suicide	Suicide
9	Influenza and Pneumonia	Falls	Falls	Falls	Falls
10	Falls	Liver Disease	Liver Disease	Liver Disease	Liver Disease

Source: Arizona Department of Health Services, Vital Records and Statistics

Quantitative data used in this report are high-quality, population-based data sources and were analyzed by the Maricopa County Department of Public Health, Office of Epidemiology. Data came from local, state and national sources, such as the Maricopa County Department of Public Health, Arizona Department of Health Services, U.S. Census Bureau, U.S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System survey and Youth Risk Behavior survey.

Primary data

The broad interests of the community were incorporated through two means:

- Data was collected through focus groups, engaging members of underserved populations and communities.
- Feedback was gathered from more than 10,000 participants through electronic survey and comments made online and presented at our regularly scheduled Maricopa County Department of Public Health-led CHNA Alliance meetings. This alliance is made up of hospitals, clinics community-based organizations and public health leaders throughout Maricopa County.

Focus groups

Members of the community representing subgroups — those groups with unique attributes, such as race and ethnicity, age, sex, culture, lifestyle or residents of a particular area of the county — were recruited to participate in focus groups. A standard protocol was used for all focus groups (Appendix C) to understand the experiences of these community members as they relate to accessing health care, health disparities and chronic disease. In all, 23 focus groups were conducted with 225 community members from the following groups:

- Older adults (age 50 and up)
- Adults without children
- Adults with children
- American Indian adults
- Lesbian, Gay, Bisexual, Transgender and Questioning (LGBTQ) adults
- African-American adults
- Hispanic/Latino adults
- Low socio-economic status adults
- Caregivers of senior parents
- Asian-American adults
- Young adults (age 18-30)

The focus group transcripts were analyzed to identify key themes and health issues affecting the community residents. The most common community health problems identified were:

- Access to care
- Mental health
- Substance abuse
- Community safety
- Diabetes (African-American and Native American groups)

Barriers to health care discussed include:

- Cost/financial limitations
- Lack of access to existing resources
- Incomplete coverage
- Complex and confusing process/lack of consumer education
- Distrust/negative past experiences with healthcare system
- Lack of cultural competency among doctors
- Lack of services/stigma for mental illness
- Lack of transportation
- Lack of child care during community health programs

Recommended strategies for health improvement included:

- Increased training/education of health care professionals (e.g., proper use of pronouns for transgendered individuals, updated technologies/medical research, alternative medicine options, etc.)

- Lower costs (e.g. insurance, co-pays, specialists)
- Provide and train more community health workers, navigators, advocates and aides
- More educational resources/opportunities (e.g. better health education for children, improve online services)
- More transparency in health care (e.g. insurance, side effects, alternatives, toxins, etc.)
- Better access to healthy and affordable food (e.g. accept SNAP benefits at farmers markets, offer nutrition and gardening classes, create community gardens)
- Improve access to physical fitness in low-income communities
- Provide more affordable mental and oral health care services
- Improvements to services (e.g. shorten wait times, accommodate people who work late hours)

Data limitations and gaps

The data used in this report are from various reliable Sources, but there are limitations that need to be considered. When reviewing birth and death records, some of the fields are filled in based on recall. For example, a mother is asked when she began prenatal care and may have an estimate, but typically not the exact date. With death records a family member assists when filling in information on the death certificate. If the individual doesn't know about an individual's personal habits (like smoking) it may not get recorded on the death certificate. With Hospital Discharge Data (HDD) for Inpatient (IP) discharges and Emergency Department (ED) visits the data is from all licensed facilities, but does not include federal, military and the Department of Veteran Affairs. When reviewing this data we also considered that these are individuals seeking care. There are various reasons why an individual does not go to a hospital for care (like lack of money to pay) or individuals may use the Emergency Department (ED) for routine care they could receive if they had a primary care physician.

The survey data from our state and national partners also have limitations since they are self-reported surveys. The Behavioral Risk Factor Surveillance System survey (BRFSS) is a survey of adults within Maricopa County. The questions can be personal in nature, and individuals have the option of not responding, or they may answer what they feel the best answer is, causing issues with the data. The Youth Risk Behavior Survey (YRBS) is a survey of students in 8th, 10th and 12th grade. The survey is done every other year and cannot be drilled down to the county level. All data from the YRBS is for the entire state.

Addressing the Needs of the Community

Identifying community health needs

To be a considered a health need, a health outcome or a health factor had to meet two criteria; first, existing data had to demonstrate a worsening trend in recent years, or indicate an apparent health disparity; second, the health outcome or factor had to be mentioned in a substantial way in focus groups and key stakeholder meetings.

Process and criteria for prioritization

Findings from primary and secondary data were reviewed and prioritized by Mayo Clinic Community Advisory Board and Mayo Clinic Community and Business Relations Work Group and were approved by the Executive Operations Team. Criteria used for prioritization included prevalence of the identified needs impact on the community, the impact on the public health system and emergency rooms, and the ability to broadly improve the health of Maricopa County.

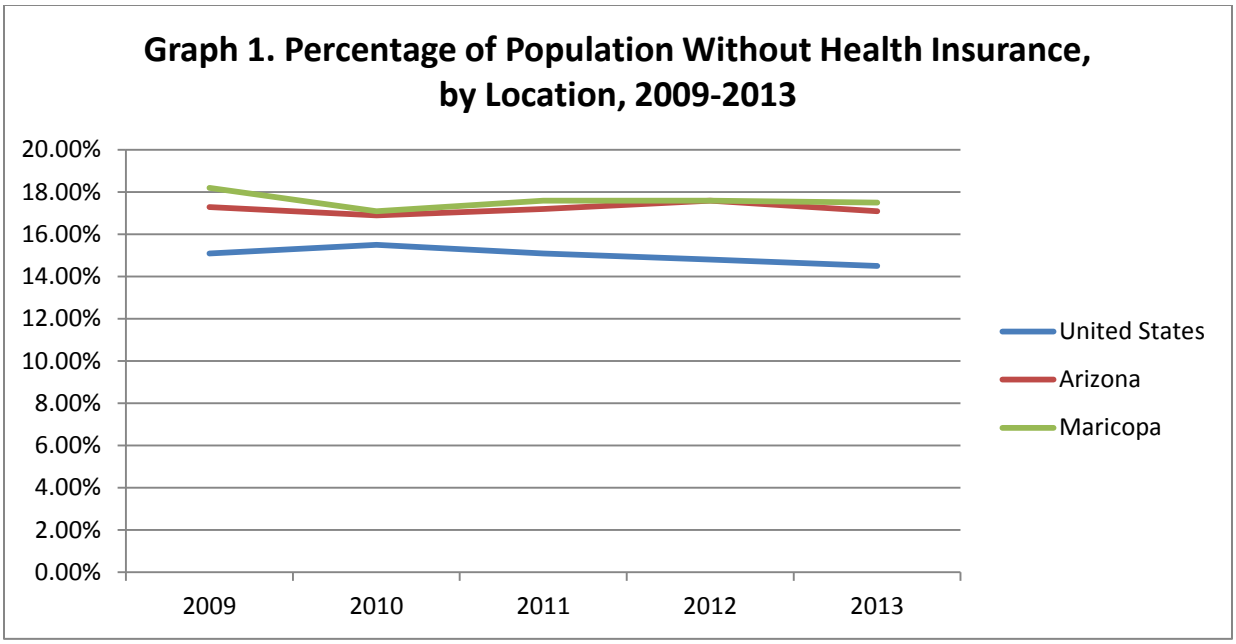
Prioritized community health needs

The areas of priority for Mayo Clinic in Arizona identified by the CHNA are summarized below, in order of priority:

Access to care

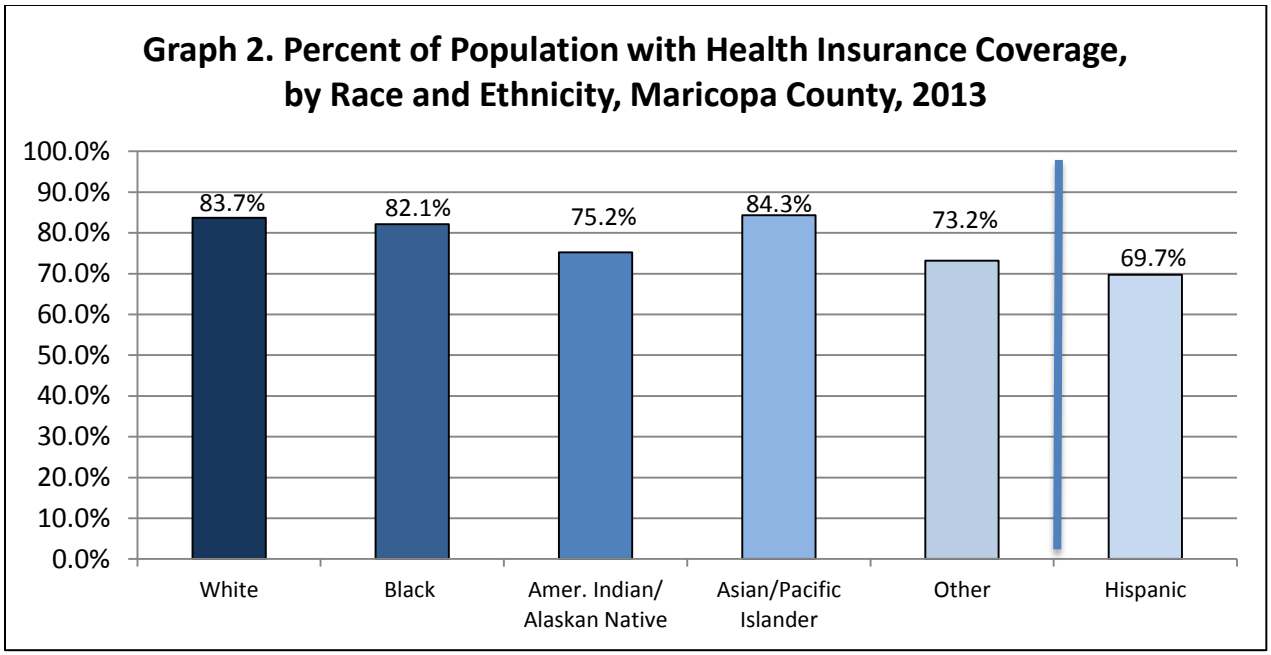
Access to care is a critical component to the health and well-being of community members. Often individuals without insurance, and those who are underinsured, experience greater difficulty readily accessing health care services, particularly preventive and maintenance health care. This can be very costly, both to the individuals and the health care system. Focus group participants overwhelmingly felt that access to care is an important issue for the community.

The American Community Survey (ACS) shows the number of people without insurance is decreasing (Graph 1.) However within Maricopa County, one out of every five residents lacks health insurance, which is higher than state and national averages. Twelve percent of children under age 18 are not insured. In addition, nearly 30 percent use publicly funded health insurance programs.[21]



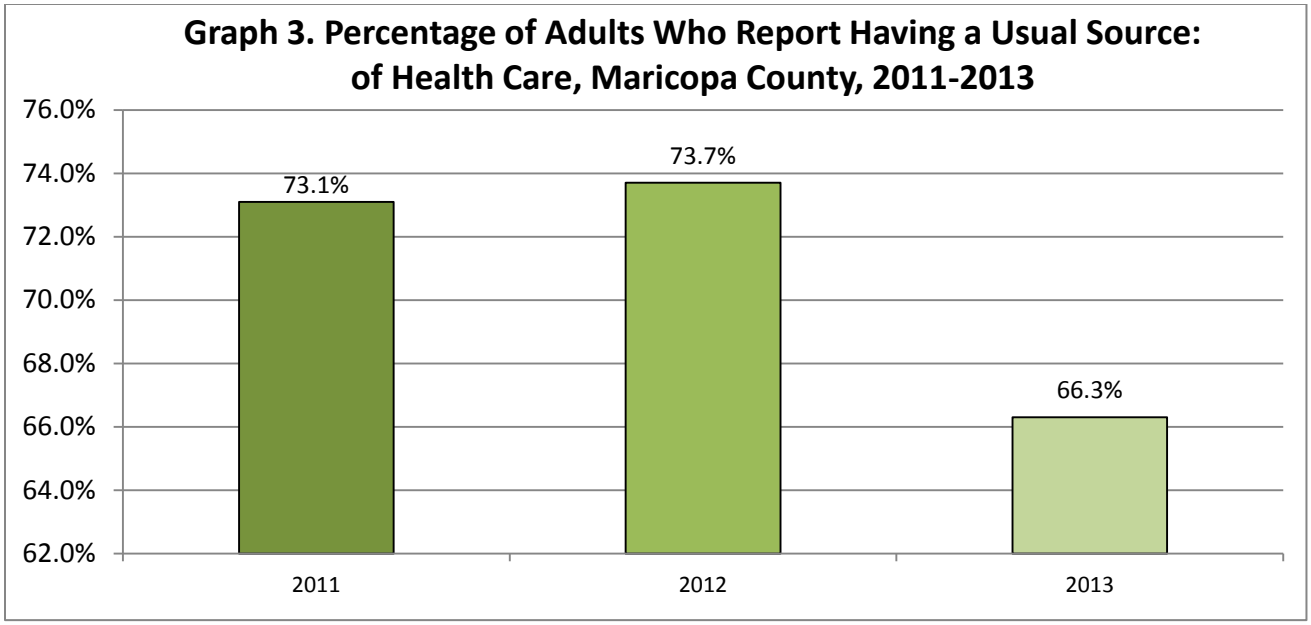
Source: U.S. Census Bureau's American Community survey

There are disparities experienced across members of certain racial/ethnic backgrounds, with Hispanics and American Indians being the least likely to have insurance (Graph 2.) [22] There also is still a large portion of undocumented citizens who do not qualify for health care coverage under the Affordable Care Act (ACA.)



Source: U.S. Census Bureau's American Community survey

Despite the increased ability to purchase health insurance through the federal marketplace, this does not appear to be translating to more people receiving care. The number of adults reporting they have a usual Source: of health care has decreased from 2011, with one out of every three Maricopa County residents saying they do not have a regular doctor (Graph 3.)[23] Women are more likely to report having a regular Source: of care compared to men.[24]



Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey

The most-frequently identified barriers to health care discussed among focus group participants included financial limitations, long wait times for services, complexity of navigating the system, incomplete coverage, lack of cultural competency, and respect among health care providers. Focus group participants also discussed the need to educate the community and increase awareness of available resources, such as free or low-cost clinics, financial aid for medical bills, and other community programs.

Cancer

While advancements continue to be made in the fight against cancer, it remains the leading cause of death in Maricopa County.[25] The highest site-specific cancer rates in Arizona include breast, prostate, lung and bronchus, colon and rectum, and uterine cancer.[26] It is estimated that approximately 39

percent of men and women will be diagnosed with cancer at some point during their lifetime.[27] The highest cancer mortality rate in Maricopa County is due to lung cancer (Graph 4.)[28]
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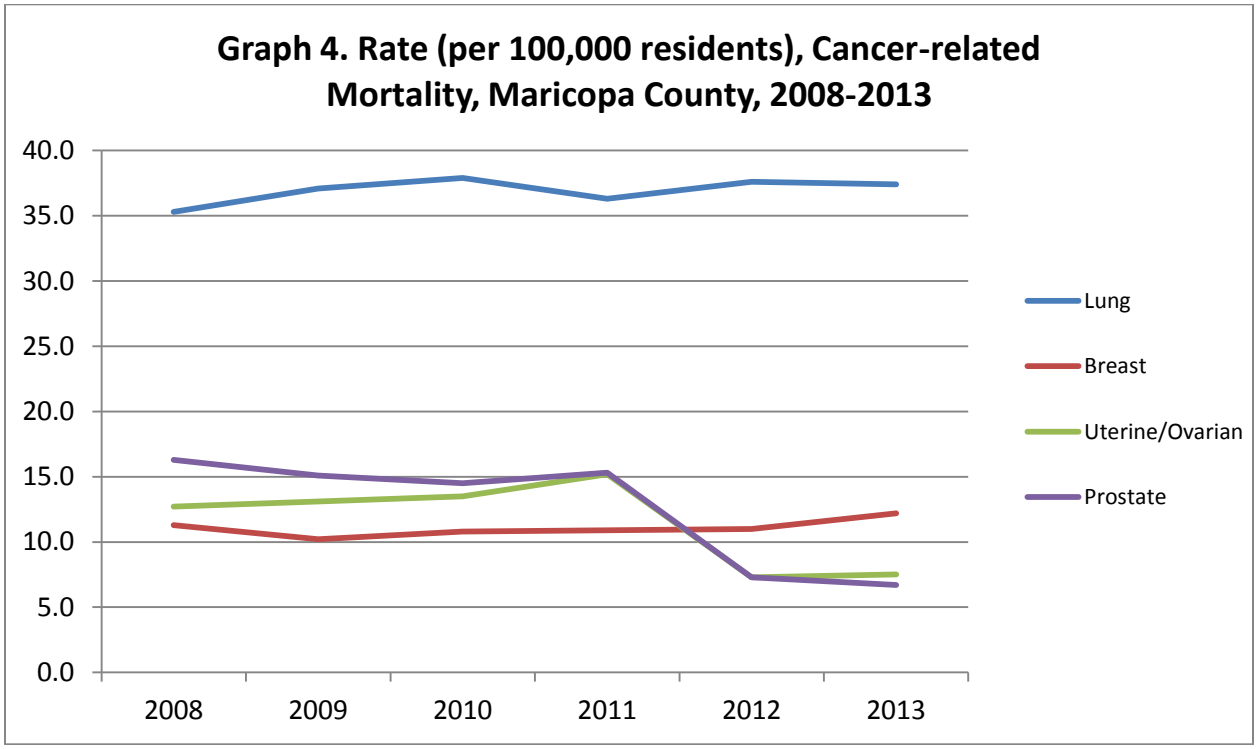
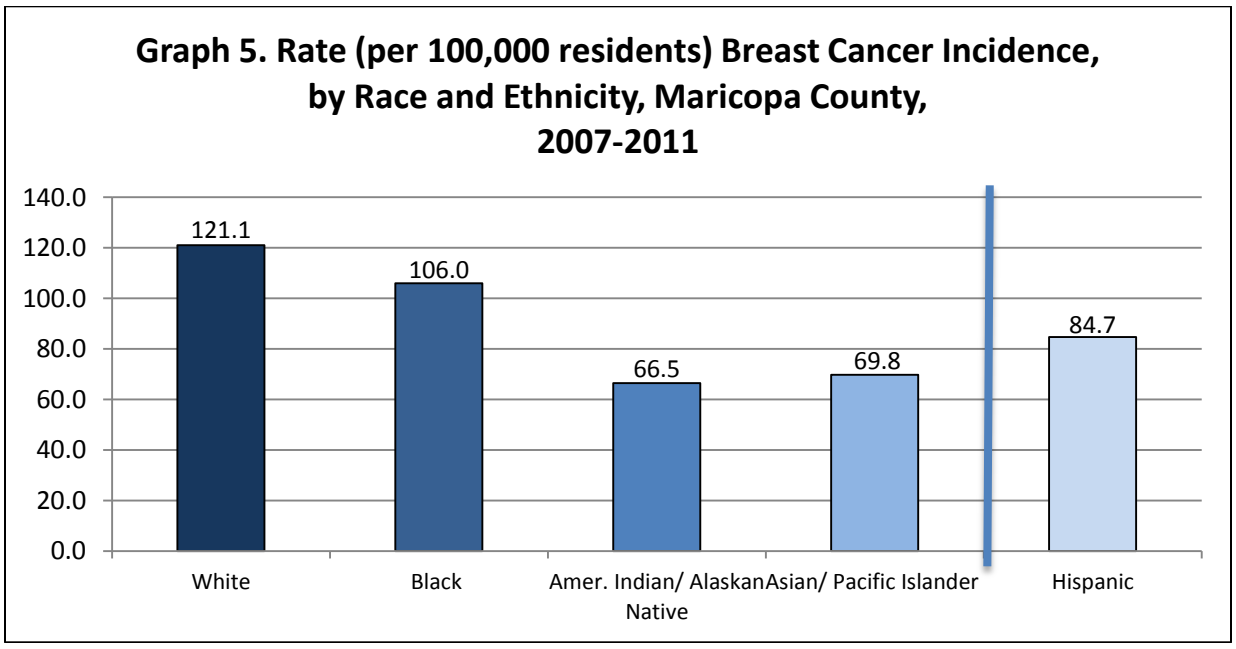


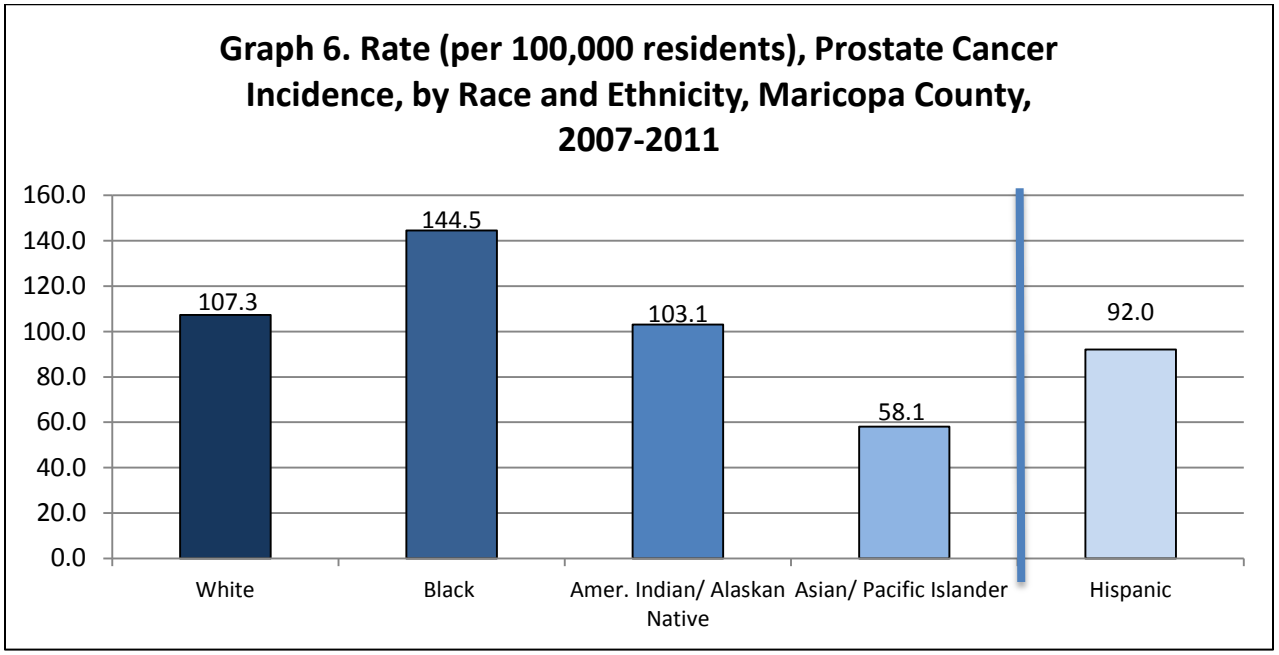
Source: Arizona Department of Health Services, Vital Records and Statistics

Nationally, cancer-related mortality is higher among men than women, with the highest rate in African-American men and lowest in Asian/Pacific Islander women.[29] Breast cancer in Maricopa County is highest among to white, non-Hispanics, followed by African-Americans (Graph 5.)[30]

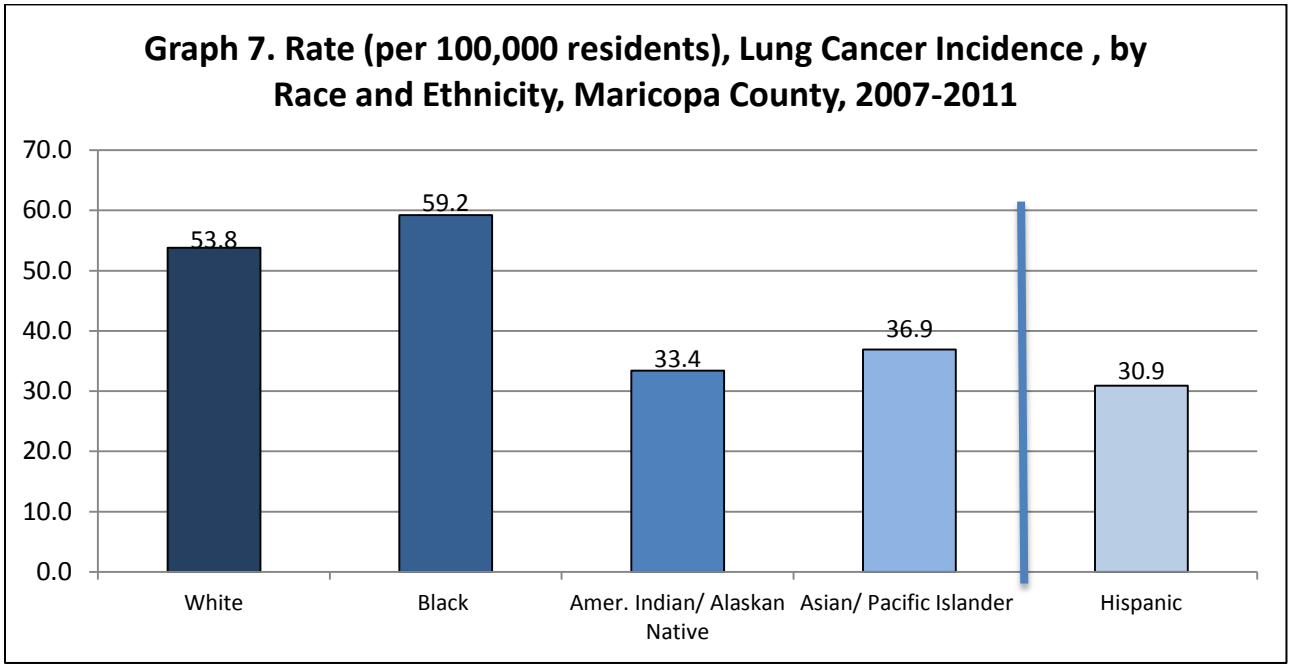


Source: National Cancer Institute, State and County Profiles

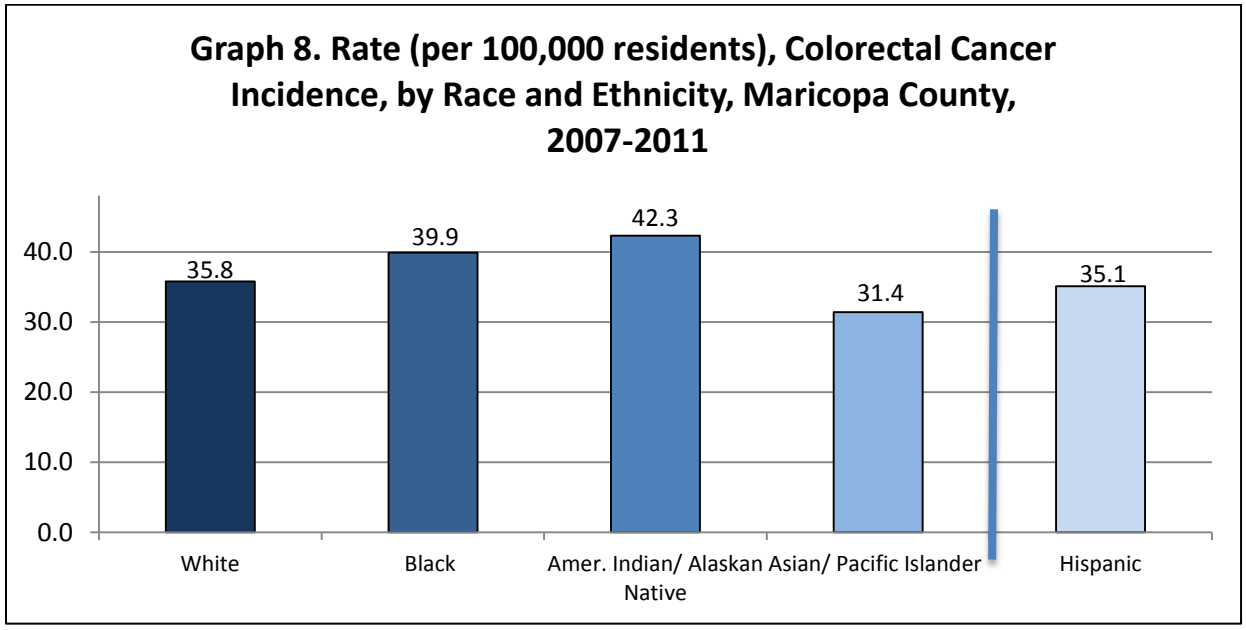
Prostate cancer, as well as lung cancer, are affecting African- Americans at the highest rate, while the highest rate of colorectal cancer can be found among American Indians, which indicates a potential health disparity in cancer screening, diagnoses or treatments for these populations (Graphs 6-8.) [31]



Source: National Cancer Institute, State and County Profiles



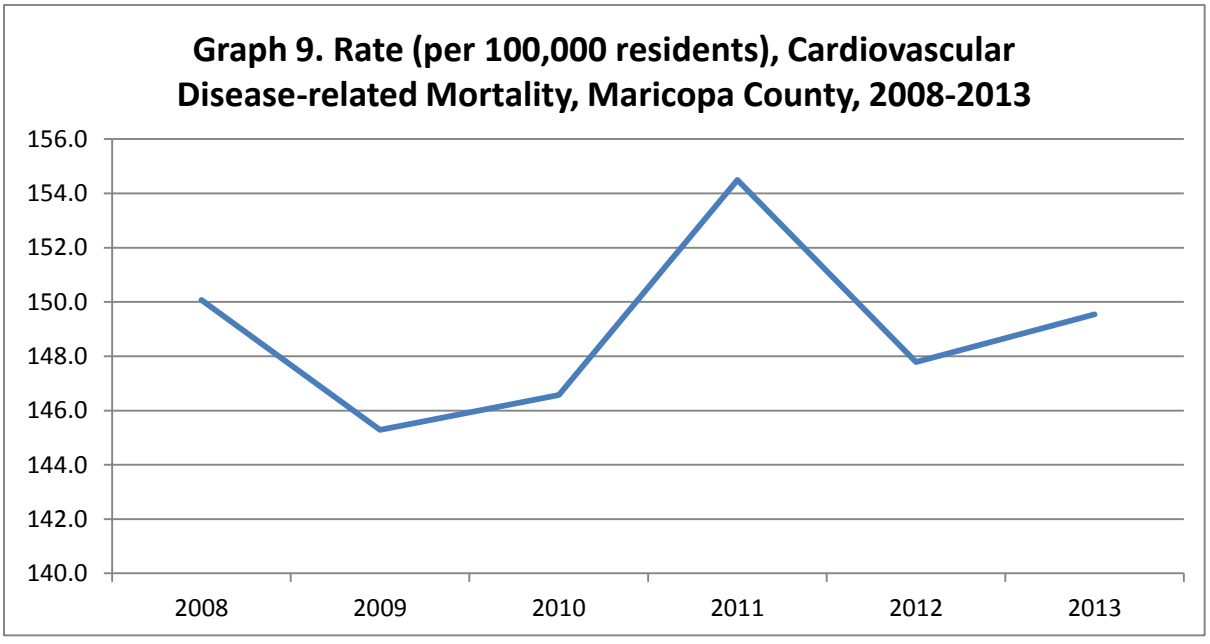
Source: National Cancer Institute, State and County Profiles

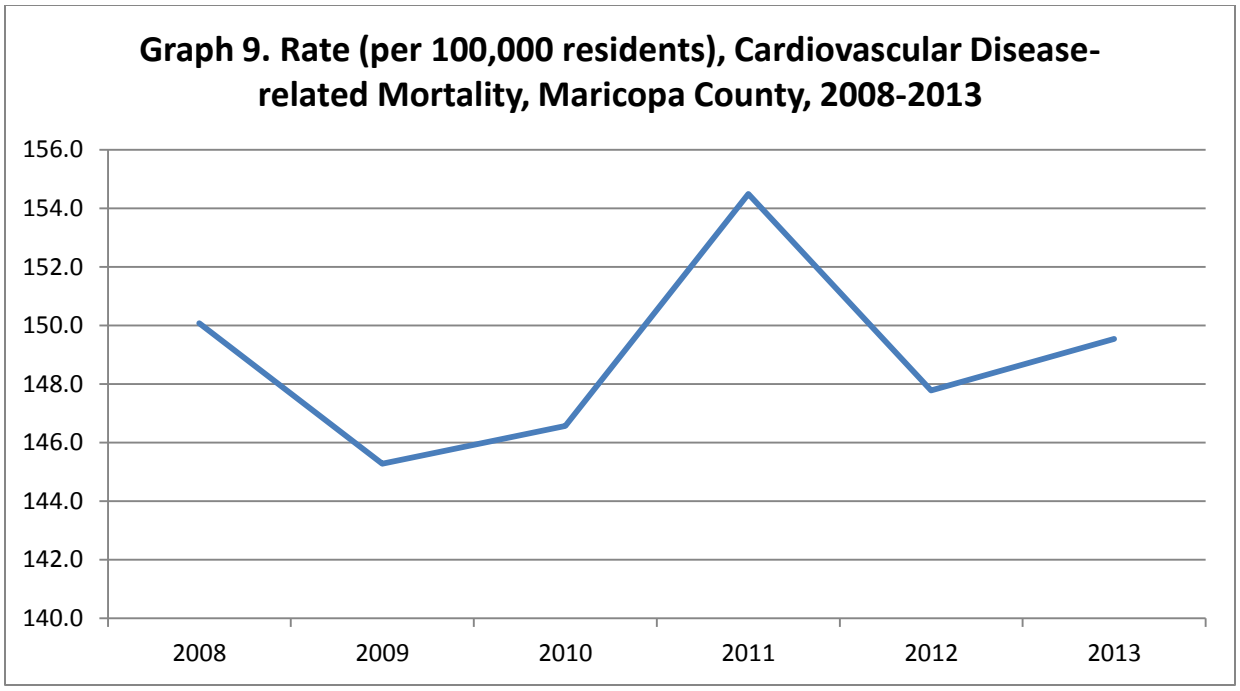


Source: National Cancer Institute, State and County Profiles

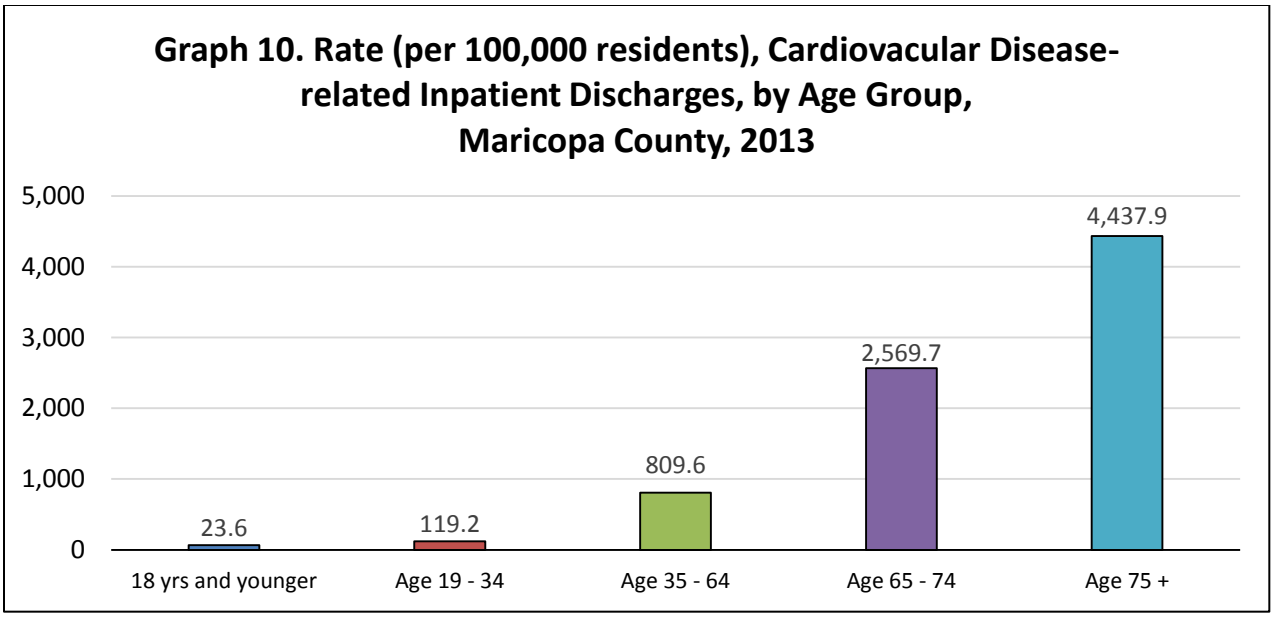
Cardiology

Heart disease costs the United States about $207 billion each year.[32] This includes the cost of health care services, medications and lost productivity. Heart disease is the second-leading cause of death for Maricopa County.[33] Overall, the number of deaths related to cardiovascular disease in the county have decreased since 2011 (Graph 9.) However, adults age 75 and older have a high rate of cardiovascular disease-related inpatient discharges (Graph 10.)[34]



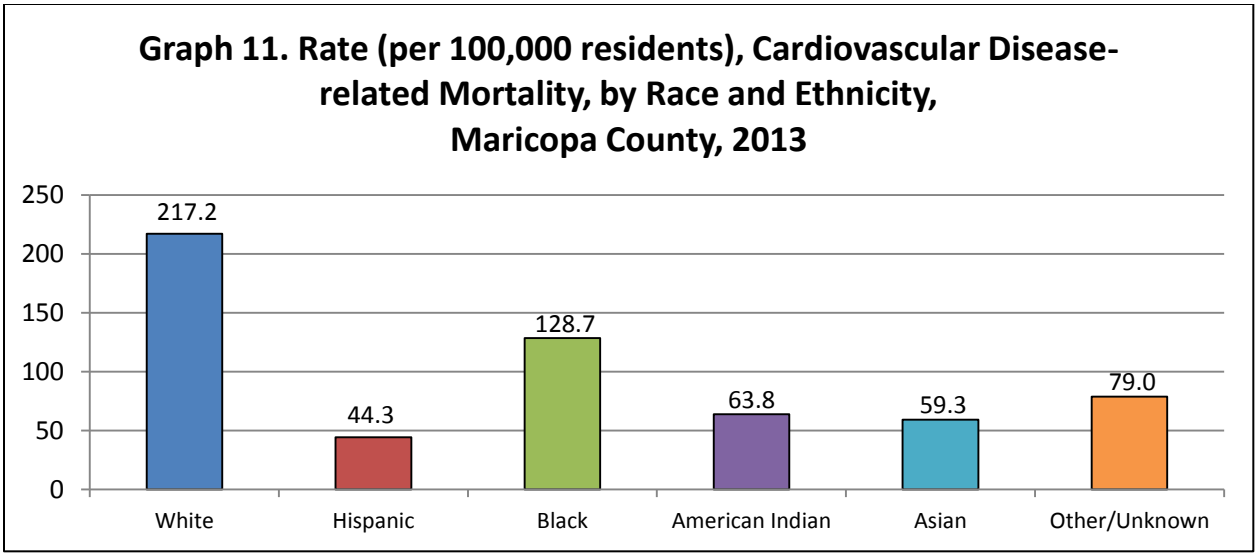


Source: Arizona Department of Health Services, Vital Records and Statistics

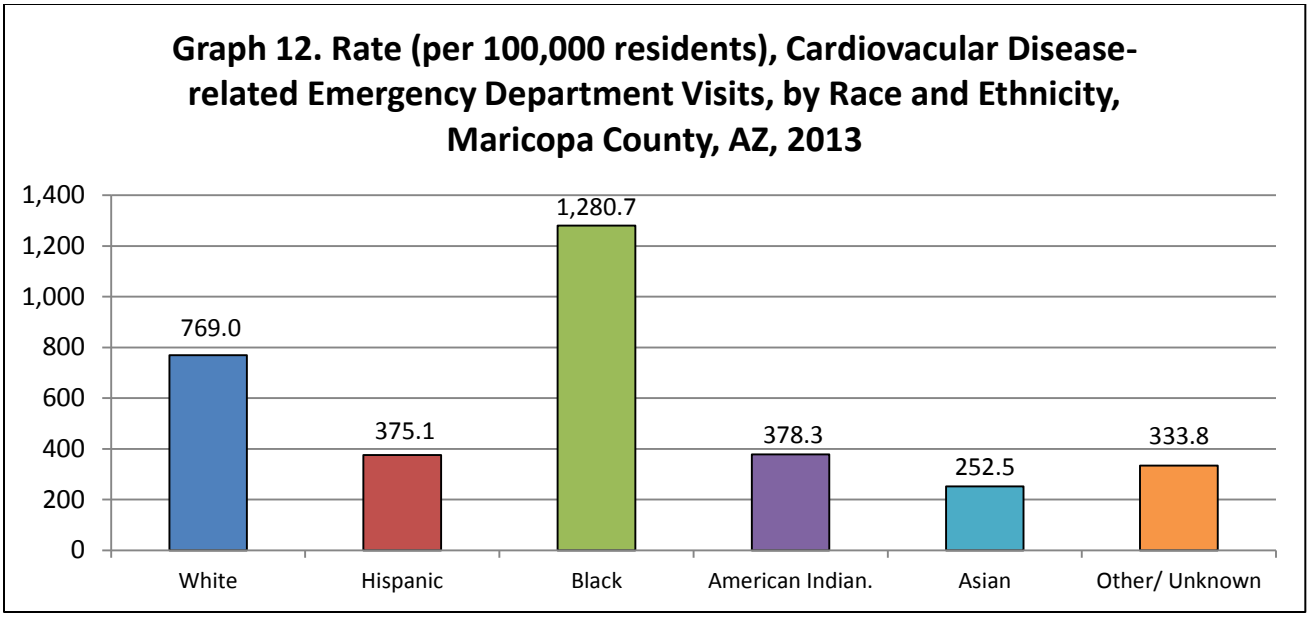


Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

Although white, non-Hispanics have the highest rate of cardiovascular disease-related mortality, African-Americans have the highest rate of cardiovascular disease-related ED visits, which indicates a potential health disparity in cardiovascular disease diagnoses, treatments or preventative care (Graphs 11- 12.)[35]



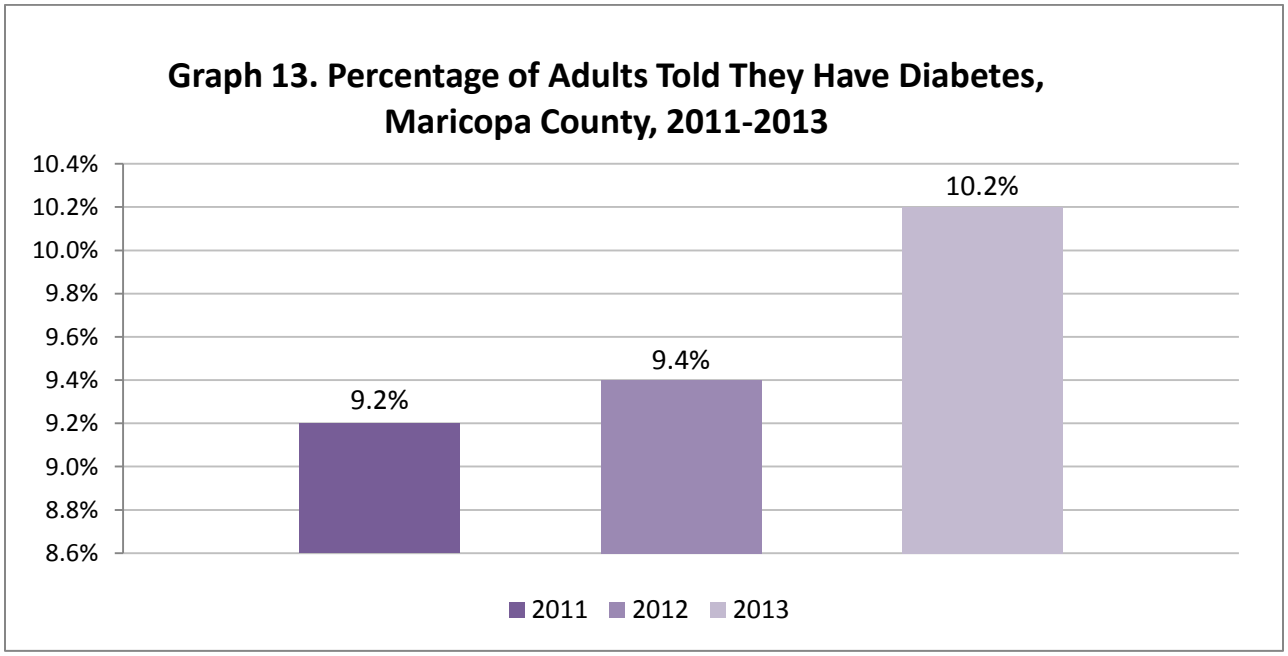
Source: Arizona Department of Health Services, Vital Records and Statistics



Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

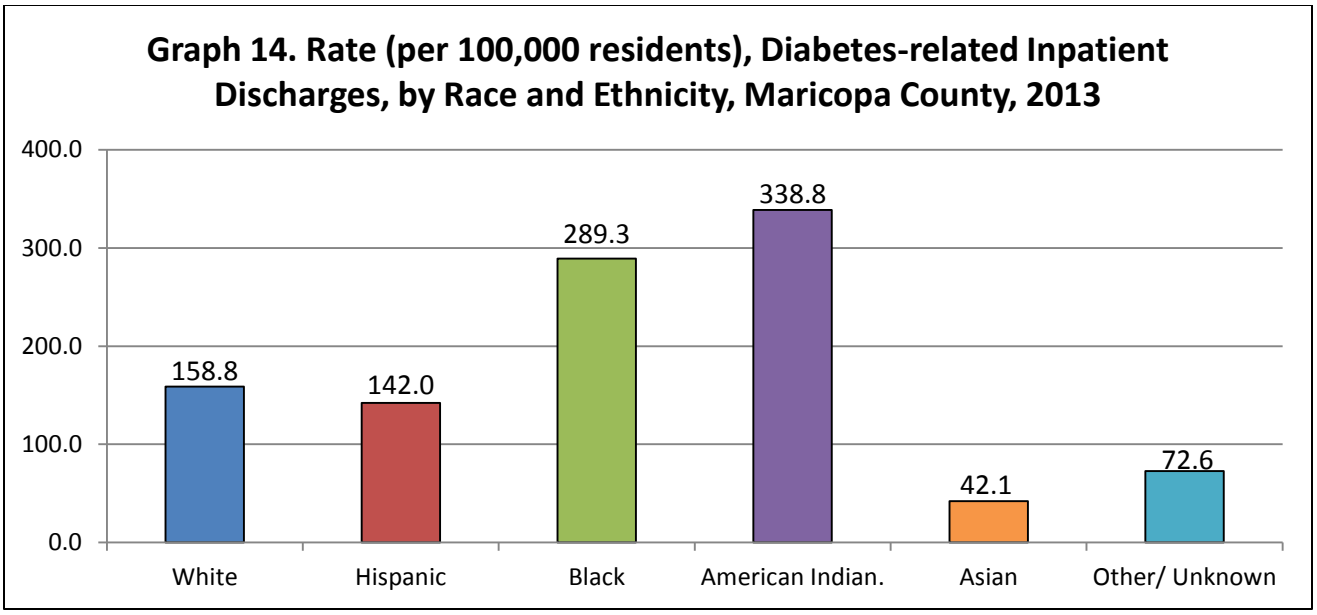
Chronic disease

The overall rates of chronic disease in Maricopa County have remained stagnant since 2008. The primary risk factors for most chronic diseases include diabetes, overweight/obesity, and hypertension. According to the American Heart Association, in 2010, 19.7 million Americans over the age of 20 had physician-diagnosed diabetes. An estimated 8.2 million Americans have undiagnosed diabetes. Complications include heart disease, stroke, high blood pressure, blindness, kidney disease, neuropathy, amputation and death. The number of deaths related to diabetes is decreasing, but it is still the 7th leading cause of death for Maricopa County residents.[36] The number of people reporting they have been told they have diabetes also is increasing. In 2013, 10.2 percent of adults responding to the Behavioral Risk Factor Surveillance System survey reported a health care professional had told them they have diabetes (Graph 13.)[37] It is unclear if this increase reflects an increase in prevalence or if it can be attributed to the increased number of people with health insurance who are now accessing care.

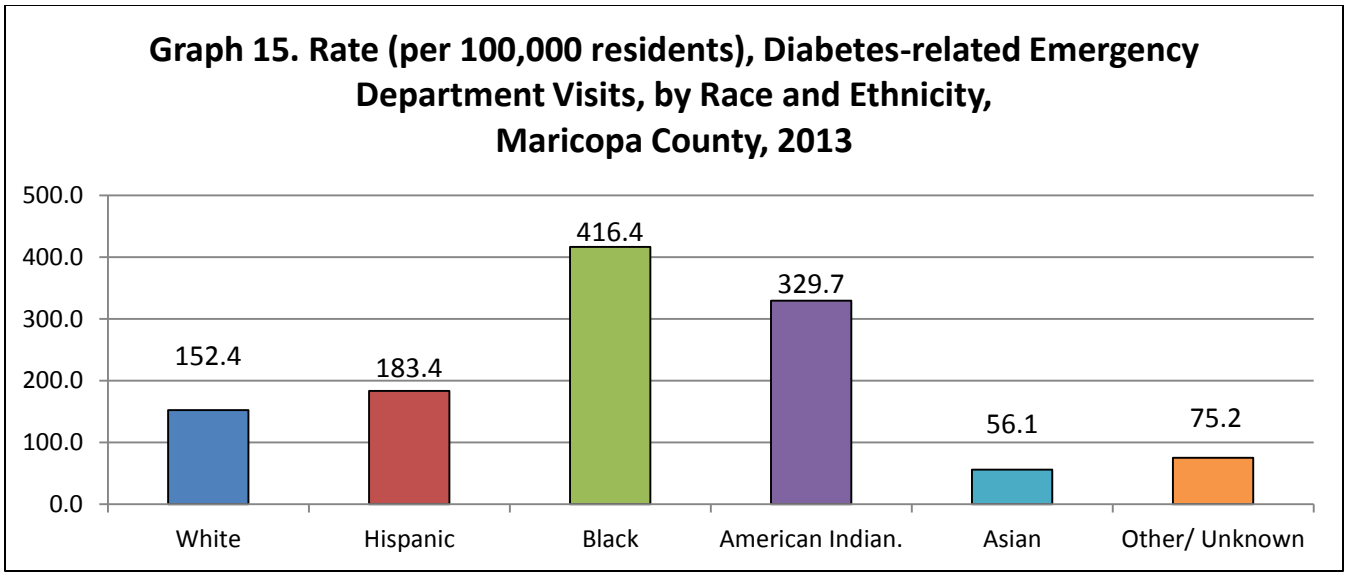


Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey

The African-American and American Indian adults who participated in the focus groups identified diabetes as one of the most concerning health problems within their communities. This is supported by the rates of hospital visits for these populations within Maricopa County (Graphs 14-15.)[38] The higher rates of inpatient discharges and ED visits for them indicate a potential health disparity in diabetes diagnoses, treatments or preventative care.

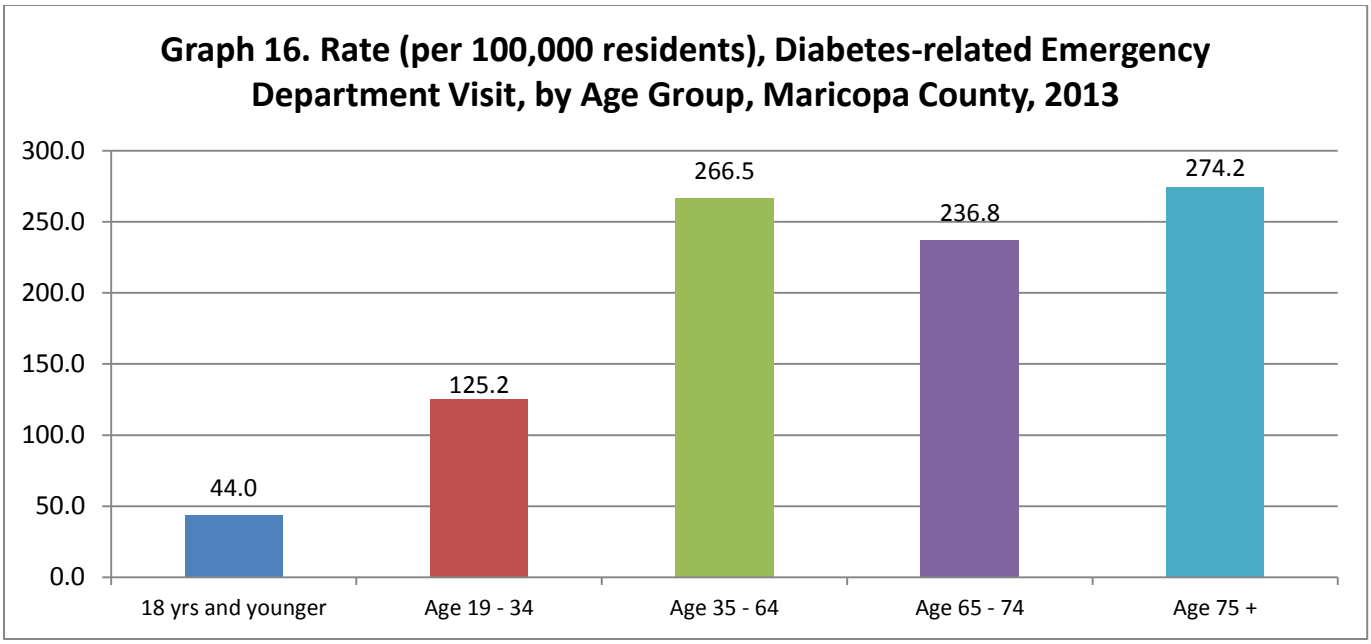


Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting



Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

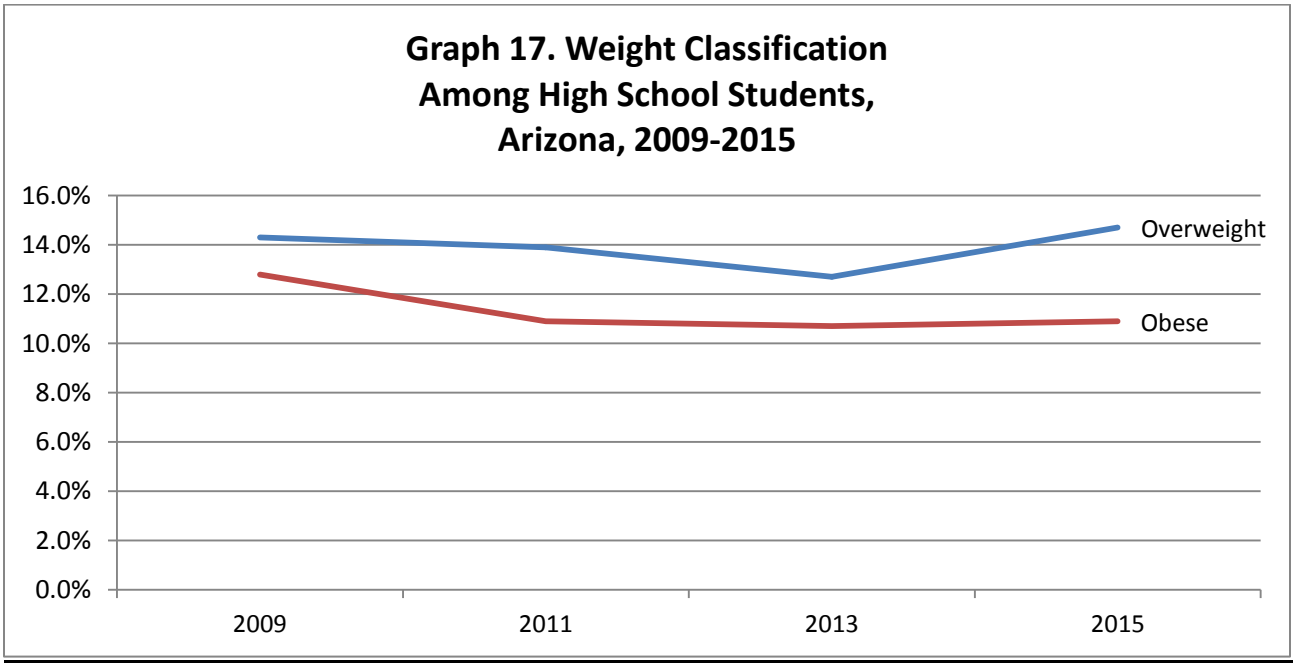
Adults age 75 and older have the highest rate of diabetes-related ED visits, however this is closely followed by adults ages 35-64, which indicates a need for earlier screening and prevention of diabetes (Graph 16.)[39]



Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

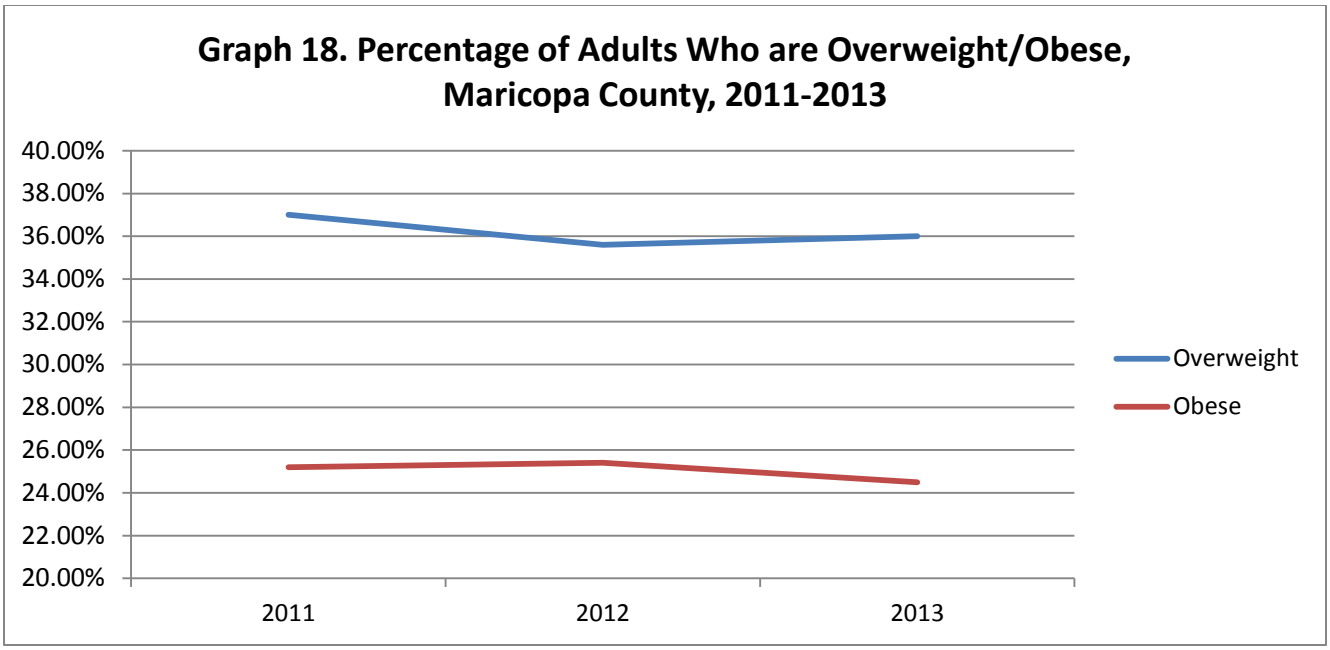
The percent of obese adults is an indicator of the overall health and lifestyle of a community and can have significant impact on health care spending. Obesity increases the risk of several chronic health conditions such as Type 2 diabetes, heart disease, cancer, hypertension, stroke, liver and gallbladder disease, respiratory problems, and osteoarthritis.

According to the 2013 Youth Risk Behavior survey, the number of overweight high school students is increasing (Graph 17.)[40] However, the number of high school students who report being obese is decreasing. High school students in Arizona who are obese now account for 10.9 percent of all students (Graph 17.)[41]

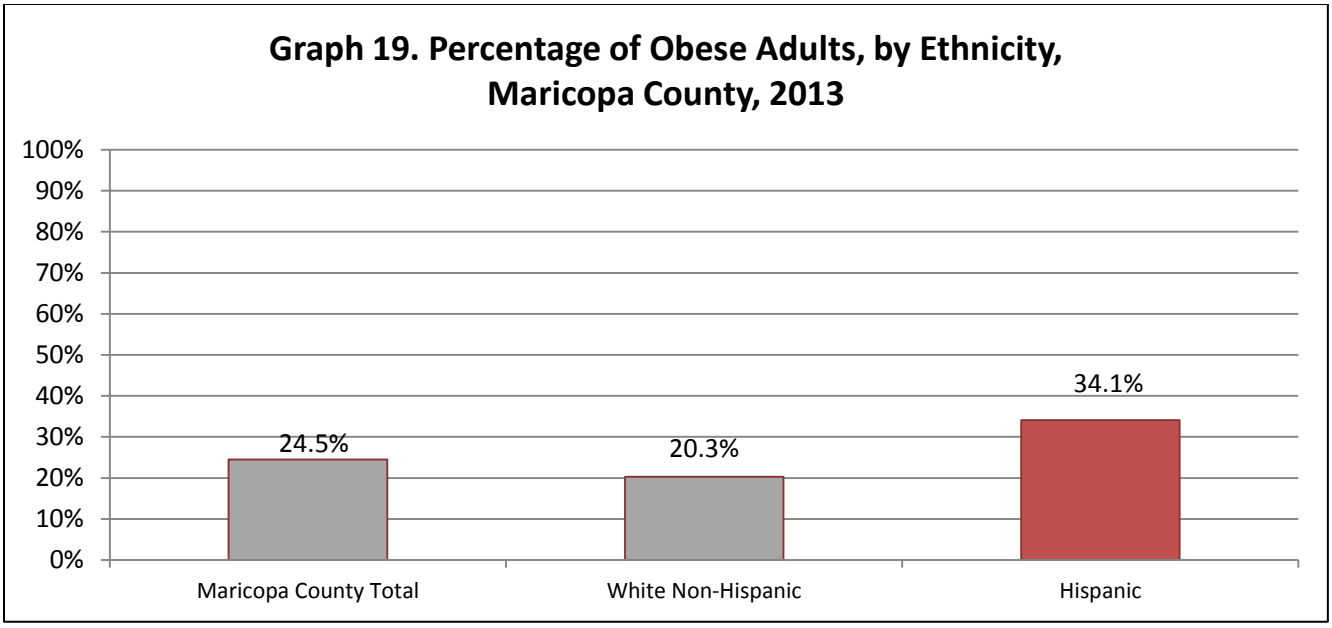


Source: Centers for Disease Control and Prevention, Youth Risk Behavior survey (note that YRBS is administered every other year)

The percentage of adults in Maricopa County who report being overweight and obese on the Behavioral Risk Factor Surveillance System survey is decreasing (Graph 18.)[42] However, Hispanic residents continue to experience disparities related to obesity, and in 2013, 34.1 percent reported being obese (Graph 19.)[43]

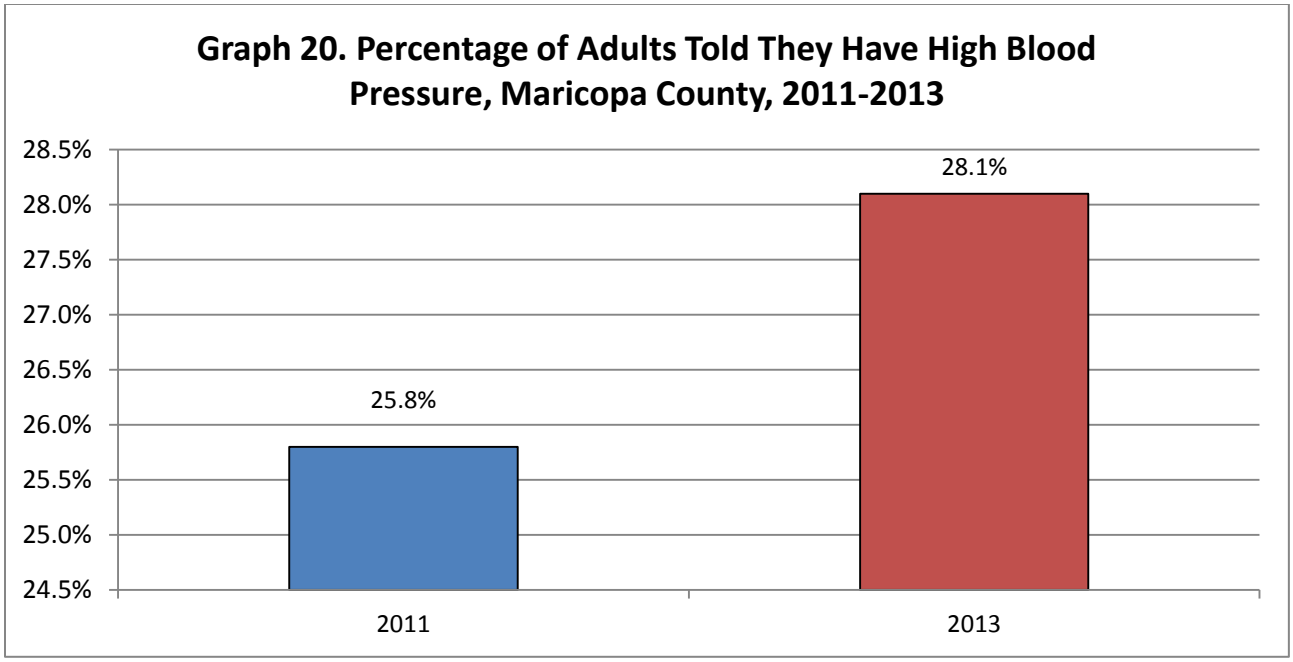


Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey



Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey

Nearly one-third of all American adults have high blood pressure. Most people with this condition do not know they have it until discovered by a doctor. High blood pressure is commonly called a "silent killer" because it usually has no noticeable symptoms. Despite the lack of symptoms, untreated high blood pressure can lead to a greater risk for stroke or heart attack. In Maricopa County, 28.1 percent of adults report being told they had high blood pressure by a health care professional (Graph 20.)[44] It is important to address the growing number of chronic health conditions in the community in order to prevent further health complications.

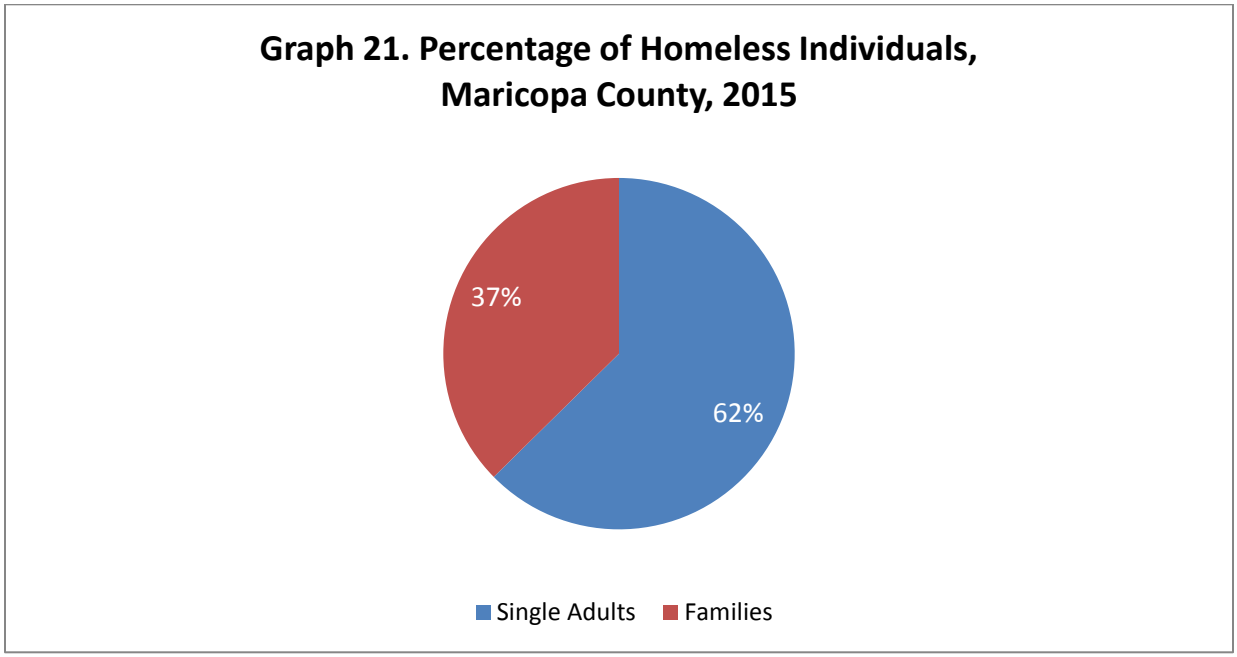


Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey

Homelessness:

Maricopa County has 61 percent of Arizona's population, but an estimated 71 percent of its homeless population. Poverty, domestic violence, chronic health conditions, mental health issues and substance use commonly are attributed as driving factors in an individual or family becoming homeless. On a given night in January, communities count the number of homeless people in emergency shelters, transitional housing and sleeping outside. The point-in-time counts are the most reliable estimates of people experiencing homelessness. In 2015, 5,631 individuals were homeless in Maricopa County. Based on the 2015 Point in Time (PIT) count, there were 4,342 individuals housed in shelters and 1,289 unsheltered homeless. The 2015 PIT count reported a 22-percent increase in the street count and an 11 percent decrease in homeless shelter count. The homeless populations counted during the PIT

count were predominantly single adults (3,475 or 62 percent) compared to families (2,102 or 37 percent) (Graph 21.) Homeless children are twice as likely to experience hunger, health problems and repeat a grade in school.[45]



Source: Homelessness in Arizona Annual Report

Addressing chronic homelessness is a priority focus for Arizona's efforts to end homelessness. Chronically homeless means a person has experienced homelessness more than four times in the past three years or has been homeless for one continuous year or longer and has a disabling medical, mental or addictive condition. Chronically homeless individuals include the most vulnerable, the most visible street homeless and the most difficult population to serve. Many have lived on the streets for years and have difficulty transitioning to housing and reconnecting with community. They are predominately single and are the highest users of EDs and hospital services. They also are the most likely to die on the streets without resources and housing assistance. There were 258 chronically homeless in Maricopa in 2015 compared to 318 in 2014.[46]

The annual Homelessness in Arizona report shows 39 percent of all homeless individuals in Maricopa County self-report some level of mental, physical or substance-abuse disabilities.[47] In 2015, Maricopa County Department of Public Health studied the demographics and most-common complaints of homeless individuals visiting EDs. The majority of homeless patients were white, non-Hispanic, male and between the ages of 35-54 (Table 5.)[48]

Table 5. Demographic of Homeless Patients

	Frequency	Percent
Patient Sex		
Male	25,244	72.85%
Female	9,406	27.15%
Patient Age Group		
< 1 year	87	0.25%
1-4	112	0.32%
5-9	54	0.16%
10-14	50	0.14%
15-19	1050	3.03%
20-24	2994	8.64%
25-34	6680	19.28%
35-44	7790	22.48%
45-54	9659	27.88%
55-64	4966	14.33%
65-74	907	2.62%
75-84	190	0.55%
85+	95	0.27%
Unknown	16	0.05%
Patient Race/Ethnicity		
White	23613	68.15%
Hispanic or Latino	4055	11.70%
African American/Black	4002	11.55%
American Indian	2194	6.33%
Refused	453	1.31%
Asian	198	0.57%
Native Hawaiian or Pacific Islander	95	0.27%
Multi-Racial	37	0.11%
Unknown	3	0.01%

Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting. Demographic data is the total number of homeless individuals who visited a hospital between the years 2006-2014; a person may have visited the hospital more than one time.

Mental health was the most-common reason for visits to the ED and inpatient admissions among homeless residents from 2006 to 2014 (Tables 6 & 7.)[49]

Table 6. Frequency of Primary Diagnosis of Homeless Individuals Visiting Emergency Departments, Maricopa County, 2006-2014

Primary Diagnosis-Emergency Department	Frequency	Percent	Most-Common Diagnosis in Group
Mental Disorders	6,821	23.74%	Alcohol abuse, unspecified
Injury and Poisoning	4,829	16.81%	Head injury, unspecified
Symptoms, Signs, and Ill-Defined Conditions	5,490	19.11%	Other chest pain
Diseases of the Musculoskeletal System and Connective Tissue	2,288	7.96%	Pain in limb
Supplementary Classification of Factors Influencing Health Status and Contact with Health Services	1,620	5.64%	Suicidal ideation
Diseases of the Respiratory System	1,424	4.96%	Acute upper respiratory infections of unspecified site
Diseases of the Skin and Subcutaneous Tissue	1,268	4.41%	Cellulitis and abscess of leg, except foot
Diseases of the Nervous System and Sense Organs	1,177	4.10%	Other chronic pain
Diseases of the Digestive System	1,076	3.75%	Unspecified disorder of the teeth and supporting structures
Endocrine, Nutritional and Metabolic Diseases, and Immunity Disorders	937	3.26%	Dehydration
Diseases of the Genitourinary System	707	2.46%	Urinary tract infection, site not specified
Diseases of the Circulatory System	425	1.48%	Unspecified essential hypertension
Infectious and Parasitic Diseases	361	1.26%	Dermatophytosis of foot
Complications of Pregnancy, Childbirth and the Puerperium	233	0.81%	Other current conditions classifiable elsewhere of mother, antepartum condition or complication
Diseases of the Blood and Blood Forming Organs	44	0.15%	Anemia, unspecified
Neoplasms	24	0.08%	Neoplasm of unspecified nature of digestive system
Congenital Anomalies	2	0.01%	Unspecified congenital anomaly of brain, spinal cord and nervous system, other anomalies of lower limb, including pelvic girdle
Unknown	1	0.00%	Unknown
Total	28,727	100.00%	

Table 7. Frequency of Primary Diagnosis of Homeless Individuals who were Hospitalized, Maricopa County, 2006-2014

Primary Diagnosis-Hospitalized	Frequency	Percent	Most-Common Diagnosis in Group
Mental Disorders	9,618	40.63%	Unspecified schizophrenia, unspecified
Injury and Poisoning	2,801	11.83%	Poisoning by amphetamines
Diseases of the Circulatory System	1,527	6.45%	Atrial fibrillation
Diseases of the Digestive System	1,433	6.05%	Acute pancreatitis
Diseases of the Respiratory System	1,426	6.02%	Pneumonia, organism unspecified
Diseases of the Skin and Subcutaneous Tissue	1,303	5.50%	Cellulitis and abscess of leg, except foot
Infectious and Parasitic Diseases	1,159	4.90%	Unspecified septicemia
Endocrine, Nutritional and Metabolic Diseases, and Immunity Disorders	1,005	4.25%	Diabetes with ketoacidosis, type I (juvenile type), uncontrolled
Symptoms, Signs and Ill-Defined Conditions	803	3.39%	Other chest pain
Diseases of the Genitourinary System	723	3.05%	Acute kidney failure, unspecified
Diseases of the Musculoskeletal System and Connective Tissue	532	2.25%	Rhabdomyolysis
Complications of Pregnancy, Childbirth and the Puerperium	468	1.98%	Previous cesarean delivery, delivered, with or without mention of antepartum condition
Diseases of the Nervous System and Sense Organs	432	1.82%	Epilepsy, unspecified, without mention of intractable epilepsy
Neoplasms	209	0.88%	Malignant neoplasm of upper lobe, bronchus or lung
Supplementary Classification of Factors Influencing Health Status and Contact with Health Services	132	0.56%	Care involving other specified rehabilitation procedure
Diseases of the Blood and Blood-Forming Organs	87	0.37%	Iron deficiency anemia, unspecified
Congenital Anomalies	13	0.05%	Anomalies of cerebrovascular system
Certain Conditions Originating in the Perinatal Period	2	0.01%	Other preterm infants, unspecified (weight)
Total	23,673	100.00%	

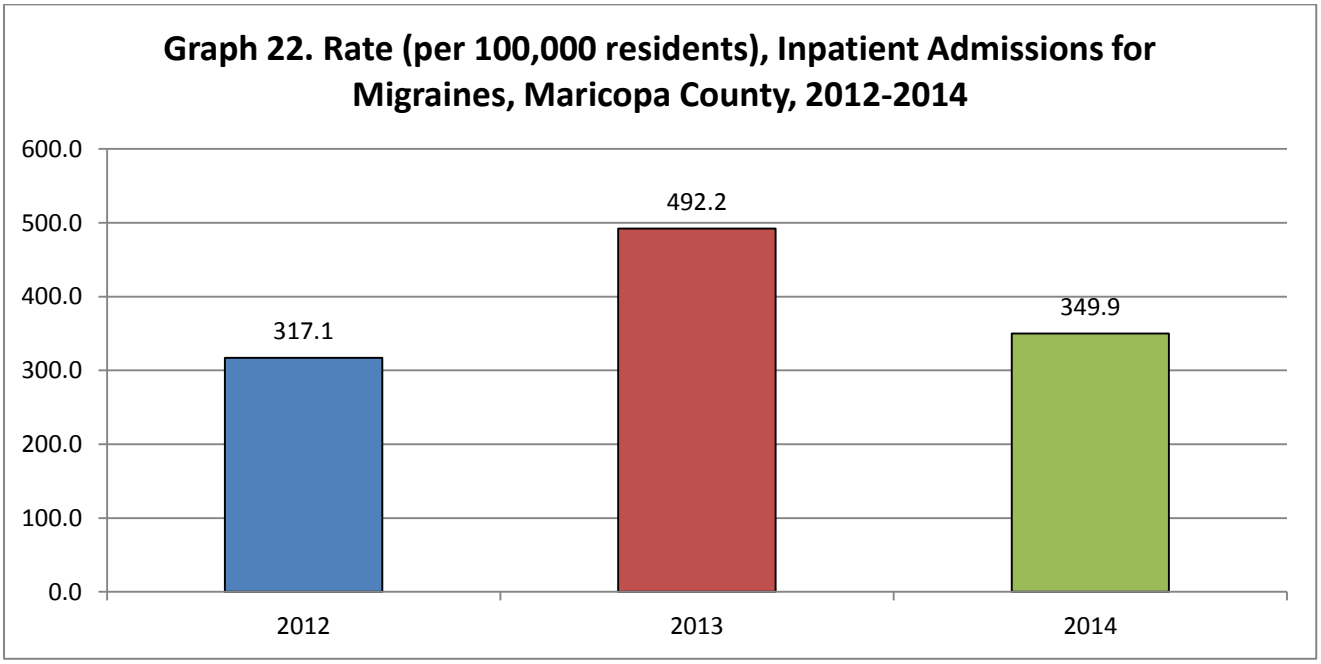
Neurology:

Neurological disorders rapidly have become a significant and growing problem. According to the World Health Organization, neurological impairments and their accompanying behavioral problems affect more that 450 million individuals worldwide, as of 2010.[50] Alzheimer's was the 5th leading cause of

death in Maricopa in 2013. The number of deaths due to Parkinson's disease also increased from 2009-2013.[51]

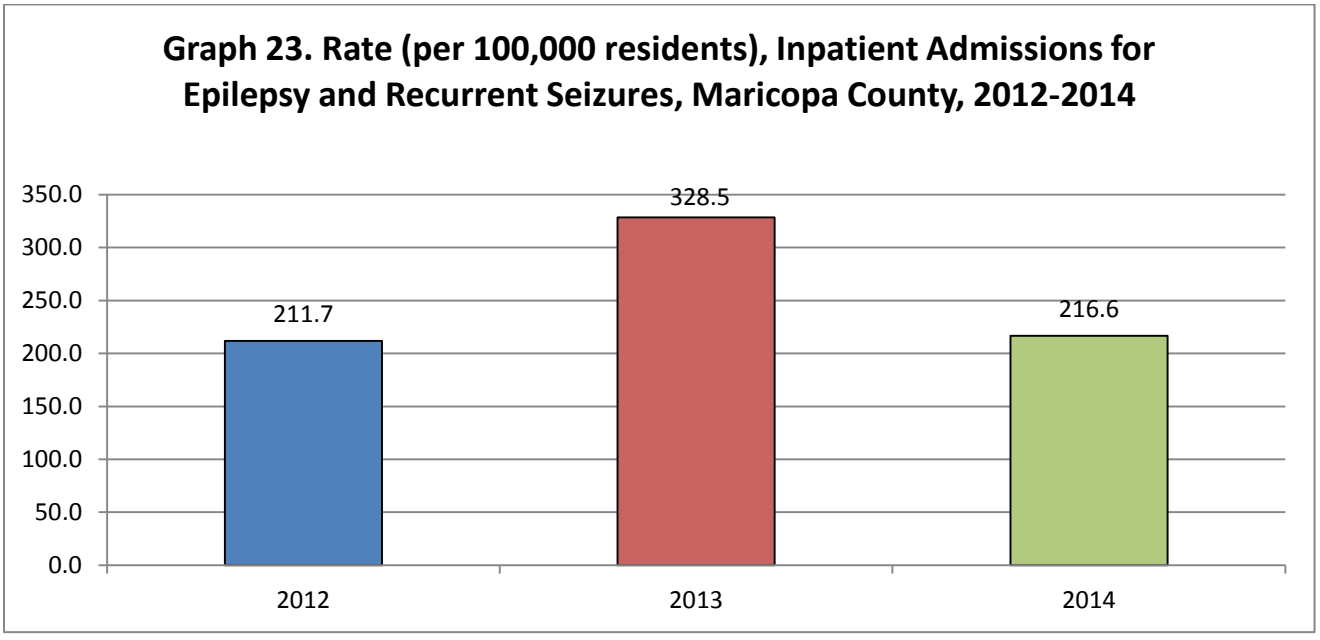
The rate of inpatient admissions has decreased for many neurological disorders such as migraines, epilepsy and seizures (Graphs 22 - 23.)[52]

Graph 22. Rate (per 100,000 residents), Inpatient Admissions for Migraines, Maricopa County, 2012-2014



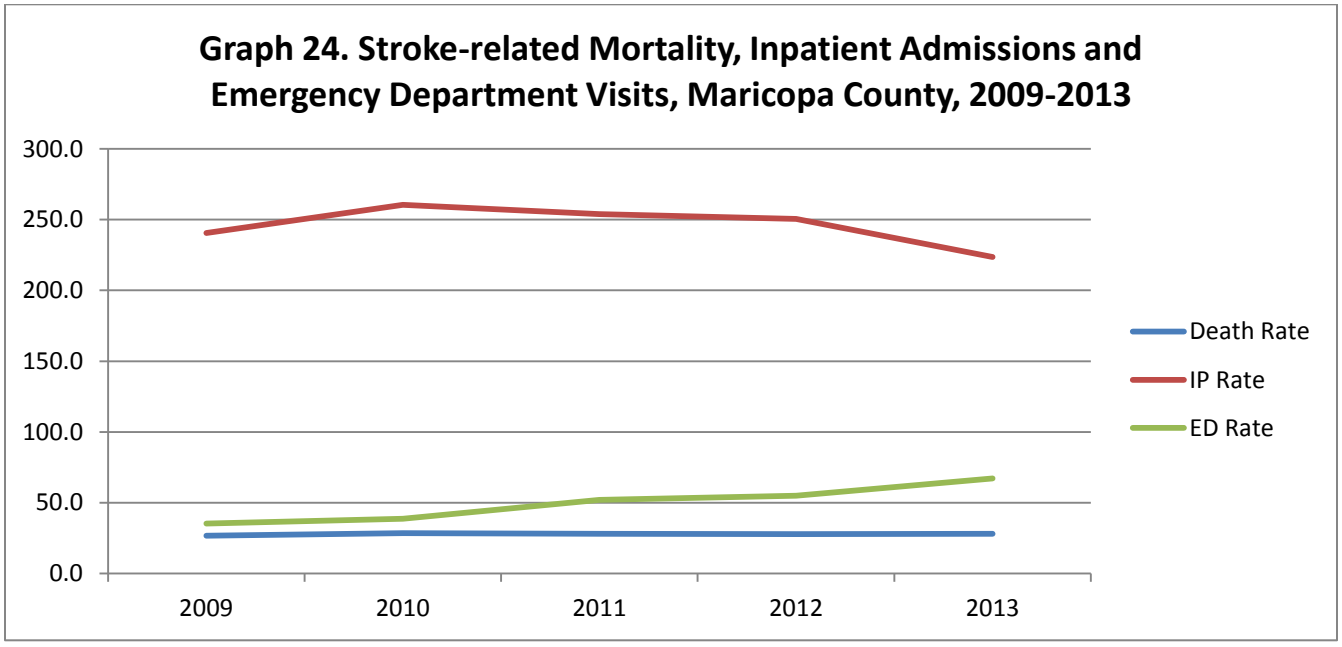
Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

Graph 23. Rate (per 100,000 residents), Inpatient Admissions for Epilepsy and Recurrent Seizures, Maricopa County, 2012-2014



Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting

However the number of stroke-related ED visits has increased (Graph 24.) The highest rates are seen in white, non-Hispanics and adults age 75 and older.[53]



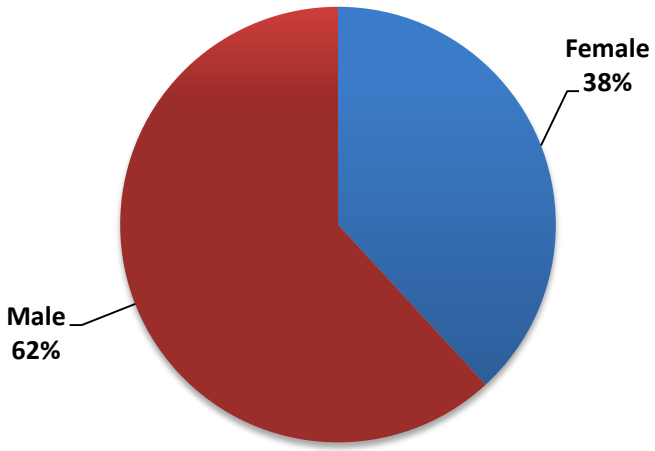
Source: Arizona Department of Health Services, Health Care Institution Facility Data, Hospital Inpatient Discharge Reporting, Arizona Department of Health Services, Vital Records and Statistics

Transplant:

Despite advances in medicine and technology, and increased awareness of organ donation and transplantation, the gap between supply and demand continues to widen. Every 10 minutes, someone is added to the national transplant waiting list. On average, 22 people die each day while waiting for a transplant.[54] In 2015, there were 2,130 individuals registered on the waitlist for solid organ transplant in Arizona, with over 80 percent waiting for a kidney transplant. The average wait time for a transplant is one to two years; however many individuals have been on the wait list for over five years. [55]

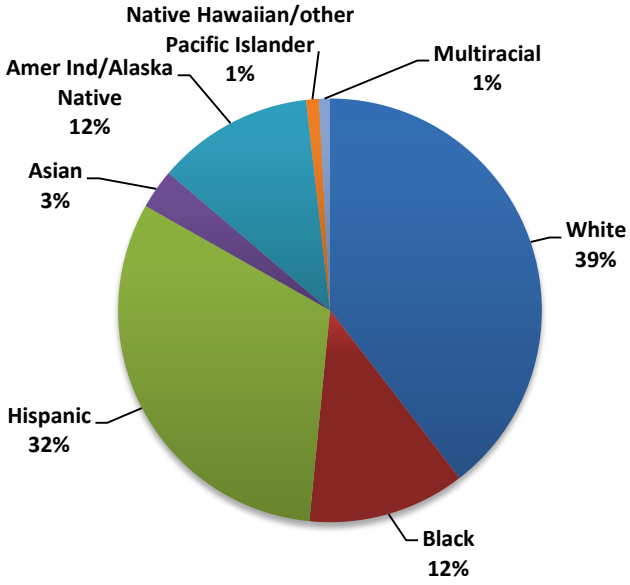
Men are more likely than women to be on the wait list (Graph 25.) The highest percentages of individuals on the waiting list are white, non-Hispanic, followed by Hispanics (Graph 26.) While national rates of donation and transplant have increased in recent years, more progress is needed to ensure that all candidates have a chance to receive a transplant.

Graph 25. Percentage of Residents Registered on Waitlist for Solid Organ Transplant, by Gender, Arizona, 2015



Source: U.S. Department of Health & Human Services Organ Procurement and Transplantation Network

Graph 26. Residents Registered on Waitlist for Solid Organ Transplant, by Ethnicity, Arizona, 2015



Source: U.S. Department of Health & Human Services Organ Procurement and Transplantation Network

Resources potentially available to address needs

- Mayo Clinic Hospital Division of Transplantation Medicine
- Mayo Clinic Hospital Cancer Center and Proton Beam Program
- Mayo Clinic Office of Disparate Health Research-Outreach to Disparate Populations
- Community-based clinic partnerships
- Partnerships with federally qualified community clinics
- Clinical Trial collaborations with existing community partnerships
- Mayo Clinic Diversity & Inclusion
- Mayo Clinic Mayo Employee Resource Groups
- Mayo Clinic Department of Education Graduate Medical Education Division
- Mayo Clinic Faculty & staff
- Maricopa County Public Health
- Mountain Park Health Centers
- Circle the City Respite Facility for the Homeless
- St. Vincent de Paul Medical & Dental Clinic
- Phoenix Indian Medical Center
- Maricopa Integrated Health
- Turn A New Leaf-Mesa Men's Center
- Adelante Medical Clinic

Evaluation of Prior CHNA and Implementation Strategy

There was very limited public feedback on the preceding CHNA for Mayo Clinic Hospital in Arizona. However, the partners and collaborators with its outreach programs greatly appreciated the care provided by physician and nursing staff at their community clinics that served poor, working poor, uninsured, underinsured, immigrant, homeless and other vulnerable populations. Below is an example of the comments:

faith, hope, love
SOCIETY of ST. VINCENT de PAUL P. O. Box 13600, Phoenix, Arizona 85002-3600 tel 602.261.6868 fax 602.264.6816 www.stvincentdepaul.net

September 8, 2016

Mayo Clinic,

My name is Maurice Lee, I am the Medical Director of the Virginia G. Piper St. Vincent de Paul Medical & Dental Clinic in Phoenix, Az, and I have had the opportunity over the last two years to get to know many of the staff and physicians that are a part of the Mayo team. Before I was hired as the Medical Director the Mayo Clinic had already had a very deep foot print in the work being done with the uninsured and underinsured. Thanks to close relationships we have been able to build upon that foundation.

We are a free community clinic that provides both primary and specialty care to people who have the highest need, yet the fewest resources. I am the only paid physician in the organization and have 4 full time staff members (a nurse, 2 MAs, a front desk and a Jesuit volunteer). With this staff we are able to provide 6-7,000 patient visits annually for patients who do not have insurance but were recently discharged from the hospital, have uncontrolled chronic diseases or need surgeries. They say you are only as strong as your weakest link. That saying is true for us, we are only as strong as our volunteers will allow us to be and because of our partnership with Mayo we are proud to say that we are the strongest free clinic in Arizona. So much so that we are the main referral source for all of the other free clinics as well as many of the local FQHCs.

Due to Mayo's generosity we have the ability to offer internal medicine, neurology, endocrinology, cardiology, echocardiography and urology services along with hosting a number of residents and fellows. Currently we are establishing a telemedicine program and a medical student run clinic beginning in 2018. Our partnership with Mayo has been invaluable; I just hope that we have been able to reciprocate a small portion of that value back.

We are currently rebuilding our website to reflect the current state of our clinic. I anticipate in the next month or two that all the new pictures will be uploaded, many of which are Mayo physicians/techs.

http://www.stvincentdepaul.net/programs/medical-clinic

We do not take the opportunity enough to thank our partners, we look forward to our continued work together to help boost the health and well-being of the community.

Maurice Lee MD, MPH, FAAFP
Medical Director, Virginia G. Piper St. Vincent De Paul Medical & Dental Clinic
Office: 602.261.6867
Cell: 480.324.6252
Fax: 602.261.6816

Access to care

- Care from the various hospitals doing outreach at community-based clinics and federally qualified community clinics was coordinated for optimal impact on these populations

- Mayo Clinic Hospital in Arizona increased its outreach to provide care to the entire Maricopa County community, which included segments of the population that are not within the pipeline of patients seen internally within the Mayo Clinic Hospital practice. Through partnerships with St. Vincent de Paul Medical & Dental Clinic we have increased by 40 percent the number of Mayo Clinic physician, nursing and allied health staff who provide *pro bono* care to this underserved, immigrant, homeless and vulnerable population.

- Mayo Clinic responds to requests from the medical directors of St. Vincent de Paul Medical & Dental Clinic and the Circle the City Respite Facility for the Homeless. It also addresses the aligned needs of the Mountain Park Health Center's for mammography, followed by appropriate treatment — at no cost — of their patients who have been diagnosed with breast cancer.

- Mayo Clinic Hospital has maintained partnerships with community-based hospitals, community-based clinics, homeless facilities and federally qualified health care centers.

Charity Care Policy, Administration of Financial Assistance Policy
Mayo Clinic's mission is to provide the best care to every patient every day through integrated clinical practice, education and research. It strives to benefit humanity through work in these three areas, while supporting the communities in which we live and work.

As part of that commitment, Mayo Clinic appropriately serves patients in difficult financial circumstances and offers financial assistance to those who have an established need to receive medically necessary medical services. Above all, Mayo Clinic's guiding philosophy is that the needs of the patient come first. Charity care is only one component of Mayo Clinic's charitable mission. Educating the next generation of health care professionals and supporting biomedical research to decrease the burden of human disease are vital to Mayo Clinic's charitable purpose.

This policy serves to establish and ensure a fair and consistent method for the review and completion of requests for charitable medical care to our patients in need.

- Mayo Clinic has created two Community Advisory Boards (CAB) to serve as a voice for our community partners, providing Mayo a greater understanding of the access-to-care issues facing our patients and community partners. The overall CAB addresses health disparities research; the Sangre Por Salud CAB provides feedback on a Latino bio bank research project at our community partner site, Mountain Park Health Center.

- Mayo Clinic serves on the Arizona State University Southwest Interdisciplinary Research Center CAB to share ideas and opportunities for improving access to care for our community members.
- Mayo Clinic has led the formation and implementation of a statewide Arizona Health Equity Conference, which addresses health disparities and access-to-care issues across the state. Mayo has served as a champion on a number of topics, including a speaker panel on access to medical and dental free clinics, Latino panel, African-American faith-based panel, LGBTQ panel, and refugee health panel.

Lung cancer

- Mayo Clinic Hospital implemented Smoking Cessation studies prioritizing targeted populations. Two of these ground-breaking efforts include the Center for the Evaluation of Nicotine in Cigarettes (CENIC) and McNeil studies. Mayo Clinic is serving as a clinic trial host for both of these studies, along with other academic institutions across the United States.
- In 2015, Mayo Clinic established a Lung Transplant Program.
- Along with the Mayo Clinic Cancer Center, Mayo Clinic in Arizona added a proton-beam facility.
- The Research on health Equity and Community Health (REACH) Program has partnered with the Somali United American Council of Arizona to assess smoking perceptions and attitudes among Somali community members. This information will help inform upcoming tobacco-cessation classes at its community center. This is the first time a research project has been conducted with them, and it has been highly successful, paving the way for many more future partnership opportunities, since given Somalis are one of the leading resettled refugee populations in Arizona.
- Mayo Clinic Arizona works closely with our Navajo Nation partners via the Networks Among Tribal Organizations for Clean Air Policies (NATO CAP) research project.
- Mayo Clinic Hospital has increased Smoking Cessation Community Outreach and Clinical Trial enrollment.

Diabetes

- Mayo Clinic representatives from the REACH Program, the Arizona arm of the Office of Health Disparities Research, participated on the Arizona Diabetes Coalition, which included quarterly overall meetings and the health equity subcommittee.
- Dr. Gabriel Shaibi, through the Viva Maryvale project, is working with St. Vincent de Paul Medical & Dental Clinic, YMCA and other partners to address obesity and diabetes amongst Latinos through family-based interventions.

Cardiology

- Through its cardiac rehabilitation program, Mayo Clinic in Arizona is working across the Enterprise to conduct a virtual-health research project with cardiac patients, which is being led by Mayo Clinic in Rochester, Minnesota.

Obesity

- Mayo Clinic REACH representatives participated in an Enterprise-wide research pilot project assessing obesity and unconscious bias with our community partners, specifically Adelante Healthcare, which is an FQHC in Arizona. This represents the first research partnership between Mayo Clinic and this organization.
- Mayo Clinic works with Arizona State University as part of its Mayo Clinic/ASU Obesity Solutions program, which conducts community-based projects, including Fit PHX Energy Zones, Streetlight USA, Measuring Activity in the Traditional School Day and Salud Es Vida.
- Obesity-related interventions and research also is being conducted by Dr. Foxx Orenstein and the Weight and Wellness Solutions program at Mayo Clinic in Arizona.
- Dr. Gabriel Shaibi, through the Viva Maryvale project, is working with St. Vincent de Paul Medical & Dental Clinic, YMCA and other partners to address obesity and diabetes among Latinos through family-based interventions.

Education for community providers

The Mayo Clinic School of Continuous Professional Development continues to be a leader in providing education to physicians and mid-level practitioners through the Mayo Clinic Faculty resources, as well as bringing in experts to help educate local physicians about best practices, data-driven clinical application of new approaches to the treatment of multiple diseases and ailments. The overall number of Continuous Professional Development/CME courses has grown from 26 in 2014 to 36 in 2016. These were the classes pertaining to CHNA priorities offered from 2014-2016.

Lung cancer

- A Multidisciplinary Update in Pulmonary and Critical Care Medicine (4/24-27/2014)

Obesity

- Mayo Clinic Women's Health Update (3/6-8/2014)
- Mayo Clinic Gastroenterology & Hepatology 2014 (3/13-16/2014)
- Clinical Reviews (3/26-29/2014)
- Update in Hospital Medicine 2014 (10/15-18/2014)
- 17th Annual Mayo Clinic Internal Medicine Update: Sedona (10/30-11/2/2014)
- Mayo Clinic Gastroenterology & Hepatology (10/22/2015)
- Update on Women’s Health (3/3-5/2016)
- Clinical Reviews (3/16-19/2016)
- 19th Annual Mayo Clinic Internal Medicine Update: Sedona (10/6-9/2016)
- Mayo Clinic Hospital Medicine 2016 (11/2-5/2016)

Cardiology

- Mayo Clinic Update in Echocardiography: Role of Echo from Prevention to Intervention (4/10-13/2014)

- Cardiology Update 2014: The Heart of the Matter (7/31- 8/3/2014)
- 17th Annual Mayo Clinic Internal Medicine Update: Sedona (10/16-19/2014)
- 17th Annual Mayo Clinic Internal Medicine Update: Sedona (10/30-11/2/2014)
- Mayo Clinic Austere Environment Medicine Symposium (11/2-5/2015)
- Mayo Clinic Hospital Medicine: Managing Complex Patients (11/4-7/2015)
- Mayo Echo in Phoenix - From Prevention to Intervention (11/12-15/2015)
- Cardiology Update 2016: The Heart of the Matter (3/23/2016)
- A Multidisciplinary Update in Pulmonary and Critical Care Medicine (4/7-10/2016)
- Cardiology Update 2016: The Heart of the Matter (8/4-7/2016)

Mayo Clinic Hospital Medicine 2016 (11/2-5/2016)

Appendix A – List of Data Sources

- Arizona Youth Risk Behavior survey (YRBS)
  https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=AZB
- Area Health Resource: File/American Medical Association
  http://ahrf.hrsa.gov/download.htm
- Behavioral Risk Factor Surveillance System survey (BRFSS)
  http://www.maricopa.gov/PublicHealth/Services/EPI/pdf/hsr/2013BRFSS.pdf
- CDC Wonder – Environmental Data
  http://wonder.cdc.gov/nasa-pm.html
- Centers for Medicare and Medicaid Services, National Provider Identification
  https://www.cms.gov/Research-Statistics-Data-and-Systems/Research-Statistics-Data-and-Systems.html
- Centers for Disease Control and Prevention (CDC) National Environmental Public Health Tracking
  http://ephtracking.cdc.gov/showCancerMain.action
- Comprehensive Housing Affordability Strategy (CHAS) data
  https://www.huduser.gov/portal/datasets/cp/CHAS/data_querytool_chas.html
- County Health Rankings and Roadmaps
  http://www.countyhealthrankings.org/
- Maricopa County Hospital Discharge Data (HDD)
  - Emergency Department visits (ED)
  - Inpatient discharges (IP)
- Maricopa County Vital Statistics data
  - Birth Certificates
  - Death Certificates
- National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
  http://www.healthindicators.gov/Indicators/Selection
- U.S. Census Bureau, American Community Survey (ACS), Bureau of Labor Statistics, United States Department of Agriculture, Centers for Medicare and Medicaid Services
  http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/
- U.S. Department of Health & Human Services Organ Procurement and Transplantation Network
  https://optn.transplant.hrsa.gov/data/

Focus Groups

Twenty-three focus groups were conducted between September 25, 2015, and April 2, 2016. A total of 225 adults, ranging in age from 18 to 91, participated. See Table 4 for additional participant characteristics.

Table 4. Summary of Participant Characteristics

Characteristic	Number	%
Gender		
Male	58	26%
Female	153	69%
Transgender	10	5%
Identifies as LGBTQ	27	12%
Race/ethnicity		
American Indian/Alaska Native	41	18%
Asian/Pacific Islander	10	5%
Black/African American	28	12%
Hispanic/Latino	96	43%
White	50	22%
Education		
Less than high school	45	21%
High school/GED	35	16%
Some college/Associates degree	83	38%
Bachelor degree or higher	55	25%
Marital Status		
Married	95	43%
Widowed, separated, or divorced	50	23%
Never married	46	21%
Living with partner	28	13%
Parent of child under age 18	131	58%
Qualified for free/reduced lunch	75	81%*
Employment		
Full-time	61	28%
Part-time	34	16%
Unemployed	73	33%
Retired	30	14%
Unable to work	20	9%

Note: Due to some missing data (e.g., skipped or unanswered questions) and multiple response options, numbers do not always add to 127 or 100 percent. Percentages reported are calculated from the total number of participants who answered that specific question.
*Of those with children in grades K-12.

Date	Time	Population	Location
9/25	9:30-11:30am	Older adults (65-74) [n=10]	Sun City Branch Library (16828 N 99th Ave, Sun City, AZ 85351)
9/28	5:30-7:30pm	Native American adults [n=24]	Phoenix Indian Center (4520 N Central Ave #250, Phoenix, AZ 85012)
9/29	5:30-7:30pm	Adults without children [n=10]	Mesa Main Library (64 E. 1st St., Mesa, AZ 85201)
9/30	6:00-8:00pm	LGBTQ adults [n=6]	Phoenix Pride LGBT Center (801 N 2nd Ave, Phoenix, AZ 85003)
10/2	9:00-11:00am	Adults with children under age 18 [Spanish; n=15]	Maryvale Community Center (4420 N. 51st Avenue, Phoenix, AZ, 85031)
10/2	6:00-8:00pm	Low-income Adults [Spanish; n=15]	Sojourner Center (2330 E Fillmore St, Phoenix, AZ 85006)
10/4	2:00-4:00pm	Hispanic/Latino adults [English; n=8]	Cesar Chavez Library (3635 W Baseline Rd, Laveen Village, AZ 85339)
10/5	5:30-7:30pm	Adults with children under age 18 [n=10]	Embry Riddle Aeronautical University, Phoenix Mesa Campus (5930 S. Sossaman Rd., Ste. #102, Mesa, AZ 85212)
10/6	5:30-7:30pm	Young adults (18-30) [n=10]	Pendergast Community Center (10550 W. Mariposa St., Phoenix, AZ 85037)
10/7	6:00-8:00pm	African American adults [n=10]	Southwest Behavioral Health Services (4420 S. 32nd St., Phoenix, AZ 85040)
10/8	11:30-1:30pm	LGBTQ adults [n=9]	ASU/SIRC (502 E. Monroe St., Phoenix, AZ 85004)

Date	Time	Population	Location
2/27	10:00-12:00pm	Older adults (50-64) [Spanish; n=8]	Guadalupe Town Office (9241 S Avenida del Yaqui Guadalupe, AZ 85283)
3/5	11:30-1:30pm	Adults with children [Spanish; n=12]	Dysart Community Center (14414 N El Mirage Rd, El Mirage, AZ 85335)
3/12	9:30-11:30am	Adult males [Spanish; n=8]	Glendale Community College (6000 W Olive Ave, Glendale, AZ 85302)
3/12	1:00-3:00pm	Adult females [Spanish; n=12]	Open Door Fellowship Church (8301 N 19th Ave, Phoenix, AZ 85021)
3/15	5:30-7:30pm	Lower income adults [n=9]	Escalante Community Center (2150 E Orange St, Tempe, AZ 85281)
3/19	9:30-11:30am	Caregivers [n=8]	Red Mountain Multigenerational Center (7550 E Adobe Rd, Mesa, AZ 85207)
3/19	9:30-11:30am	Older adults [75+] [n=10]	Red Mountain Multigenerational Center (7550 E Adobe Rd, Mesa, AZ 85207)
3/22	5:30-7:30pm	African American adults [n=9]	Tanner Community Development Corporation [TCDC] (700 E Jefferson St # 200, Phoenix, AZ 85034)
3/24	5:30-7:30pm	Native American adults [n=6]	Mesa Community College (1833 W Southern Ave, Mesa, AZ 85202)
3/29	5:30-7:30pm	Adults with children [n=8]	Paradise Valley Community College (18401 N 32nd St, Phoenix, AZ 85032)
4/2	9:30-11:30am	Asian American adults [n=8]	Chandler Downtown Library (22 S Delaware St Chandler, AZ 85225)

Appendix B – List of Data Indicators

1. Leading causes of death, Vital Records and Statistics
2. Years of potential life lost before age 75 per 100,0000 population (age adjusted), Vital Records and Statistics
3. Number of infant deaths (within 1 year), per 100,000 births, Vital Records and Statistics
4. Percentage of adult respondents who rate their health “fair” or “poor,” BRFSS
5. Average number of days adult respondents report that their physical health was not good, BRFSS
6. Average number of days adult respondents report that their mental health was not good, BRFSS
7. Percentage of live births where the infant weighed less than 2,500 grams (approximately 5lbs., 8 oz.)
8. Percentage of pre-term births (<37 weeks gestation), Vital Records and Statistics
9. Percentage of adult respondents who report they were told they had diabetes by a doctor, BRFSS
10. Percentage of adult respondents who report they were told they had high blood pressure by a doctor, BRFSS
11. Number of persons living with a diagnosis of human immunodeficiency virus (HIV) infection per 100,000 population
12. Percentage of the adult population (age 18 and older) who reports a body mass index (BMI) greater than 25 kg/m^2 but less than 30kg/m^2, BRFSS
13. Percentage of high school students who report a body mass index (BMI) greater than 25kg/m^2 but less than 30 kg/m^2, YRBS
14. Percentage of the adult population (age 18 and older) who reports a body mass index (BMI) greater than or equal to 30 kg/m^2, BRFSS
15. Percentage of high school students who report a body mass index (BMI) greater than or equal to 30 kg/m^2, YRBS
16. Inpatient admissions and emergency department visits related to substance use (opiates, heroin, benzodiazepine, alcohol), HDD
17. Inpatient admissions and emergency department visits related to mental health (organic psychotic, neurotic, other psychoses, suicide), HDD
18. Inpatient admission and emergency department visits related to injury (motor vehicle occupant, motorcycle, pedestrian, bicycle, falls and interpersonal violence), HDD
19. Inpatient admissions and emergency department visits related to chronic disease (asthma, cardiovascular disease, congestive heart failure, diabetes, stroke), HDD
20. Inpatient admissions and emergency department visits related to cancer, HDD
21. Inpatient admissions related to neurological disorders, HDD
22. Number of residents registered on waitlist for solid organ transplant, U.S. Department of Health & Human Services Organ Procurement and Transplantation Network
23. Percentage of the population between the ages of 18 and 64 that has no insurance coverage, ACS
24. Percentage of the population under the age of 18 that has no insurance coverage, ACS

25. Percentage of the population that has Medicare/Medicaid for health insurance, ACS
26. Ratio of population to primary care physicians, Area Health Resource: File/American Medical Association
27. Ratio of population to dentists, Area Health Resource: File, National Provider Identification File
28. Ratio of population to mental health providers, CMS, National Provider Identification
29. Primary payer type of Emergency Department and Inpatient Visits, HDD
30. Percentage of births by when prenatal care began, Vital Records and Statistics
31. Percentage of women ages 50 and older who report having had a mammogram within the past 2 years, BRFSS
32. Percentage of men ages 40 and older who report having had a PSA test within the past 2 years, BRFSS
33. Percentage of women ages 18 and older who report having had a pap test within the past 3 years, BRFSS
34. Percentage of adults who report being current smokers, BRFSS
35. Percentage of high school students who report using tobacco, YRBS
36. Percentage of adults who report meeting at least one of the physical activity guidelines, BRFSS
37. Percentage of high school students who report physical inactivity, YRBS
38. Percentage of the population who lack adequate access to food, ACS
39. Percentage of adults who report fruit and vegetable consumption, BRFSS
40. Percentage of adults who report eating out, BRFSS
41. Percentage high school students who report fruit consumption, YRBS
42. Number of newly diagnosed chlamydia cases per 100,000 population, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
43. Number of births per 100,000 female population ages 15-19, Vital Statistics
44. The percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, BRFSS
45. Percentage of high school students who have ever used drugs or alcohol, YRBS
46. Number of people residing in Maricopa County (broken out by gender, age, race and ethnicity), ACS
47. Median household income, ACS
48. Percentage of persons in poverty, ACS
49. Percentage of children under age 18 in poverty, ACS
50. Percentage of adults ages 25 and older that do not have a high school diploma, ACS
51. Percentage of population ages 16 and older who are unemployed, Bureau of Labor Statistics
52. Percentage of adults who report speaking English “not well,” or “not at all,” ACS
53. Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5), CDC Wonder
54. Percentage of adults with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities, CHAS

Appendix C – Primary Data Collection Tools

CHNA Focus Group Questions

Community = where you live, work, and play

1. What does quality of life mean to you?
2. What makes a community healthy?
3. Who are the healthy people in your community?

   [Prompts]

   a. What makes them healthy?

   b. Why are these people healthier than those who have (or experience) poor health?
4. What do you believe are the 2-3 most important issues that must be addressed to improve health and quality of life in your community?

   [Prompt]

   a. What are the biggest health problems/conditions in your community?
5. What types of services or support do you (your family, your children) use to maintain your health?

   a. Why do you use them?
6. Where do you get the information you need related to your (your family's, your children's) health?
7. What keeps you (your family, your children) from going to the doctor or from caring for your health?
8. What are some ideas you have to help your community get or stay healthy?
9. What else do you (your family, your children) need to maintain or improve your health?

   [Prompts]

   i. Services, support or information to manage a chronic condition or change health behaviors such as smoking, eating habits, physical activity, or substance use

   ii. Preventive services such as flu shots or immunizations

   iii. Specialty healthcare services or providers
10. What resources does your community have that can be used to improve community health?

Appendix D- References

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