



East Valley Rehabilitation Hospital

Community Health Needs Assessment 2019







Maricopa County Coordinated Community Health Needs Assessment

Dignity Health East Valley Rehabilitation Hospital Chandler, AZ

This community health needs assessment report is a customized version of the coordinated community health needs assessment that the Maricopa County Department of Public Health conducted in partnership with Adelante Healthcare, Banner Health, Dignity Health, Mayo Hospital, Native Health, and Phoenix Children's Hospital.

December 20, 2018





Table of Contents

I.	Executive Summary	4
II.	Assessment Purpose and Organizational Commitment	9
III.	Community Definition	11
	Definition of Community	11
	Demographic and Socioeconomic Profile	12
IV.	Assessment, Process and Methods	16
	Process and Methods	16
	Secondary Data Collection	16
	Primary Data	18
	Data Limitations and Information Gaps	22
V.	Prioritized Description of Community Health Needs	24
	Identifying Community Health Needs	24
	Process and Criteria for Prioritization	24
	Description of Prioritized Community Health Needs	24
VI.	Resources Potentially Available to Address Needs	38
VII.	Impact of Actions Taken Since Preceding CHNA	40
/III.	Input Received on Most Recent CHNA and Implementation Strategy	41
Арре	ndix A. List of Data Sources	42
	ndix B. Primary Data Collection Tools	48
	ences	51

Executive Summary

Community Health Needs Assessment (CHNA) Background

The Patient Protection and Affordable Care Act (ACA) added new requirements which nonprofit hospitals must satisfy in order to maintain their tax-exempt status under section 501(c)(3) of the Internal Revenue Code. One such requirement added by ACA, Section 501(r) of the Code, requires nonprofit hospitals to conduct a Community Health Needs Assessment (CHNA) and adopt implementation strategies to meet the identified needs of the community at least once every three years. As part of the CHNA, each hospital is required to collect input from individuals in the community, including public health experts as well as residents, representatives or leaders of low-income, minority, and medically underserved populations.

Beginning in early 2015, East Valley Rehabilitation Hospital (EVRH), in partnership with SYNAPSE: A collaborative partnership with local hospitals and healthcare systems and the Maricopa County Department of Public Health (MCDPH) conducted an assessment of the health needs of residents of Maricopa County as well as those in their primary service area. The CHNA process undertaken and described in this report was conducted in compliance with federal requirements.

Purpose Statement

The purpose of this community health needs assessment (CHNA) is to identify and prioritize significant health needs of the community served by EVRH. The priorities identified in this report help to guide the hospital's community health improvement programs and community benefit activities, as well as its collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets requirements of the Patient Protection and Affordable Care Act that not-for-profit hospitals conduct a community health needs assessment at least once every three years.

Community Definition

The geographic area for this CHNA is Maricopa County, the common community for all partners participating in the SYNASPE Partnership. Maricopa County is the fourth most populous county in the United States. With an estimated population of 4 million and growing, Maricopa County is home to well over half of Arizona's residents. Maricopa County encompasses 9,224 square miles, includes 27 cities and towns, as well as the whole or part of five sovereign American Indian reservations. Maricopa County is ethnically and culturally diverse, home to more than 1.2 million Hispanics (30% of all residents), 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% are living below the federal poverty level, and over 600,000 are uninsured.

Dignity Health defines the community served by a hospital as those individuals residing within its primary and secondary service areas. For this report the focus will be on the primary service area of EVRH. The primary service area includes all residents in a defined geographic area surrounding the hospital and does not exclude low-income or underserved populations. The city of Chandler is primarily served by EVRH. Chandler is a growing and diverse city in Maricopa County, Arizona with nearly 250,000 residents of many ethnicities, various incomes and education levels. Surrounding communities include Gilbert, Mesa, Tempe, Ahwatukee, Sacaton, Apache Junction, Casa Grande, Pinal County, Gila River Indian Reservation, and Guadalupe. Chandler is home to several major industrial firms that include Intel, Microchip and Orbital. However, despite strong economic growth, there continues to be many factors and social determinants of health in the suburban Chandler communities that

need to be addressed in order to improve the health and wellbeing for the broader community and the underserved. According to the Community Need Index (CNI), a proprietary tool developed by Dignity Health, the primary service area includes both moderate and high-risk areas with significant socio-economic barriers. Zip code areas with the highest risks include 85122, 85128, 85139, 85202, 85225, 85282, and 85283ⁱⁱ.

Assessment, Process and Methods

The ACA requirements are mirrored in the Public Health Accreditation Board's (PHAB) standard mandating that health departments participate in or conduct a community health assessment every three to five years. Federally funded community health centers must also ensure their target communities are of high need. The similar requirements from IRS, PHAB, and the federally funded health center requirements put forth by the United States Department of Health and Human Services provide an opportunity to catalyze stronger collaboration and better shared measurement systems among hospitals, health centers, and health departments. Additionally, limited resources for comprehensive health assessments and the move toward new population health models have created the need for an organized, collaborative, public-private approach for conducting assessments. As a result, Adelante Healthcare, Banner Health, Dignity Health, Mayo Hospital, Native Health, and Phoenix Children's Hospital have joined forces with Maricopa County Department of Public Health (MCDPH) to identify the communities' strengths and greatest needs in a coordinated community health needs assessment.

The process of conducting this assessment began with a review of approximately 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. Surveys were collected from key informants to help determine community needs and priorities. Additionally, meetings were held with stakeholders from the Community Benefit Committee and Community Partnership Collaboration to assist with the analysis and interpretation of data findings.

Summary of Prioritization Process

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 that the primary service area had a health outcome or factor rate worse than the average Maricopa County rate, demonstrate a worsening trend when compared to Maricopa County data in recent years, or indicate an apparent health disparity; second, the health outcome or factor had to be mentioned in a substantial way in at least two primary data collection sources which were focus groups, surveys, or stakeholder meetings.

The process for prioritization included engagement with both internal Dignity Health stakeholders and community partners. The first step of the process was a comprehensive presentation by MCDPH that included an overview of the CHNA findings and key emerging health needs. The second step in the process involved review and prioritization of the key emerging health needs outlined in the MCDPH presentation by the Community Benefit Committee and Community Partnership Collaboration. Participants discussed each health need, consideration was given to the size of the problem, disparity and equity, known effective interventions,

resource feasibility and sustainability, and community salience. Through a voting process, participants made final recommendations to EVRH for priority health needs.

Summary of Prioritized Needs

The following statements summarize each of the areas of priority for EVRH, and are based on data and information gathered through the CHNA.

1. Access to Care

Community members and key informants overwhelmingly felt that access to care is an important issue for the community. When EVRH 2015 community survey respondents were asked, what was the most important "Health Problem" impacting their community, access to care was number one top concern. Within EVRH's primary service area, 3.9% of the population are unemployed and 8.8 are uninsuredⁱⁱⁱ. Additionally, there are disparities experienced across members of certain racial/ethnic backgrounds, with Hispanics and American Indians being least likely to have insurance^{iv}.

2. Mental/Behavioral Health

Mental and behavioral health are terms often used interchangeably to refer to a spectrum of health conditions which are each distinct yet often co-occurring and overlapping. Behavioral health includes not only ways of promoting well-being by preventing or intervening in mental illness such as anxiety or depression, but also has an aim preventing or intervening in substance abuse and suicide.

Mental health was ranked as the most important health problem impacting the community by key informants. This was echoed by participants in the focus groups who believe mental health is one of top health issues impacting community residents.

Substance abuse was one of the top concerns for both focus group participants and key informants. Key informants listed alcohol and drug abuse as two of the riskiest health behaviors community members are engaging in. In 2017, the United States Health and Human Services Department declared a public health emergency and announced a plan to combat the opioid crisis. In 2016, 790 Arizonians died from opioid overdoses and trends show an increase of a startling 74% over the past four years.^v

Suicide was the eighth leading cause of death for Maricopa County residents and EVRH's primary service area in 2016. Suicide rates across Maricopa County have slightly increased from 2012-2016, with male rates 3 times higher than female suicide rates. In Maricopa County, rates of suicide are highest among age groups 45-54 and 75+, which could indicate a potential health disparity in identification, referral or treatment of suicidal ideation.

Maternal Health is an important part of a mothers, infants, and child's overall health and wellbeing. It determines the health of the next generation and can help predict health challenges for families, communities, and the medical care system. Moreover, healthy birth outcomes and early detection and treatment of health conditions among infants can prevent death^{vi}. Maricopa County's infant mortality rates from 2012-2016 range from 5.3 to 6.3 infant deaths per 1,000 births.

Alzheimer's is a type of dementia that causes problems with memory, thinking, and behavior^{vii} In Arizona, 2,943 deaths occurred in 2015 due to Alzheimer's and it is the fifth leading cause of death, which is a 182% increase since 2000^{viii}. In Maricopa County Alzheimer's is the fourth leading cause of death and in the EVRH primary service area, it is the third leading cause of death^{ix}.

3. Overweight/Obesity

Arizona has the 30th highest adult obesity rate in the nation, and the 32rd highest obesity rate for youth ages 10-17^x. In Maricopa County, males have higher rates of being overweight, and Hispanics have higher rates of obesity when compared to non-Hispanic whites^{xi}. Key informants felt that being overweight, poor eating habits and lack of exercise were among the top five risky health behaviors community members were engaging in.

4. Cancer

While advancements continue to be made in the fight against cancer, it remains the leading cause of death in Maricopa County and the EVRH's primary service area and was identified as one of the top five areas of concerns from key informants. Colorectal cancer death rates in Maricopa County and EVRH primary service area has fluctuated over the last five years^{xii}. In EVRH primary service area, breast cancer death rates are highest among women ages 75+ and are higher than the Maricopa County rate^{xiii}.

5. Trauma/Injury Prevention

Injuries are not accidents, they are predictable and preventable. Unintentional injuries, including traffic-related, injuries, falls, burns, poisonings, and drowning were responsible for lost lives in the EVRH primary service area^{xiv}. Unintentional injury is the fifth leading cause of death in Maricopa County and sixth in the EVRH's primary service area. Males are more likely to suffer from an unintentional injury with the exception of falls which are more prevalent among females^{xv}.

6. Social Determinant of Health

Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks^{xvi}. Dignity Health EVRH is dedicated to making a positive impact on the social determinants of health, particularly on the health of those economically-disadvantaged communities. Resources that enhance quality of life can have a significant influence on population health outcomes. EVRH will focus on addressing homelessness, food insecurity, transportation, and problems related to psychosocial circumstances.

Resources Potentially Available

Resources potentially available to address identified needs include services and programs available through hospitals, government agencies, and community based-organizations. Resources include access to over 40 hospitals for emergency and acute care services, over 10 Federally Qualified Health Centers (FQHC), over 12 food banks, 8 homeless shelters, school-based health clinics, churches, transportation services, health enrollment navigators, free or low cost medical and dental care, and prevention-based community education.

The Health Improvement Partnership of Maricopa County (HIPMC) is a collaborative effort between MCDPH and a diverse array of public and private organizations addressing healthy eating, active living, linkages to care and tobacco-free living. With more than 100 partner organizations, this is a valuable to resource to help Dignity Health East Valley Rehabilitation Hospital connect to other community based organizations that are targeting many of the same health priorities^{xvii}.

This CHNA report was adopted by the Dignity Health East Valley Rehabilitation Hospital community board on January 29, 2019.

This report is widely available to the public on the hospital's web site, and a paper copy is available for inspection upon request at Dignity Health East Valley Rehabilitation Hospital Department of Community Health Integration.

Written comments on this report can be submitted to the Dignity Health East Valley Rehabilitation Hospital Department of Community Health Integration, by e-mail to CommunityHealth-SHJMC@DignityHealth.org or by phone to 602-406-2288.

Assessment Purpose and Organizational Commitment

Community Health Needs Assessment (CHNA) Background

Dignity Health East Valley Rehabilitation Hospital is dedicated to enhancing the health of the communities it serves. The findings from this Community Health Needs Assessment (CHNA) report will serve as a foundation for understanding the health needs found in the community and will inform the implementation strategies selected. This report complies with federal tax law requirements set forth in Internal Revenue Code section 501(r) requiring hospital facilities owned and operated by an organization described in Code section 501(c)(3) to conduct a CHNA at least once every three years. With regard to the CHNA, the ACA specifically requires nonprofit hospitals to: (1) collect and take into account input from public health experts as well as community leaders and representatives of high need populations—this includes minority groups, low-income individuals, medically underserved populations, and those with chronic conditions; (2) identify and prioritize community health needs; (3) document a separate CHNA for each individual hospital; (4) and make the CHNA report widely available to the public. In addition, each nonprofit hospital must adopt an Implementation Strategy that describes how the hospital will address the identified significant community health needs.

Purpose Statement

The purpose of this CHNA is to identify and prioritize significant health needs of the community served by EVRH. The priorities identified in this report help to guide the hospital's community health improvement programs and community benefit activities, as well as its collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets requirements of the Patient Protection and Affordable Care Act that not-for-profit hospitals conduct a community health needs assessment at least once every three years.

Organizational Commitment

Dignity Health East Valley Rehabilitation Hospital (EVRH) is an affiliate of St. Joseph's Hospital and Medical Center (SJHMC). Since 1895, SJHMC has delivered high-quality, affordable, health care services in a compassionate environment that meets each patient's physical, mental and spiritual needs. Upholding the core values of dignity, justice, stewardship, collaboration, and excellence, our healing philosophy serves not just our patients, but our staff, our communities, and our planet.

Rooted in Dignity Health's mission, vision and values, SJHMC is dedicated to delivering community benefit with the engagement of its management team, Community Board and Community Health Integration Network (CHIN). The board and its committee on community health and benefit issues are composed of community members who provide stewardship and direction for the hospital as a community resource.

The SJHMC Community Board and its chairperson, Richard Horn, Patty White, the hospital's President and CEO, the Executive Management Team and the community are involved in the CHNA process, Community Benefit planning process, and the prioritization of the identified unmet health-related needs to inform the development of the programs for each year and how they link to the hospital's strategic plan. This commitment is reflected in the hospital's Community Health Integration and Community Benefit programs, which are a demonstration of the hospital's commitment to improving the lives of the communities within Arizona. The Community Board, leadership and CHIN hold the planning of the community needs, oversee the

CHNA and its adoption through setting the priority for the Community Benefit Plan and approving the strategies for implementing the programs that will work with the community. They will continue to monitor the outcomes of the programs and ensure the appropriate resources are made available to sustain a healthier Arizona.

The key staff positions dedicated to planning and carrying out the community benefit programs include, but are not limited to the following:

- Director of Community Health Integration and Community Benefit provides the leadership, oversight, evaluation, and effectiveness of the community benefit programming for the hospitals and its affiliates.
- Directors of Hospital Service Lines provide oversight of the programs within their departments that are providing community benefit programming to meet the needs within the community.
- Community Benefit Specialists and Program Coordinators provide program coordination, outreach
 efforts, and community integration. These program coordinators are integrated within the hospital
 departments delivering the programs.
- Community Benefit Analyst provides oversight of the evaluation and outcomes of the programs to meet the needs within the community.

SJHMC's community benefit program includes financial assistance provided to those who are unable to pay the cost of their care, unreimbursed costs of Medicaid, subsidized health services that meet a community need, and community health improvement services. Our community benefit also includes monetary grants we provide to not-for-profit organizations that are working together to improve health on significant needs identified in our CHNA.

In addition, we are investing in community capacity to improve health – including by addressing the social determinants of health – through Dignity Health's Community Investment Program. In Arizona, \$14,900,000 has been invested through Dignity Health Community Investments. The following are the investments made to date:

Name	Amount
Arizona Community Foundation	\$5,000,000
Local Initiatives Support Corporation (LISC)/WESCAP Investments, Inc.	\$2,400,000
Chicanos por la Causa (Prestamos)	\$4,000,000
Trellis	\$500,000
Foundation for Senior Living	\$2,500,000
Brighter Way Institute (BWI)	\$500,000
	\$ 14,900,000

These investments were made to improve the community through social impact funding with the Arizona Community Foundation; improve a local food bank who also provides social supports to the Chandler Community; provide low-interest loans to small, start-up business to minority groups; improve early childhood learning; provide low-interest rates to individuals who are unable to secure loans for homes; and transitional housing for adolescents. All these projects and investments continue to create healthier, safe, communities in Arizona.

Community Definition

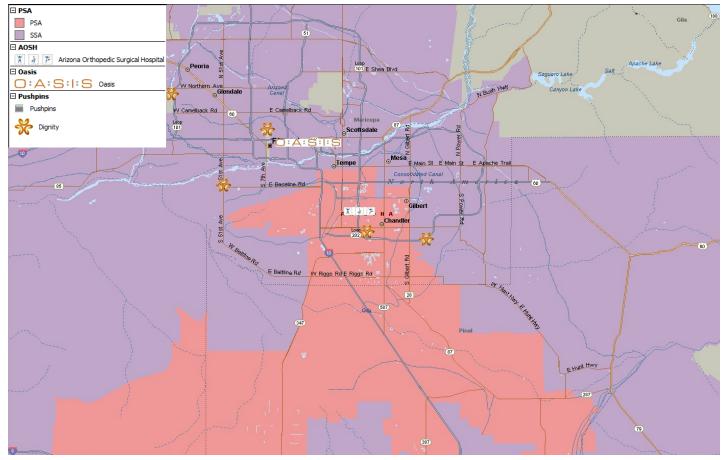
Definition of Community

The geographic area for this CHNA is Maricopa County, the common community for all partners participating in the Maricopa County Coordinated Health Needs Assessment collaborative (CCHNA). However, Dignity Health East Valley Rehabilitation Hospital primary service area specific information will also be provided when available.

Maricopa County is the fourth most populous county in the United States. With an estimated population of four million and growing, Maricopa County is home to well over half of Arizona's residents. Maricopa County encompasses 9,224 square miles, includes 27 cities and towns, as well as the whole or part of five sovereign American Indian reservations.

Dignity Health defines the community served by a hospital as those individuals residing within its primary and secondary service areas. For this report the focus will be on the primary service area of EVRH. The primary service area includes all residents in a defined geographic area surrounding the hospital and does not exclude low-income or underserved populations. The primary service area for EVRH Dignity Health East Valley Rehabilitation Hospital includes the zip codes making up the top 75% of the total patient cases.

The city of Chandler is primarily served by Dignity Health East Valley Rehabilitation Hospital for inpatient acute rehabilitation treatment and recovery for individuals who have experienced the debilitating effects of a severe injury or illness. . Surrounding communities also being served by Dignity Health East Valley Rehabilitation Hospital include Gilbert, Mesa, Tempe, Ahwatukee, Sacaton, Apache Junction, Casa Grande, Pinal County, Gila River Indian Reservation, and Guadalupe.



Dignity East Valley Rehabilitation Hospital Primary and Secondary Service Areas

Demographic and Socioeconomic Profile

Primary Care Area (PCA) Statistical Profiles are revised annually and provide detailed information on the demographics, health resources, hospital utilization, and health status indicators in defined geographic areas throughout Arizona. According to the Arizona Department of Health Services (ADHS), the Chandler Central PCA has been federally designated as a Medically Underserved Area^{xviii}. More than half of the population of EVRH's primary service area is adults between 20-64 years of age. Nearly 8.6% of residents do not have a high school diploma, 3.9% are unemployed and approximately 8.8% are without health insurance. This data shows that the population as a whole is majority white, and with a median income above Maricopa County and the state of Arizona. Table 1 provides the specific age, sex, and race/ethnicity distribution and data on key socio-economic drivers of health status of the population in the EVRH's primary service area compared to Maricopa County and the state of Arizona.

	EVRH PSA	Maricopa County	Arizona
Population: estimated 2015	620,463	4,088,549	6,728,577
Gender			
• Male	49.3%	49.5%	49.7%
• Female	50.7%	50.5%	50.3%
Age			
• 0 to 9 years	13.8%	13.8%	13.3%
 10 to 19 years 	14.2%	13.8%	13.6%
• 20 to 34 years	20.2%	21.2%	20.5%
• 35 to 64 years	39.5%	37.3%	36.7%
• 65 to 84 years	11.1%	8.0%	9.2%
 85 years and over 	1.2%	5.9%	6.7%
Race			
• White	61.3%	56.9%	77.8%
 Asian/Pacific Islander 	6.7%	4.0%	3.2%
Black or African American	4.7%	5.0%	4.3%
 American Indian/Alaska Native 	2.0%	1.5%	4.4%
• Other	3.0%	2.3%	7.0%
Ethnicity			
• Hispanic	22.2%	30.3%	30.5%
Median Income	\$74,138	\$53,694	\$51,340
Uninsured	8.8%	13.9%	13.6%
Unemployment	3.9%	4.4%	5.4%
No HS Diploma	8.6%	14.0%	13.8%
*% of Population 5+ non-English speaking	6.0%	9.3%	9.1%
*Renters	34.3%	39.6%	37.5%
CNI Median Score	2.6	39.6%	37.5%
Medically Underserved Area	Yes	-	-

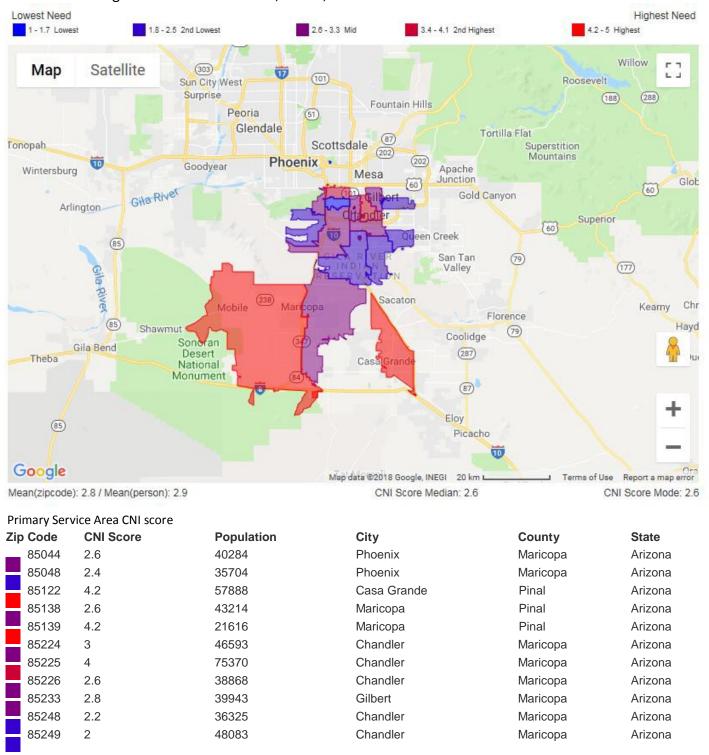
^{*}Source: U.S. Census American Community Survey, 5 year estimates 2013-2017

Chandler is home to several major industrial firms that include Intel, Microchip and Orbital. Despite strong economic growth, there continue to be many factors and social determinants of health in the suburban Chandler community that needs to be addressed in order to improve the health and wellbeing for the broader community, and the underserved. Challenges for this community include high rates of poverty, violence-associated injuries, a large non-English speaking population, and low education attainment, all of which create barriers to access. Downtown Chandler has a significant population of uninsured and underinsured non-English speaking persons of all age groups. A large majority of this population is also indigent with their primary source of income through day labor and seasonal work.

Community Need Index

Dignity Health has developed the nation's first standardized Community Need Index (CNI) in partnership with Truven Health Analytics. The CNI identifies the severity of health disparity for every zip code in the United States based on specific barriers to healthcare access. The CNI considers multiple factors that are known to limit health care access such as income, language, educational, insurance and housing barriers. The ability to pinpoint neighborhoods with significant barriers to health care access is an important new advancement for public health advocates and care providers. According to the CNI illustrated below, the primary service area has a mean CNI

score of 2.6 and includes both moderate and high-risk areas with significant socio-economic barriers. Zip code areas with the highest risks include 85122, 85139, and 85283.



85283	3.4	47190	Tempe	Maricopa	Arizona
85284	1.6	18133	Tempe	Maricopa	Arizona
85286	2.6	49140	Chandler	Maricopa	Arizona
85296	2	45985	Gilbert	Maricopa	Arizona
85298	2	31321	Gilbert	Maricopa	Arizona

Assessment Process and Methods

Process and Methods

The ACA requirements are mirrored in the Public Health Accreditation Board's (PHAB) standard mandating that health departments participate in or conduct a community health assessment every three to five years. Other PHAB standards require health departments to conduct a comprehensive planning process resulting in a community health improvement plan, and implement strategies to improve access to health care. Federally funded community health centers must ensure their target communities are of high need, and address the shortage of health services that are occurring within these communities. The similar requirements from IRS, PHAB, and the Federally funded health center requirements put forth by the United States Department of Health and Human Services provides an opportunity to catalyze stronger collaboration and better shared measurement systems among hospitals, health centers, and health departments. Additionally, limited resources for comprehensive health assessments and the move toward new population health models have created the need for an organized, collaborative public-private approach for conducting assessments.

Maricopa County hospitals and health centers play significant roles in the region's overall economy and health. In addition to providing safe and high-quality medical care, these institutions work to improve regional health through programs that promote health in response to identified community needs. Additionally, health care partners are often serving the same or portions of the same communities across Maricopa County. As a result, Adelante Healthcare, Banner Health, Dignity Health, Mayo Hospital, Native Health, and Phoenix Children's Hospital have joined forces with Maricopa County Department of Public Health (MCDPH) to identify the communities' strengths and greatest needs in a coordinated community health needs assessment.

The CHNA utilized 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, surveys, and meetings with community stakeholders. The process was reiterative as both the 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" perspectivexix. Population health can be defined as "the health outcomes of a group of individuals, including the distribution of such outcomes within the group." A focus on population health implies 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 utilized a community health framework for this report to develop criteria for indicators used to measure health needs.

SYNAPSE partners selected approximately 100 data indicators to help examine the health needs of the community (Appendix A). 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^{xx}. While this report does not identify the specific indicators that should be utilized, it does specify the categories of information that should be considered.

The following five data categories describe the type of health factor and health outcome indicators utilized in the CHNA (See 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, asthma incidence, 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;
- <u>Health Behavior</u> 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.);
- <u>Demographics and Social Environment</u> describe the population of interest by measuring its characteristics (e.g. total population, age breakdowns, limited English proficiency, etc.). Unlike other categories, demographic indicators are purely descriptive and not generally compared to benchmarks or viewed as positive or negative. This category also includes measures of social status, educational attainment, and income, all of which have a significant impact on an individual's health and;
- <u>Physical Environment</u> measures characteristics of the built environment of a community that can impact the health of that community either positively or negatively (e.g. parks, grocery stores, walkability, etc.)

Health Outcome Metrics		Health Determinants and Correlated Metrics			
Mortality	Morbidity	Access to Healthcare	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	
	Communicable Diseases			Language Spoken at Home	

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

Quantitative data used in this report are high quality, population-based data sources and were analyzed by MCDPH, 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, Arizona Criminal Justice Commission, 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 three means. First, data was collected through focus groups engaging members of underserved populations and communities. Second, surveys were conducted with key informants who serve the primary service area. Finally, a series of meetings were held with key stakeholders from EVRH's primary service area. Members of the CHIN and Arizona's Community of Care Network (AZCCN) provided input on the selection of data indicators, provided feedback on data collected, and aided in the selection of final priorities. Membership of the above mentioned committees and collaborations intentionally represent vulnerable and disenfranchised populations including the homeless, uninsured/underinsured, Medicaid, Medicare, immigrant, disabled, mentally ill, and elderly.

Focus Groups

Members of the community representing subgroups, defined as groups with unique attributes (race and ethnicity, age, sex, culture, lifestyle, or residents of a particular area of Maricopa County), were recruited to participate in focus groups. A standard protocol was used for all focus groups (See Appendix B) to understand the experiences of these community members as they relate to accessing health care, health disparities and chronic disease. In all, a total of twelve focus groups were conducted with 127 community members from the following groups: (1) older adults (65-74 years of age); (2) adults without children; (3) adults with children; (4) American Indian adults; (5) Lesbian, Gay, Bisexual, Transgender, and Questioning (LGBTQ) adults; (6) African

American adults; (7) Hispanic/Latino adults (English); (8) adults with children (Spanish); (9) low socio-economic status adults (Spanish), and (10) young adults (18-30 years of age).

Content analysis was performed on focus group interview transcripts to identify key themes and salient health issues affecting the community residents. The most common problem identified was access to care. Specific barriers discussed includes lack of transportation, high cost of doctor visits, high deductibles, unexpected or complicated bills from insurance, and a perceived lack of cultural competency and respect from providers. Participants also identified mental health, substance abuse, and community safety as important issues. Additionally, American Indian and African American participants felt diabetes was a significant health concern for their community.

Recommended strategies for health improvement discussed amongst the participants included:

- More health care navigators/advocates
- More community education/awareness of resources
- More transparency in health care (e.g. insurance, side effects, alternatives, toxins, etc.)
- Better access to healthy, and affordable food
- Increased training/education of health care professionals (e.g., proper use of pronouns for transgendered individuals, updated technologies/medical research, alternative medicine options, etc.)

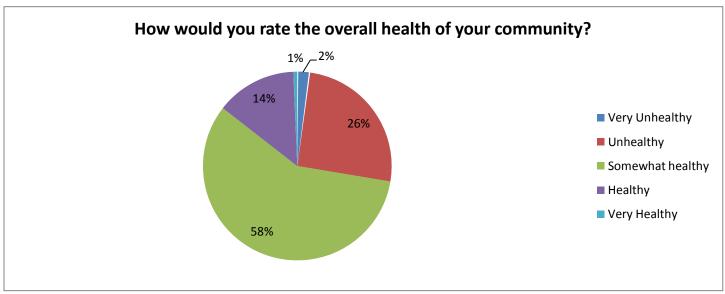
Key Informant Surveys

In order to identify and understand the community health needs, a community health survey was administered to key informants. Key informants were identified as health or community experts familiar with target populations and geographic areas within Dignity Health East Valley Rehabilitation Hospital primary service area. The survey instrument was created by MCDPH based on recommendations from the National Association of County and City Health Officials, Centers for Disease Control and Prevention, and Dignity Health leadership.

The survey was administered to 100 key informants who provide services throughout EVRH's primary service area. The survey asked respondents about factors that would improve "quality of life," most important "health problems," in the community, "risky behaviors" of concern, and their overall rating of the health of the community (Appendix B).

When surveyed about the overall health of the community, an alarming 25% of respondents felt the community was either "very unhealthy" or "unhealthy" (Chart 1).

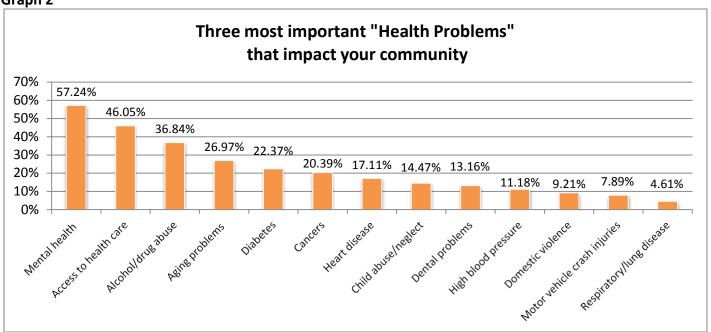
Graph 1



Source Key Informant Survey

Key informants felt the most important health problems impacting their community are mental health, access to health care, alcohol/drug abuse, aging problems, and diabetes (Graph 2).

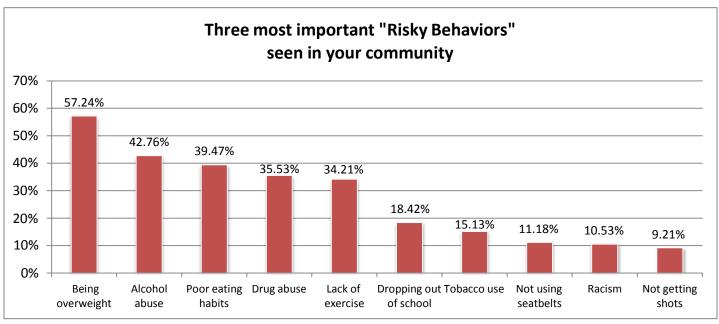
Graph 2



Source Key Informant Survey

When asked to rank the three most important risky behaviors seen in the community, the top five answers selected by respondents included being overweight, poor eating habits, alcohol abuse, drug abuse and lack of exercise (Graph 2). Though the responses reflect distinct behaviors, there appears to be some overlap with primary concerns of key informants centering on the areas of substance use, healthy eating, and active living.

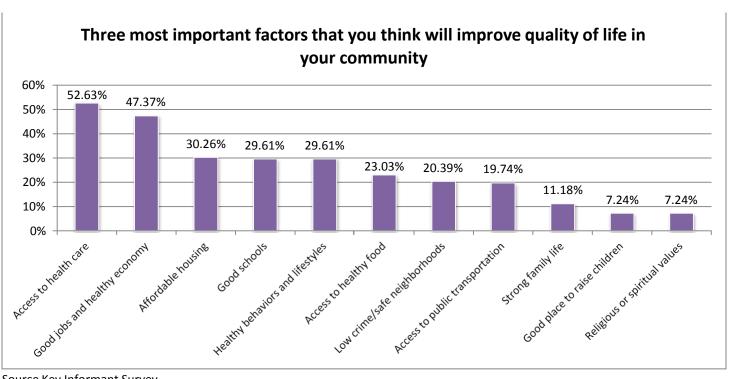
Graph 3



Source Key Informant Survey

Lastly, the most important factors key informants felt would improve the quality of life within their community included access to healthcare, good jobs and healthy economy, affordable housing, good schools, and healthy behaviors and lifestyles (Graph 4).

Graph 4



Source Key Informant Survey

Community Input/Engagement

Community input for the CHNA included engagement from the following Dignity Health sponsored stakeholder groups:

<u>St. Joseph's Hospital and Medical Center – Community Health Integration Network (CHIN)</u>

Each Dignity Hospital and Joint Venture Hospital participated and gave input at the Community Health Integration Network (CHIN) that is facilitated by the St. Joseph's Hospital and Medical Center Board of Directors and representatives from the community and experts within the hospitals that are working collaboratively to meet the needs within the communities' they serve. A key function of the Community Health Integration Network (CHIN), comprised of Dignity Health, community agencies, and community members, is to participate in the process of establishing program priorities based on the community needs and assets and to review, advice, and make recommendations to Dignity Health –St. Joseph's Hospital Westgate's Board's Community Benefit Committee.

St. Joseph's Hospital and Medical Center- Arizona Community of Care Network (AzCCN)

Arizona Community of Care Network (AzCCN) is a collaborative among diverse hospital, community organizations, government agencies, and community members. Through the collective impact model, the AzCCN shares common agenda's, shared measurement systems, mutually reinforcing activities and continuous communication to solve complex issues and improve the health of Arizona residents.

The information from the key informant survey along with the key findings from the MCDPH assessment data report was presented on October 2, 2018 to the Executive Leadership Team, Community Board, and CHIN. Attendees were surveyed on the information provided in this presentation in order to further narrow down the list of significant health needs. Following the survey feedback, MCDPH provided additional presentations incorporating focus group findings and gathered final recommendations from leadership, the CHIN and AzCCN, in order to solidify the recommended priorities.

Data limitations and Gaps

The data used in this report are from various reliable sources, but there are limitations to the data that need to be considered. When reviewing birth and death records some of the fields in these records are filled in based on recall. 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 have to consider the fact that these are those individuals that are seeking care. There are various reasons why and individual does not go to a hospital for care (like lack of money to pay) or individuals may use the ED for routine care that they could receive if they had a primary care physician. The year we evaluated for HDD used the ICD-9 code, which is different from the death certificate coding which utilizes ICD-10.

The survey data used 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. This data could not be drilled down to each hospitals primary service area. The survey 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 grades of school. 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. The Arizona Youth survey (AYS) is done every other year, opposite of the YRBS, and is of 8th, 10th, and 12th grade students in Arizona schools. This data can be evaluated at the county level, but not at the hospital service area.

Prioritized Descriptions of Significant Community Health Needs

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 that the primary service area had a health outcome or factor rate worse than the average Maricopa County rate, demonstrate a worsening trend when compared to Maricopa County data in recent years, or indicate an apparent health disparity; second, the health outcome or factor had to be mentioned in a substantial way in at least two primary data collection sources which were focus groups, surveys, or stakeholder meetings.

Process and Criteria for Prioritization

The process for prioritization included engagement with both internal Dignity Health stakeholders and community partners from the Community Benefit Board and the Community Partnership Collaboration (See Appendix A for list of participating organizations). The first step of the process was a comprehensive presentation by MCDPH that included an overview of the CHNA findings and key emerging health needs. Throughout the presentation, stakeholders in attendance responded to survey questions that would later be used during strategy sessions to identify health priorities. After completion of the presentation, stakeholders were given the opportunity to provide additional feedback and recommendations. The second step in the process involved review and prioritization of the key emerging health needs outlined in the MCDPH presentation. Participants discussed each health need; consideration was given to the size of the problem, disparity and equity, known effective interventions, resource feasibility and sustainability, and community salience. Through a voting process, participants made final recommendations to Dignity Health East Valley Rehabilitation Hospital for priority health needs.

Description of Prioritized Community Health Needs

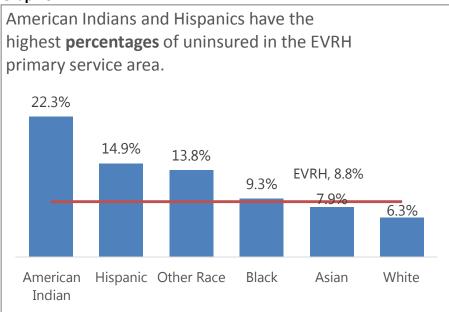
The following statements summarize each of the areas of priority for Dignity Health East Valley Rehabilitation Hospital, and are based on data and information gathered through the CHNA.

Stakeholders, community partners, focus group participants and key informants overwhelmingly felt that access to care is an important issue for the community. In Maricopa County 13.9% of the population is uninsured. There are disparities experienced across members of certain racial/ethnic backgrounds, with Hispanics (23.8%) and American Indians (24.3%) being the least likely to have insurance^{xxi}. According to the 2017 Behavioral Risk Factor Surveillance Survey (BRFSS), Maricopa County shows that 16.3% of those surveyed said they didn't have health coverage and 27.2% don't have a usual source of care. In the EVRH primary service area, uninsured rates are 8.8% (Graph 5)^{xxii}.

According to the 2012-2016 American Community Survey, 8.8% of EVRH primary service area was uninsured. This percentage is lower than Maricopa County's uninsured percentage of 13.9%.

Males are more likely to be uninsured than females in this PSA, 10.2% versus 7.5%, respectively.

Graph 5



Source: American Community Survey, 5 year estimates 2012-2016

When focus group respondents were asked about choices, needs, and barriers to healthcare, responses included:

When community participants were asked about healthcare needs, responses included:

- Most get their healthcare information online.
- Attend health fairs, workshops, free clinics, urgent cares, emergency rooms, and some go out of state or even out of country.
- The healthcare system is disjointed and they want better communication and greater coordination across providers.
- System is hard to navigate and was seen to require a significant amount of personal effort and persistence.
- Eligibility restrictions, insurance issues, and a lack of low cost options for care.

Access to Care

Overall, the percentage of people without health care insurance in Maricopa County has declined noticeably in the years since the implementation of the Affordable Care Act. In 2016, the percentage of Maricopa County's population without health insurance was 13.9%. More recently, respondents to the community survey conducted in 2016 reported that 12.1% had no health insurance, possibly suggesting that uninsured rates are still declining. Maricopa County has also seen a decrease in the percent of adults who could not afford needed healthcare, falling from 20.8% in 2012 to 14.6% in 2016. However, many adults may still face difficulty accessing care -- 45.9% of respondents to our 2016 community survey indicated that sometimes they did not have enough money to pay for health care expenses on a monthly basis^{xxiii}. In the EVRH primary service area, uninsured rates are at 8.8% per 100,000 and Maricopa County is 13.9%.

Mental/Behavioral Health

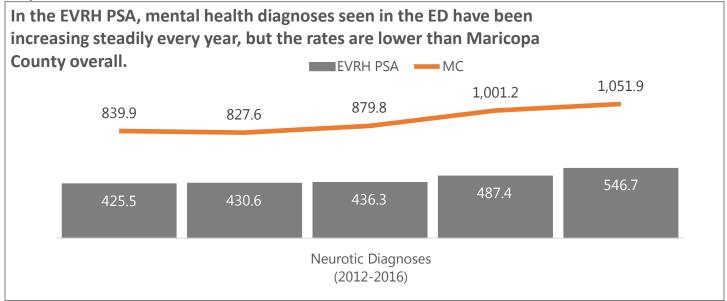
Mental and behavioral health are terms often used interchangeably to refer to a spectrum of health conditions which are each distinct yet often co-occurring and overlapping. Behavioral health includes not only ways of promoting well-being by preventing or intervening in mental illness such as anxiety or depression, but also has an aim preventing or intervening in substance abuse and suicide. Mental health was ranked as the most important health problem impacting the community by key informants. This was echoed by participants in the focus groups who felt it was among their top concerns.

Mental health emergency department visits, also known as Neurotic Conditions (i.e. Post-Traumatic Stress Disorder, Anxiety, adjustment disorder, panic disorders), have increased over the past five years in Maricopa County. Graph 6 shows the increase of neurotic diagnoses seen in the ED in the EVRH PSA from 2012-2016.

"It's hard to care about being physically healthy when you're not happy, or you just feel like there's an invisible ceiling, there's a road block everywhere. I think it starts with the mental health."

-Focus Group Participant

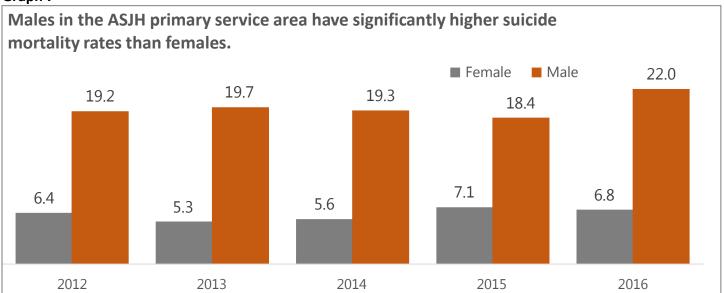
Graph 6



Source: Hospital discharge data from ADHS, analyzed by MCDPH

Suicide is a major public health problem and a leading cause of death in the United States^{xxiv}. According to the Behavioral Risk Factor Surveillance Survey, 18.7% of Maricopa County residents reported having a depressive disorder. Suicide mortality rates in Maricopa County are significantly higher in males than females (Graph 7). American Indians, Whites and Asians have the highest IP rates per 100,000 for suicide in the EVRH PSA. American Indians, Whites and Blacks have the highest ED rates per 100,000 for suicide in the EVRH PSA, according to the hospital discharge data analyzed by MCDPH.

Graph 7



Source: Death data from ADHS, analyzed by MCDPH

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs^{xxv}. According to the Centers for Disease Control and Prevention, substance abuse cost our nation \$700 billion dollars annually in costs related to crime, lost productivity, and health care.^{xxvi} According to the Substance Abuse and Mental Health Service Administration's (SAMHSA's) National Survey on Drug Use and Health, 23.5 million persons aged 12 or older needed treatment for an illicit drug or alcohol abuse problem in 2009. Of these, only 2.6 million—11.2% of those who needed treatment—received it at a specialty facility.^{xxvii}

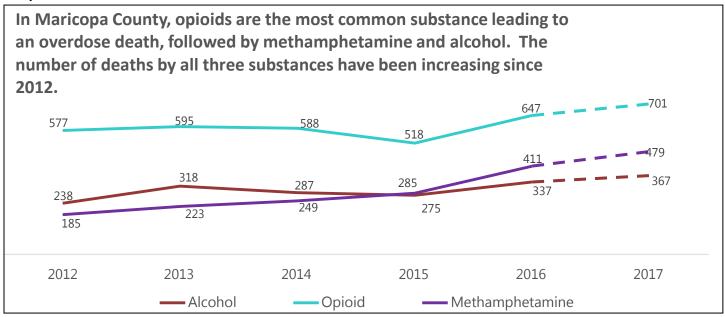
Key informants listed alcohol and drug abuse as two of the top risky health behaviors community members are engaging in. The substances most frequently cited in the survey as being of concern included methamphetamines, prescription drugs, heroin, marijuana, cocaine and alcohol. Additionally, substance abuse was frequently mentioned as a concern amongst focus group participants.

Opioids are psychoactive substances derived from the opium poppy, or their synthetic analogues. Examples are morphine and heroin^{xxviii}. In 2016 there were 790 deaths attributed to opioids in Arizona. This represents a 16.3% increase in opioid deaths since 2015, and a 74% increase since 2012^{xxix}

In Maricopa County, opioids are found more often than alcohol and methamphetamine when examined by the Maricopa County Office of the Medical Examiner (OME). All three of these drugs are showing an upward trend with our preliminary 2017 data (graph 8).

Opioid-related mortality rates have risen over the past 5 years and match the trend nationally. In June of 2017 Arizona Governor Doug Ducey declared a public health emergency to address this epidemic.

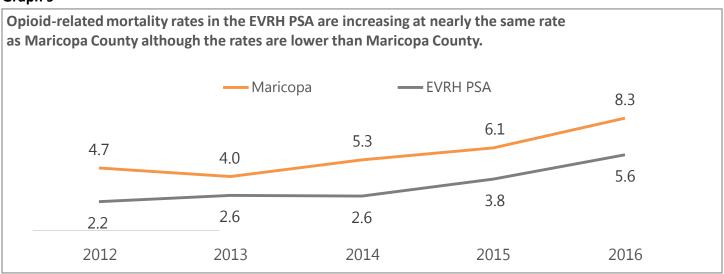
Graph 8



Source: Office of the Medical Examiner for Arizona

Note: Deaths for the year 2017 are still being finalized as of December 2018. To compare the EVRH primary service area with Maricopa County as a whole, the rates for opioid-related deaths were calculated and plotted in Graph 9. The EVRH primary service area's opioid mortality rates are lower than Maricopa County as a whole, but are definitely following the same increasing trend of deaths as Maricopa County.

Graph 9



Source: Death data from ADHS, analyzed by MCDPH

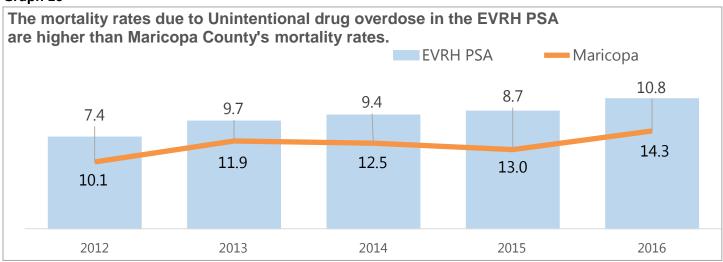
From 2012-2016, the inpatient hospitalization rates from opioid-related overdoses were consistently highest among the age groups 45-54, 55-64, and 65-74; however, in those 5 years, the rates were never higher than Maricopa County's overall for those particular age groups. In fact, they were approximately half of Maricopa County's rates.

Opioid-related overdose rates for the emergency department has been increasing every year for Maricopa County as a whole. When looking at just the EVRH primary service area, the 15-19 and 20-24 year olds almost

always had the highest rates of visits to the emergency department due to Opioid overdoses. While the ED rates per 100,000 are typically lower than Maricopa County's ED rates for opioid overdoses, in 2016, the EVRH PSA had a higher ED rate of 48.1 per 100,000 among the 20-24 year olds compared to Maricopa County's 20-24 year olds with a rate of 35.8 per 100,000.

Graph 10 shows the unintentional drug overdoses, which include opioids, for the EVRH PSA. Interestingly, although the EVRH PSA doesn't have higher opioid-related drug overdoses compared to Maricopa County, it does have a higher mortality rate than Maricopa County for unintentional drug overdoses.

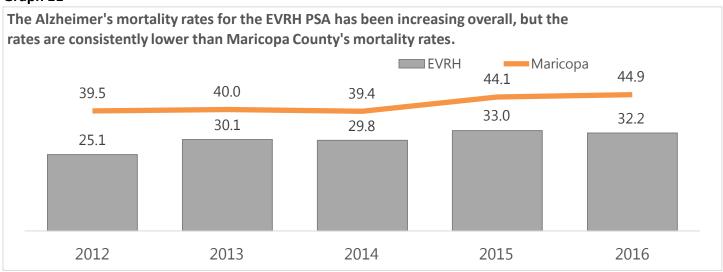
Graph 10



Source: Death data from ADHS, analyzed by MCDPH

Alzheimer's is a type of dementia that causes problems with memory, thinking, and behavior^{xxx} In Arizona, 2,943 deaths occurred in 2015 due to Alzheimer's and it is the fifth leading cause of death, which is a 182% increase since 2000^{xxxi}. In Maricopa County Alzheimer's is the fourth leading cause of death and in the EVRH primary service area it is the third^{xxxii}. The Alzheimer's mortality rates for the EVRH PSA have been increasing overall since 2012, but the rates are lower than Maricopa County's (Graph 11).

Graph 11

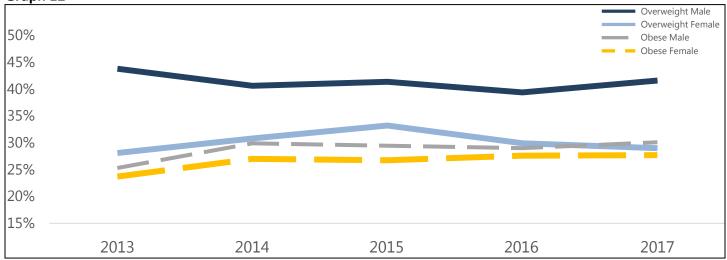


Source: Death data from ADHS, analyzed by MCDPH

Overweight/Obesity

According to the World Health Organization (WHO), in 2016, more than 1.9 billion adults, 18 and older, were overweight. Of these over 650 million were obese^{xxxiii}. The prevalence of obesity was 39.8% and affected by 93.3 million US adults in 2015-2016. Obesity related conditions include heart disease, stroke, type 2 diabetes, and certain types of cancers^{xxxiv}. In 2017, the Arizona adult obesity rate was 29.5%^{xxxv}. In Maricopa County, males have higher overweight rates than females (Graph 12) and Hispanic obesity rates are higher than non-Hispanic whites^{xxxvi}. Key informants felt that being overweight, poor eating habits and lack of exercise were among the top five risky health behaviors community members were engaging in.

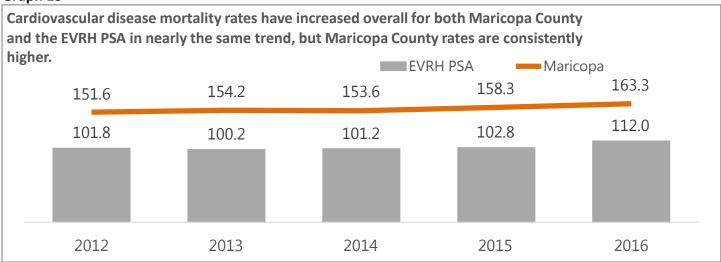




Source: Behavior Risk Factor Surveillance Survey for Arizona

Cardiovascular disease is the second leading cause of death for Maricopa County and EVRH's primary service area. The primary risk factors include diabetes, overweight/obesity, poor diet, physical inactivity and excessive alcohol use. Many of these are the same risky behaviors key informants reported being concerned about for the primary service area. Overall the rates of deaths due to cardiovascular disease in the EVRH primary service area follow the same increasing trend as the mortality rates for Maricopa County (Graph 13).

Graph 13



Source: Death data from ADHS, analyzed by MCDPH

A Cardiovasular disease density map (Figure 1) highlights in red where the death rates due to cardiovascular rates are highest in Maricopa County.

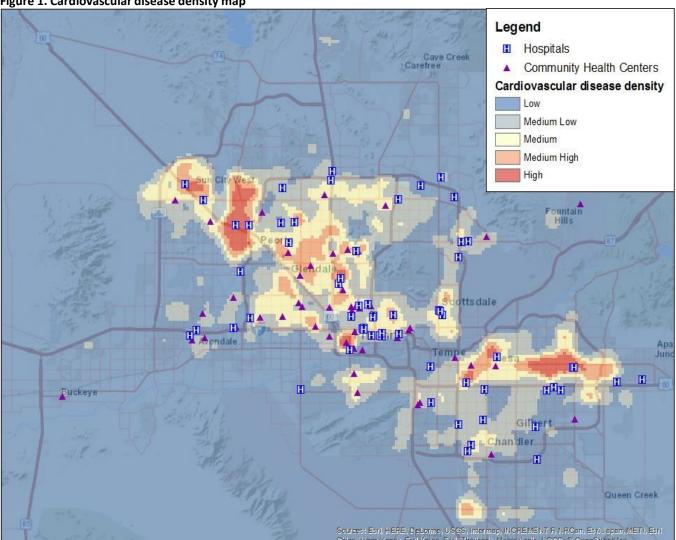


Figure 1. Cardiovascular disease density map

Diabetes

More than one million U.S. adults are now living with diabetes or pre-diabetes, according to a new report released by the Centers for Disease Control and Prevention**xxvii. The number of deaths related to diabetes is decreasing in Maricopa County, but it is still the seventh leading cause of death in both the county and in the EVRH primary service area indicating a sustained health need (Appendix A). The number of people reporting they have been told they have diabetes is also increasing, according to the behavioral risk factor surveillance survey from the CDC. Also, from the same survey, a higher percentage of males tend to be diabetic compared to females**xxxviii.

From the years 2012-2016, emergency department visits and inpatient hospitalizations for diabetes in the EVRH primary service areas have been significantly lower than the rates for Maricopa County. From the years 2012-2016, the IP rates per 100,000 for diabetes in the EVRH PSA range from a low of 97.2 per 100,000 to a high of 118.5 per 100,000. Maricopa County's range is from a low of 177.4 per 100,000 to a high of 198.4 per 100,000. The range of ED visits due from diabetes in the EVRH PSA is 8911 per 100,000 to 152.6 per 100,000.

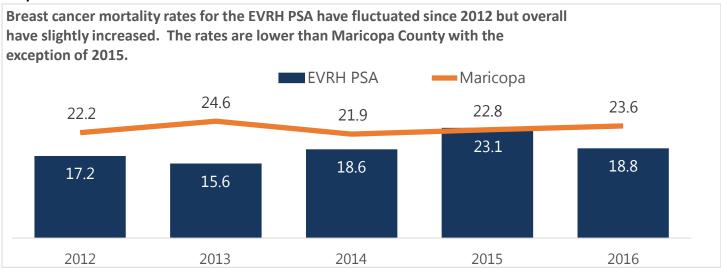
is significantly lower than Maricopa County's range of 180.0 per 100,000 to 290.0 per 100,000. were analyzed by MCDPH from the hospital discharge data from ADHS.	These ranges

Cancer

While advancements continue to be made in the fight against cancer, it remains the leading cause of death in Maricopa County and the EVRH primary service area and was identified as one of the top five areas of concerns from key informants.

Breast cancer mortality rates in the EVRH primary service area have fluctuated up and down from the years 2012-2016, and only in 2015 were the EVRH PSA rates slightly higher than Maricopa County's breast cancer mortality rates. See graph 14. Women ages 75 and older have the highest breast cancer mortality rates, and the rates for women 75+ in the EVRH PSA were very similar to the rates of women 75+ in Maricopa County dying of breast cancer.

Graph 14



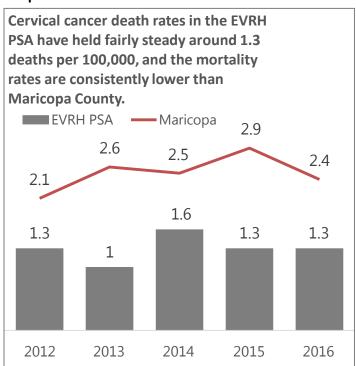
Colorectal cancer death rates in Maricopa County and EVRH primary service area has fluctuated up and down from the years 2012-2016 (Graph 14). In that same graph, it can be seen that colorectal cancer mortality rates for the EVRH primary service area are consistently lower than Maricopa County's rates.

In Maricopa County, cervical cancer incidence rates have slightly increased overall and the percentage of women that have had a pap test has been declining slightly since 2012. In Black/African American populations the death rates are highest compared to all other races in Maricopa County**xxix*. In the EVRH primary service area, cervical cancer death rates have held rather steady around 1.3 deaths per 100,000 being due to Cervical Cancer compared to Maricopa County's mortality rates of at least 2 deaths per 100,000 (graph 15).

Graph 14

Colorectal cancer mortality rates per 100,000 for the EVRH PSA fluctuated slightly from the years 2012-2016 but overall have indcreased. Maricopa County's rates were higher each year with the exception of 2013. EVRH PSA -- Maricopa 14.7 14.6 14.0 13.8 13.8 12.1 11.9 10.4 9.3 9.1 2012 2013 2014 2016 2015

Graph 15



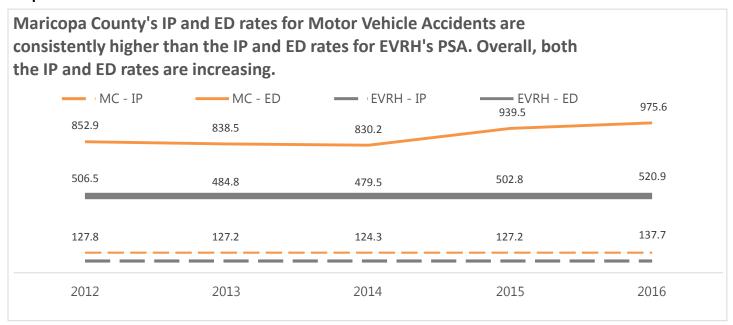
Source: Death data from ADHS, analyzed by MCDPH (graphs 14 and 15)

Trauma/Injury Prevention

In the United States, deaths from unintentional injuries are the seventh leading cause of death among older adults, and falls account for the largest percentage of those deaths^{xl}. In 2016 unintentional injury was the fifth leading cause of death in Maricopa County and sixth in the EVRH primary service area and falls were the ninth leading cause of death (Appendix A). Unintentional injuries are preventable and largely due to lifestyle choices. Nationally, nearly one-third of these deaths are due to car crashes and nearly another one-third is due to accidental poisonings^{xli}. Males are more likely to suffer from an unintentional injury with the exception of falls which are more prevalent among females^{xlii}.

The mortality rates per 100,000 related to motor vehicle accidents within the EVRH primary service areas are lower than Maricopa County's mortality rates for motor vehicle accidents (Graph 16), but the IP and ED rates are steadily increasing. In the EVRH primary service area, the 2016 mortality rate was 17.3 deaths per 100,000 which isn't quite at the Healthy people 2020 goal of 12.4 deaths per 100,000 individuals.

Graph 16

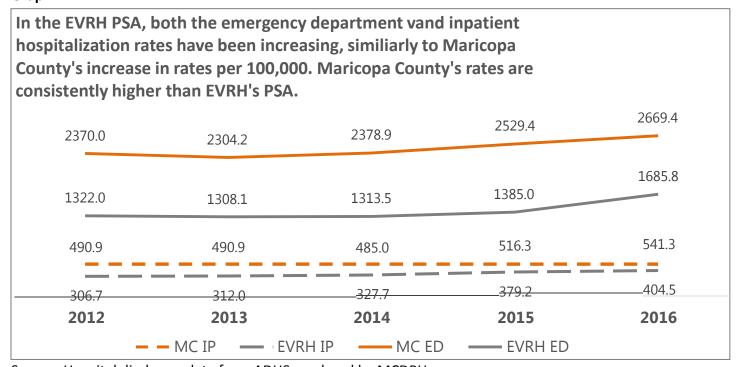


Source: Death data from ADHS, analyzed by MCDPH

<u>Falls</u>

Falls are a great concern, particularly among the elderly. The highest rates of falls are among the 75+ for both inpatient hospitalization and emergency department visits. In graph 17, it shows that the IP and ED rates for falls are increasing every year and yet the rates for the EVRH PSA are never higher than Maricopa County's rates.

Graph 17

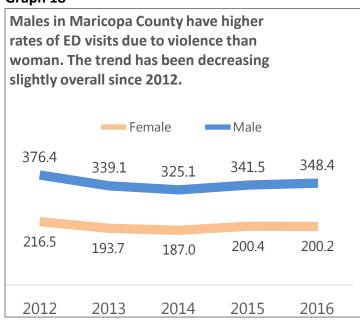


Source: Hospital discharge data from ADHS, analyzed by MCDPH

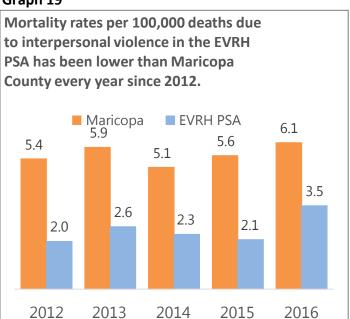
Violence

In Maricopa County, males entered the emergency room due to violence at a much higher rate than females, graph 18. It was also found that deaths due to interpersonal violence are less likely in the EVRH primary service area compared to Maricopa County overall. See graph 19.

Graph 18



Graph 19



Source: Hospital discharge data from ADHS, analyzed by MCDPH

Source: Hospital discharge data from ADHS, analyzed by MCDPH

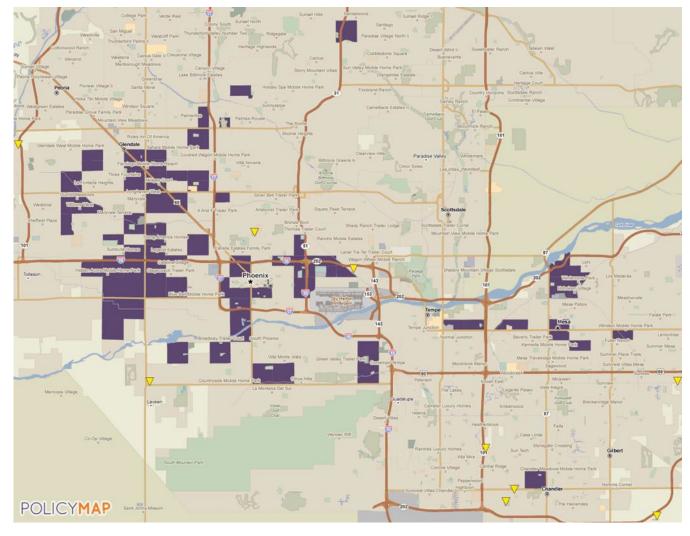
Social Determinants of Health

According to Health People 2020, a social determinants of health is a condition in the environment in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and qualify-of-life outcomes and risks^{xliii}. For the EVRH primary service area, transportation, access to food, and housing were mapped to better understand those social determinants of health for this primary service area.

Homelessness/Housing

A household is considered cost burdened if they are paying 30% or more (for homeowners) and 50% or more (for renters) of their gross income towards housing, which includes rent or mortgage, utilities, etc. If a household is cost burdened then it can make it more difficult to afford the other necessities such as transportation, health care, food, child care, clothing, etc. To greater understand the population considered cost burdened by home ownership or renting, a map was created. The purple areas on the map meet the following criteria as of 2012-2016:

- At least an estimated 20% of all people are considered living in poverty
- At least an estimated 25% of all homeowners are considered cost burdened
- At least an estimated 46% of all renters are considered cost burdened

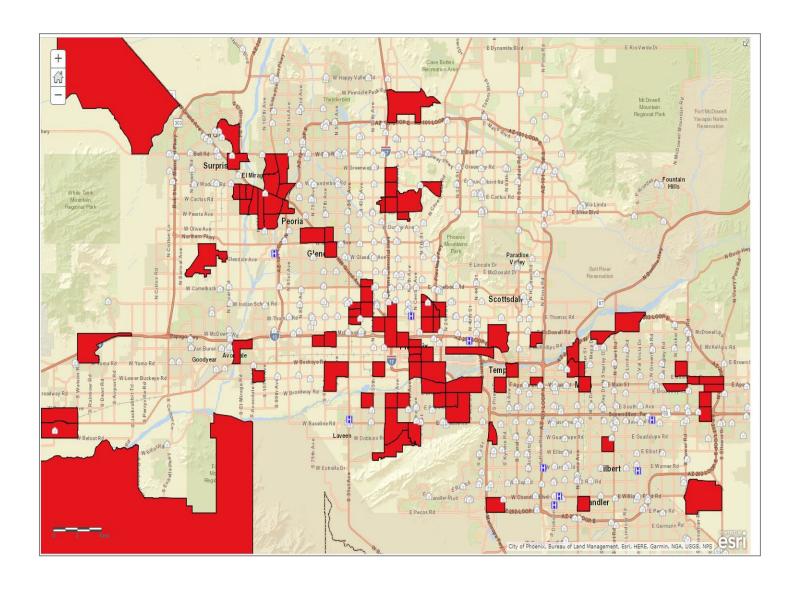


Source: PolicyMap

Access to Food – Low-Income and Low-Access to Grocery Stores

Every individual needs access to healthy food to live and sustain health. Without the ability to access, afford and consume healthy food, a person is at an incredible risk of developing a chronic disease, such as cardiovascular disease and diabetes, and the chance of living a long and healthy live is very small. Census tracts were visually analyzed around Maricopa County to see which census tracts had lower access to healthy food. These census tracts are considered low-income and low-access.

The USDA defines a low-income neighborhood as a census tract with a poverty rate that is 20 percent or greater, a family with a household income that is 80 percent or less than the State-wide median family income or a census tract that is 80 percent or less than the metro area's median family income. The USDA defines a low-access neighborhood is a census tract that is considered to be far from a supermarket, supercenter or large grocery store. It is calculated as low-access if it has at least 33% (or at least 500) people farther than ½ mile from the nearest supermarket, supercenter or large grocery store for an urban area or more than 10 miles for a rural area. A census tract is considered low-income and low-access if it fits both criteria. The following maps highlight in red those census tracts considered low-income and low-access.



Resources Potentially Available to Address Needs

Additional resources potentially available to address identified needs include services and programs available through hospitals, government agencies, and community based organizations. Resources include access to hospital emergency and acute care services, Federally Qualified Health Centers (FQHC), food banks, homeless shelters, school-based health clinics, churches, transportation services, health enrollment navigators, free or low cost medical and dental care, and prevention-based community education. Below is a listing of potential resources to address prioritized community health needs:

Hospitals and Hospital Systems providing emergency care, acute care, outpatient services, and community programs:

- Arizona Heart Hospital
- Banner Health
- Dignity Health
- Honor Health
- Ironwood Cancer and Research Center
- Maricopa County Integrated Health System
- Phoenix Children's Hospital
- Valley Hospital
- OASIS Hospital
- Arizona Orthopedic Surgical Hospital

Community-Based Agencies:

Organization Name	Services Provided
Ability 360	Social and health supports for individuals with disabilities
Area on Aging	Programs and support for aging population
Arizona Living Well Institute	Chronic Disease Self-Management Education
Catholic Charities Community Services	Provides social services, including behavioral health to
	veterans and their families, sex-trafficked survivors,
	victims of domestic abuse, refugees and those
	experiencing homelessness and the broader community
Circle the City	Medical care and respite for homeless
Clinica Adelante	Primary medical care for uninsured/underserved
Community Bridges	Supportive services for homeless
Corporate for Supporting Housing	Housing
Dignity Health Medical Group	Primary Care services – General, Internal Medicine,
	Specialty Care and women's health services
DUET: Partners in Health and Aging	Elderly and care giver support services, parish nurse
	programs
Esparanca Women's Health Center	Women's Health
Faith Community/Churches	Parish Nurse programs
Feeding Matters	Support for parents of infants and children who struggle
	with eating and the physicians who treat them
Foundation for Senior Living	Adult Health Services
Keogh Health Connection	Heath insurance enrollment and navigation
International Rescue Committee	Refugee and Immigrant Services

Health and dental care for the homeless population
Palliative and Hospice Care
Resource Center
Primary medical care for uninsured/underserved
Primary medical care for uninsured/underserved
Medical, Dental Behavioral health for urban Native
Americans
Free and reduced health services
Homeless Healthcare and Federally Qualified Health
Center
Support to American Indians for education and
employment
Services for children and families
Food bank
Primary medical care for uninsured/underserved
Medical, dental, food, clothing, housing for underserved
Mental Health/Behavioral Health services
Food bank
Primary healthcare services are offered for children and
adults, in addition to behavioral health services.
Improve well-being in Arizona by addressing root
causes and broader issues that affect health.
addresses the untreated risk factors associated with
interpersonal violence perpetration among youth

The Health Improvement Partnership of Maricopa County (HIPMC) is a collaborative effort between MCDPH and a diverse array of public and private organizations addressing healthy eating, active living, linkages to care and tobacco-free living. The HIPMC provides a forum to share ideas and resources as well as a data-driven process to identify gaps and barriers to health improvement, especially among vulnerable populations. With more than 100 partner organizations, this is a valuable to resource to help Dignity Health East Valley Rehabilitation Hospital connect to other community based organizations that are targeting many of the same health priorities^{xliv}.

Impact of Actions Taken Since Preceding CHNA

From fiscal year 2016 through fiscal year 2018, Dignity Health – St. Joseph's Hospital and Medical Center provided \$614,977,700 in patient financial assistance, unreimbursed cost of Medicaid, community health improvement services, and other benefits. The hospital also incurred \$340, 388,753 in unreimbursed costs of caring for patients covered by Medicaid.

In addition, the number of persons served through financial assistance and community health improvement services between fiscal year 2016-2018 further demonstrates the impact of Dignity Health actions taken through community benefit services. 3,208 people received financial assistance and 429,886 people were served through community health services. Below is a listing of key community benefit services:

- Mohammed Ali Parkinson Center
- Maternity Outreach Mobile
- Keogh Health connections
- Barrows Neurological Institute's Fall Prevention Program
- Barrows Neurological Institute's Stroke Program
- Healthier Living Chronic Disease Self-Management
- ACTIVATE ACTIVATE Prime Transitional Care Program
- Refugee Health Partnership
- Smooth Way Home
- Native American Collaborative
- HOMeVP: Health and Home of Medically Vulnerable People

Input Received on Most Recent CHNA and Implementation Strategy

A formal mechanisms is being worked on to receive and track written comments regarding the Community Benefit Report and Plan. East Valley Rehabilitation Hospital is working to track or record written comments for the most recently conducted CHNA and adopted Implementation Strategy. Positive feedback on the value and benefit of the CHNA report has been received verbally by many internal and external stakeholders. In addition, many individuals and agencies have requested the CHNA report to use for grant applications, assessments, and planning. Although there have not been formal mechanisms in place to receive and track written comments in the past, a process will be in place for newly conducted CHNA's, including this report, to comply with the regulatory requirement to solicit and take into account input received from written comments.

This report is widely available to the public on the hospital's web site, and a paper copy is available for inspection upon request at East Valley Rehabilitation Hospital's Department of Community Health Integration.

Written comments on this report can be submitted to the East Valley Rehabilitation Hospital's Department of Community Health Integration, by e-mail to CommunityHealth-SHJMC@DignityHealth.org or by phone to 602-406-2288.

Appendix A - List of Data Sources

Data Sources

- Vital statistics (birth, death) obtained from the Arizona Department of Health Services (ADHS). Data analysis completed by MCDPH Office of Epidemiology staff.
- Hospital Discharge Data (inpatient and emergency department) obtained from the Arizona Department
 of Health Services. Data analysis completed by MCDPH Office of Epidemiology staff.
- Behavioral Risk Factor Surveillance Survey (BRFSS)
- Arizona Youth Survey (AYS)
- Youth Risk Behavioral Surveillance Survey (YRBSS)
- Centers for Disease Control (CDC) Environmental Public Health Tracking (EPHT) -
- ADHS EPHT Explorer
- US Census, American FactFinder

Data Indicators

1. Population Demographics

- o Gender
- o Age groups
- o Race/Ethnicity

2. Access to Health Care

Health Insurance Coverage by:

- o Age groups
- o Gender
- Race/Ethnicity
- Nativity/Citizenship
- Education
- o Income
- Employment status
- o Poverty level

3. Birth Related

- o IMR
- Low Birth Weight

4. Cancer Incidence & Prevention

- o Breast Cancer Incidence
- Breast Cancer Screening
- o Breast Cancer
- o Cervical Cancer Incidence
- o Cervical Cancer Screening
- o Cervical Cancer
- o Colorectal Cancer Incidence

- o Education
- o Income
- o Employment Status

Health Care Coverage (18-64)

- o Usual Source of Care
- o Routine Checkup (last year)
- o Couldn't Afford Needed Care
- AHCCS enrollment broken down as much as possible
- Primary Payer Type for ED/IP
- o Preterm Births
- o Teen Birth
- o Colorectal Cancer Screening
- Colorectal Cancer
- o Prostate Cancer Incidence
- Prostate Cancer Screening
- Prostate Cancer
- o Lung Cancer Incidence
- o Lung Cancer

5. Environmental Health

- o Asthma rates
- o Air Quality
- Blood Lead Levels in children
- Carbon Monoxide Poisonings

6. Chronic Disease

- o Stroke
- o Been told they had a stroke
- Been told they have high blood pressure
- o Cardiovascular Disease
- o Cholesterol checked in last 5 yrs.
- Told they have high cholesterol
- o Congestive Heart Failure
- Told they have coronary heart disease
- o Told they have had heart attack

- o Extreme Heat Days
- o Heat Related Illness
- Flood Vulnerability
- o Diabetes
- o Arthritis
- o Alzheimer's
- Confusion/Memory Loss
- o COPE
- Been told they have COPD
- o Asthma
- o Been told they have asthma
- o Diabetes
- o Been told they have diabetes

7. Mental/Behavioral Illness

- Organic Psychotic Conditions
- o Other Psychoses
- Neurotic, Personality & Other Non-Psychotic Disorders
- o Suicide
- o All Mental/Behavioral Ranked
- Screenings for all forms depression (include maternal child health)
- Alcohol Related

- o All Drug Related Intentional
- o All Drug Related Unintentional
- Opioid prescribing over recommended amount and/or days
 - o Opioids Intentional
 - Opioids Intentional
 - Opioids Unintentional
 - o Opioids Unintentional

8. Behavioral Health Risk Factors

- Alcohol/Drug use
- o Smoking
- o Nutrition/Diet

- o Physical Activity
- Obesity

9. Injury

- Motor Vehicle Related
- o Motor Cycle Related
- o Bicycle Related

- o Pedestrian Related
- o Fall Related
- o Violence

10. Prevention Quality Indicators (PQI's)

11. Social Determinants of Health

- o Transportation
- o Access to Food
- o Housing
- o Utilities
- o CNI Map
- o Z Codes
- 12. Top 5 leading causes of death
- 13. Youth Top 5 leading causes of death
- 14. Preventable ED's
- **15. Community Surveys**
- 16. Focus Groups

Top 10 Leading Causes of Death

Rank	Maricopa County	East Valley Rehabilitation Hospital
1	Cancer	Cancer
2	Cardiovascular Disease	Cardiovascular Disease
3	Chronic Lower Respiratory	Alzheimer's
4	Alzheimer's	Chronic Lower Respiratory
5	Unintentional Injuries	Stroke
6	Stroke	Unintentional Injury
7	Diabetes	Diabetes
8	Suicide	Suicide
9	Falls	Falls
10	Liver Disease	Liver Disease

Key Informant Survey

Total Number of Participants	100
Characteristic	Percentage of Participants
Male	20%
Female	80%
0-17	0%
18-24	1%
25-39	18%
40-54	37%
55-64	31%
65 or older	13%

American Indian/Alaskan Native	0%
Asian/Pacific Islander	1%
African American	4%
Hispanic	11%
White	84%

Focus Groups

Total Number of Participants = 127

Date	Time	Population	Location
9/25 (Fri.)	9:30-11:30am	Older adults (65-74) [n=10]	Sun City Branch Library (16828 N 99th Ave, Sun City, AZ 85351)
9/28 (Mon.)	5:30-7:30pm	Native American adults (x2) [n=24]	Phoenix Indian Center (4520 N Central Ave #250, Phoenix, AZ 85012)
9/29 (Tues.)	5:30-7:30pm	Adults without children [n=10]	Mesa Main Library (64 E. 1 st St., Mesa, AZ 85201)
9/30 (Wed.)	6:00-8:00pm	Lesbian, Gay, Bisexual, Transgender, Questioning (LGBTQ) adults [n=6]	Phoenix Pride LGBT Center (801 N 2nd Ave, Phoenix, AZ 85003)
10/2 (Fri.)	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 (Fri.)	6:00-8:00pm	Low-income Adults [Spanish; n=15]	Sojourner Center (2330 E Fillmore St, Phoenix, AZ 85006)
10/4 (Sun.)	2:00-4:00pm	Hispanic/Latino adults [English; n=8]	Cesar Chavez Library (3635 W Baseline Rd, Laveen Village, AZ 85339)
10/5 (Mon.)	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 (Tues.)	5:30-7:30pm	Young adults (18-30) [n=10]	Pendergast Community Center (10550 W. Mariposa St., Phoenix, AZ 85037)
10/7 (Wed.)	6:00-8:00pm	African American adults [n=10]	Southwest Behavioral Health Services (4420 S. 32 nd St., Phoenix, AZ 85040)
10/8 (Thurs.)	11:30-1:30pm	LGBTQ adults [n=9]	ASU/SIRC (502 E. Monroe St., Phoenix, AZ 85004)

Stakeholder Meetings

	Number of	Data Alla dad
Organization	representatives	Date Attended
CHNA Presentation	0-	
Dignity Health	27	Attended CHNA presentation 10.2.18
Ability 360	1	Attended CHNA presentation 10.2.18
POM Consulting	1	Attended CHNA presentation 10.2.18
Southwest Human Development	2	Attended CHNA presentation 10.2.18
Premier Risk Management	1	Attended CHNA presentation 10.2.18
Cancer Support Community Arizona	1	Attended CHNA presentation 10.2.18
Mountain Park Health Center	1	Attended CHNA presentation 10.2.18
Foundations for Senior Living	1	Attended CHNA presentation 10.2.18
Maricopa Community College	1	Attended CHNA presentation 10.2.18
Arizona State University	8	Attended CHNA presentation 10.2.18
Sacks-Tierney Law Firm	1	Attended CHNA presentation 10.2.18
PV Health Solutions	1	Attended CHNA presentation 10.2.18
Arizona Healthy Communities	1	Attended CHNA presentation 10.2.18
AzCCN Meeting		
City of Phoenix	3	Attended AzCCN meeting 12.6.18
Mercy Housing	2	Attended AzCCN meeting 12.6.18
Valley of the Sun United Way	3	Attended AzCCN meeting 12.6.18
Arizona Spinal Cord Injury Association	1	Attended AzCCN meeting 12.6.18
Southwest Human Development	2	Attended AzCCN meeting 12.6.18
Foundation for Senior Living	4	Attended AzCCN meeting 12.6.18
Maggie's Place	2	Attended AzCCN meeting 12.6.18
Ability 360	2	Attended AzCCN meeting 12.6.18
St. Joseph's Hospital and Medical Center	2	Attended AzCCN meeting 12.6.18
Touchstone Health Services	1	Attended AzCCN meeting 12.6.18
Keogh Health Connections	1	Attended AzCCN meeting 12.6.18
International Rescue Committee	3	Attended AzCCN meeting 12.6.18
Accel	1	Attended AzCCN meeting 12.6.18
Family Involvement Center	1	Attended AzCCN meeting 12.6.18
Tanner Community Development		, and the second
Corporation	1	Attended AzCCN meeting 12.6.18
Special Olympics AZ	1	Attended AzCCN meeting 12.6.18
Therapeutic Harp Foundation	1	Attended AzCCN meeting 12.6.18
Arizona Care Network	1	Attended AzCCN Meeting 12.6.18
Franciscan Renewal Center	1	Attended AzCCN meeting 12.6.18
Nami Valley of the Sun	1	Attended AzCCN meeting 12.6.18
CHIN Meeting		

St. Joseph's Westgate Medical Center	1	Attended CHIN meeting 11.29.18
PV Health Solutions	1	Attended CHIN meeting 11.29.18
Arizona Dept. of Health Services	1	Attended CHIN meeting 11.29.18
Sacks Tierney P.A.	1	Attended CHIN meeting 11.29.18
Dignity Health	1	Attended CHIN meeting 11.29.18
Adelante Healthcare	1	Attended CHIN meeting 11.29.18
Arizona State University	1	Attended CHIN meeting 11.29.18
Foundation for Senior Living	1	Attended CHIN meeting 11.29.18
Catholic Charities Community Services	1	Attended CHIN meeting 11.29.18
Chicanos Por La Causa	1	Attended CHIN meeting 11.29.18
St. Joseph's Hospital and Medical Center	4	Attended CHIN meeting 11.29.18
Maricopa County Dept. of Public Health	1	Attended CHIN meeting 11.29.18
Mercy Care Plan	1	Attended CHIN meeting 11.29.18

Appendix B – Primary Data Collection Tools

CHNA Focus Group Questions

Community = where you live, work, and play

Introductions: State your name and what makes you most proud of your community.

- 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?

[Prompt]

- 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?

Community Health Survey

Please take a minute to complete the survey below. The purpose of this instrument is to get your opinions about community health issues. In collaboration with our public health partners we plan to compile this information and use it as input for the development of Dignity healthcare's community health improvement plan.

Thank you for your time and interest in helping us to identify our most pressing problems and issues.

In this survey, "community" refers t	o the major area where you pro	vide services. Please check one from th	e following
list:			
Northeast (Scottsdale, Carefree,	Fountain Hills, Cave Creek)		
Northwest (Peoria, Surprise, El N	1irage, Sun City)		
Central (Phoenix, Paradise Valley	y)		
Central west (Glendale, Avondale	e, Litchfield Park)		
Central East (Tempe, Mesa)	,		
Southeast (Chandler, Ahwatukee	e. Gilbert)		
Southwest (Tolleson, Buckeye, G			
Part I: Community Health			
Please check the three most	important factors that you t	: hink will improve the quality of	life in vou
c ommuni ty? "	mpor tante ractor o tinat you		<u>,</u>
<u>c ommuni ty:</u>			
Check only three:			
Good place to raise children	Excellent	race/ethnic relations	
Low crime / safe neighborhoods	Good jobs	s and healthy economy	
Low level of child abuse	Strong far	mily life	
Good schools	Healthy b	ehaviors and lifestyles	
Access to health care (e.g., family	doctor) Low adult	t death and disease rates	
Safe Parks and recreation	Low infan	t deaths	
Clean environment	Religious	or spiritual values	
Affordable housing	Emergend	cy preparedness	
Arts and cultural events	Access to	public transportation	
Access to Healthy Food	Other		
Check only three:		I th probl ems " that impact your com	munity?
Access to Health care	Heart disease and stroke	Rape / sexual assault	
Aging problems (e.g., arthritis,	High blood pressure	Respiratory / lung disease	
hearing/vision loss, etc.)	HIV / AIDS	Sexually Transmitted Diseases	
Cancers	Homicide	(STDs)	
Child abuse / neglect	Infant Death	Suicide	
Drug and Alcohol abuse	Infectious Diseases (e.g.,	Teenage pregnancy Other	
Dental problems	hepatitis, TB, etc.)		
Diabetes	Mental health problems		
Domestic Violence	Motor vehicle crash injuries		
Firearm-related injuries			

Check only three:	
Alcohol abuse	Racism
Being overweight	Tobacco use
Dropping out of school	Not using birth control
Drug abuse	Not using seat belts / child safety seats/bike
Lack of exercise	helmets
Lack of maternity care	Unsafe sex
Poor eating habits	Unsecured firearms
Not getting "shots" to prevent disease	Other
_	
4. If you selected drug abuse in question 3 pl	ease specify substances of use here:
5. How would you rate the overall health of	your community?
Very unhealthy Son	newhat healthy Healthy Very healthy
Part II: Demographics	
Please answer questions #5-8 so we can see	how different types of people feel about local health issues.
6. Zip code where you work:	
7. Age:	
	40-54
0-17	40-54 55-64
0-17 18-25	55-64
0-17	
0-17 18-25 26-39	55-64
0-17 18-25 26-39	55-64

Appendix C -References

https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml. xvi

HealthyPeople2020 (2018). Social Determinants of Health. Retrieved from

https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.

xvii Health Improvement Plan of Maricopa County (2018). Retrieved from

https://www.maricopa.gov/1782/Health-Improvement-Partnership.

xviii Arizona Department of Health Services (2016). Retrieved from https://www.azdhs.gov/prevention/health-systems-development/shortage-designation/index.php.

xix Kindig, D., & Stoddart G. (2003). What is population health? American Journal of Public Health. 93, 380-383.

xx Boothe, Sinha, Bohm, & Yoon (2013). Community health assessment for population health improvement; resource of most frequently recommended health outcomes and determinants. Centers for Disease Control and Prevention (U.S.), Office of Surveillance, Epidemiology, and Laboratory Services.

xxi U.S. Census Bureau (2016). Retrieved from https://www.census.gov/quickfacts/maricopacountyarizona.

xxii US Census, American Factfinder (2017). Retrieved from

https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml. xxiii

Coordinated Community Health Needs Assessment (2015).

https://www.maricopa.gov/DocumentCenter/View/40784/MC 2017 CCHNA Report.

xxiv Suicide in America (2016). Retrieved from https://www.nimh.nih.gov/health/publications/suicide-faq/index.shtml.

xxv World Health Organization (2018). Retrieved from http://www.who.int/topics/substance abuse/en/.

ⁱ U.S. Census Bureau. (2013). American Fact Finder fact sheet: Maricopa County, AZ, Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

[&]quot; Dignity Health. Community Need Index. http://cni.chw-interactive.org/

iii U.S. Census Bureau. (2016). *American Fact Finder fact sheet:* Maricopa County, AZ, Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

iv Hospital Discharge Data from ADHS, analyzed by MCDPH

^v Arizona Department of Health Services (2018). Retrieved from https://www.azdhs.gov/prevention/womens-childrens-health/injury-prevention/opioid-prevention/index.php.

vi Healthy People 2020 (2018). Retrieved from https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Maternal-Infant-and-Child-Health.

vii Alzheimer's Association (2018). Retrieved from https://www.alz.org/alzheimers-dementia/what-is-alzheimers.

viii Alzheimer's Impact Movement (2018). Retrieved from https://www.alz.org/media/Documents/arizona-alzheimers-facts-figures-2018.pdf.

ix Arizona Department of Health Services (2016). Analyzed by Maricopa County Department of Public Health.

^{*} The State of Obesity (2018). Retrieved from https://stateofobesity.org/states/az/.

xi Behavior Risk Factor Surveillance System (BRFSS), ADHS/CDC, analysis by MCDPH.

xii Hospital Discharge Data from ADHS, analyzed by MCDPH

xiii Arizona Department of Health Services (2016). Analyzed by Maricopa County Department of Public Health.

xiv Hospital Discharge Data from ADHS, analyzed by MCDPH

xv U.S Census Bureau (2010). Retrieved from

xxvi National Institute on Drug Abuse (2017). Retrieved from https://www.drugabuse.gov/related-topics/trends-statistics.

xxvii NSDUH (formerly known as the National Household Survey on Drug Abuse) is an annual survey of Americans aged 12 and older conducted by the Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

xxviii World Health Organization (2018). Retrieved from https://www.who.int/substance_abuse/information-sheet/en/.

xxix 2016 Arizona Opioid Report (2016). Retrieved from

https://www.azdhs.gov/documents/audiences/clinicians/clinical-guidelines-recommendations/prescribing-guidelines/arizona-opioid-report.pdf.

xxx Alzheimer's Association (2018). Retrieved from https://www.alz.org/alzheimers-dementia/what-is-alzheimers.

xxxi Alzheimer's Impact Movement (2018). Retrieved from https://www.alz.org/media/Documents/arizona-alzheimers-facts-figures-2018.pdf.

xxxii Arizona Department of Health Services (2016). Analyzed by Maricopa County Department of Public Health.

wxxiii World Health Organization (2018). Retrieved from https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight.

xxxiv Center for Disease Control and Prevention (2018). Retrieved from

https://www.cdc.gov/obesity/data/adult.html.

xxxv The State of Obesity (2018). Retrieved from https://stateofobesity.org/adult-obesity/.

xxxvi Hospital Discharge Data from ADHS, analyzed by MCDPH

xxxvii Center for Disease Control and Prevention (2018). Retrieved from

https://www.cdc.gov/media/releases/2017/p0718-diabetes-report.html.

xxxviii Hospital Discharge Data from ADHS, analyzed by MCDPH

xxxix Hospital Discharge Data from ADHS, analyzed by MCDPH

xl Center for Disease Control and Prevention (2016). Retrieved from

https://www.cdc.gov/mmwr/volumes/67/wr/mm6718a1.htm.

xli Center for Disease Control and Prevention (2017). Retrieved from

https://www.cdc.gov/nchs/fastats/accidental-injury.htm.

xlii US National Library of Medicine National Institutes of Health (2011). Retrieved from

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222499/.

xliii HealthyPeople2020 (2018). Social Determinants of Health. Retrieved from

https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

xliv Health Improvement Plan of Maricopa County (2018). Retrieved from

https://www.maricopa.gov/1782/Health-Improvement-Partnership.