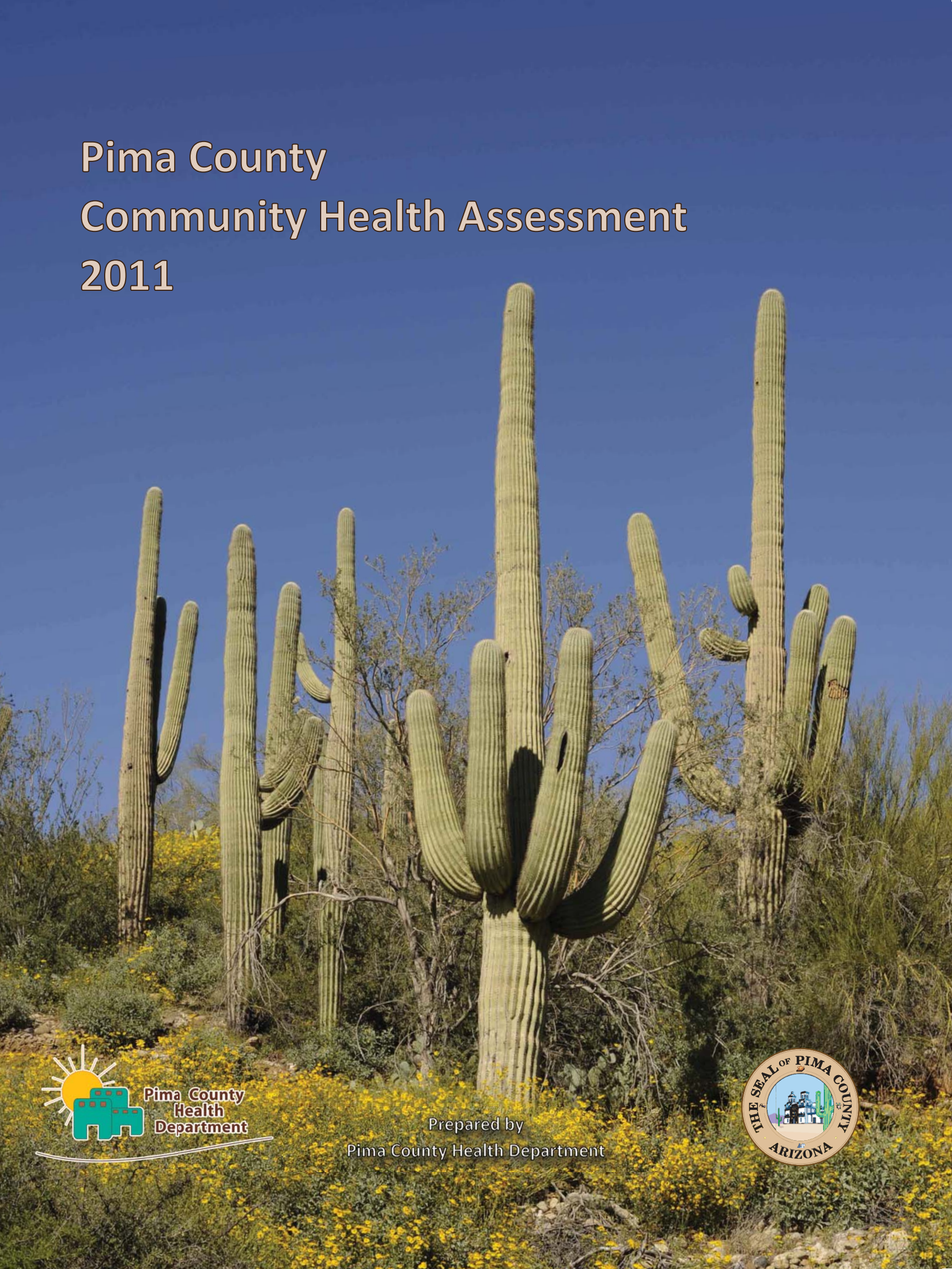
Pima County Community Health Assessment 2011



Pima County Health Department

Prepared by
Pima County Health Department

THE SEAL OF PIMA COUNTY ARIZONA

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INTRODUCTION

In January, 1920, the Arizona State Board of Health, the Arizona Anti-Tuberculosis Association, and the Pima County Anti-Tuberculosis Society initiated one of the community's first health surveys. Assisted by the Pima County Medical Society, surveyors estimated there were more than 2,000 cases of tuberculosis in Tucson. Based on the data collected, the participating organizations identified specialized needs for children exposed to tuberculosis. They also expressed concern over the lax enforcement of existing laws intended to protect residents, and recommended additional funding to support local mitigation efforts.

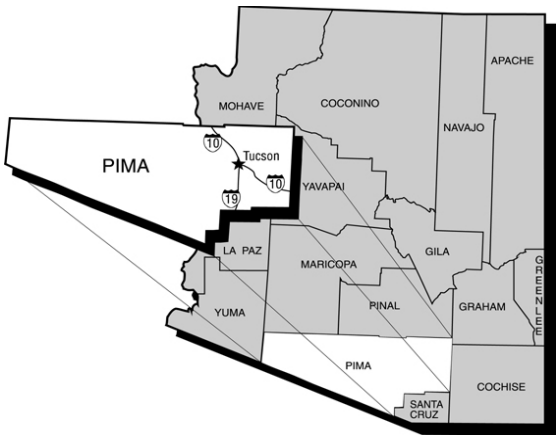
Although the Pima County Community Health Assessment conducted in 2011 was more comprehensive in scope, it was similar in purpose to those of the past. A community health assessment requires a concerted effort by community members to identify pressing health concerns of the community, and prioritize what needs to be done to address those concerns. There is no single authority on what is best for the community, and there is no single organization that can meet the needs of the community. Through collaboration, health systems, providers, community groups, faith-based communities, non-governmental entities, governmental agencies, and other stakeholders can create significant change.

This report is a summary of the Pima County Community Health Assessment that was conducted in 2011. As facilitator, the Pima County Health Department examined existing data describing the community, surveyed residents and stakeholders about their perceptions of the health status of Pima County, and presented these findings to the Community Health Assessment Taskforce. The community members who comprised the taskforce evaluated the information and identified five priorities that would make a significant positive impact on the health status of Pima County residents.

PIMA COUNTY

History and Geography

Pima County, located in southern Arizona, is adjacent to six other Arizona counties and shares an international border with Mexico. The counties are Yuma to the west, Maricopa and Pinal to the north, Graham to the northeast, Cochise to the east, and Santa Cruz to the south. Most of the southern boundary of Pima County borders Sonora, Mexico. This international border is 123 miles long, with 62 miles located on Tohono O'odham Nation land.



The population of Pima County is 92% urban and 8% rural. The vast majority of Pima County residents live in the Tucson metropolitan area. Other population centers include Green Valley, Marana, Oro Valley, Sahuarita, South Tucson, Vail, and the sparsely populated towns of Ajo and Sells, the capital of the Tohono O'odham Nation.

European settlement of the region dates back to the arrival of the Spanish in the 1690s, who encountered indigenous people already living in the area. Just south of Tucson is the Mission of San Xavier del Bac, founded in 1697 by Father Kino and still in use.

During the middle of the 18th century, silver and gold were discovered and prospectors from Mexico entered the area in droves. The latter part of the century saw an expansion of mining and ranching in this region and an increase in population. The Royal Presidio de San Augustín del Tucson was completed in 1781, and it remained the northern-most outpost of Mexico until the arrival of American soldiers in 1856.

Pima County was created in 1864 and includes most of southern Arizona acquired from Mexico by the Gadsden Purchase. The Royal Presidio de San Augustín del Tucson served as the Arizona Territorial capital from 1867 to 1877.

Although greatly reduced from its original size, Pima County covers 9,184 square miles in the arid Sonoran Desert. It ranges in elevation from 1,200 feet to 9,185 feet, the peak of Mount Lemmon. From a population of 395 in 1820, Pima County has grown to be the second most populated county in Arizona, with just under one million residents today.

Pima County is home to three Native American reservations. The Tohono O'odham Nation is located in the western portion of the County and has a total land mass of 4,453 square miles, approximately 42% of Pima County. The San Xavier Indian Reservation is a smaller, eastern section of the Tohono O'odham Nation, situated in the southwestern Tucson metropolitan area, spanning 111 square miles. Total tribal enrollment is approximately 31,500 members. The Pascua Yaqui Tribe and Reservation is also located in the southwestern Tucson metropolitan area and is adjacent to the San Xavier Indian Reservation. The Pascua Yaqui Reservation is roughly 1.9 square miles, and total tribal enrollment is approximately 18,000 members.

Pima County is also home to Davis-Monthan Air Force Base and the University of Arizona, both of which account for a diverse, fluctuating, non-resident population. Additionally, Pima County has a growing refugee population. Tucson is federally designated as a "preferred community" by the United States Department of Health and Human Services for the resettlement of refugees seeking asylum. In the last few years, approximately 2,500 refugees from Africa and Asia have resettled in Pima County. It is difficult to know the exact size of each refugee community because of the secondary migration and relocation that occurs over time.[i]

Climate

Southern Arizona has a mild, high desert environment that makes Pima County a popular travel and relocation destination for people from colder and wet climates. Although the summers can be scorching, the climate is relatively temperate with low humidity. In Tucson, the average high temperature is 82° with an average low of 54°. Annual monsoons during July and August contribute to most of the region's annual precipitation, which totals less than 12 inches a year. Given the size and topographic variety in Pima County, the local climate can vary significantly.

Average Temperature in Pima County

	January Average High (°F)	January Average Low (°F)	July Average High (°F)	July Average Low (°F)
Ajo	64.0	41.5	103.0	77.7
Mount Lemmon	50.6	31.7	92.0	68.9
Tucson	65.5	37.6	100.1	73.9

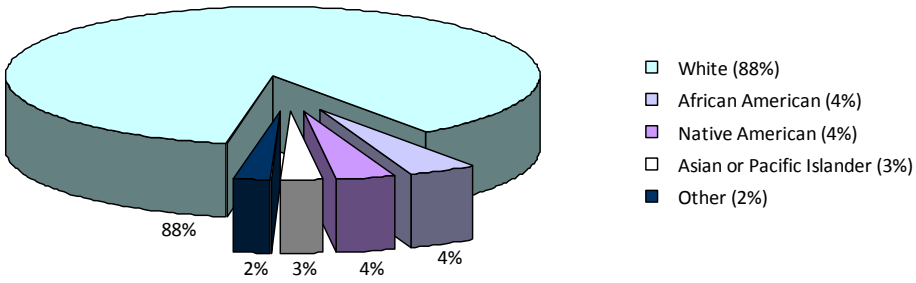
Residents

The figures below provide an overview of the composition of Pima County residents.[ii iii iv]

Pima County at a Glance, 2010	
Population	980,263
Unemployment (Tucson, December, 2010)	8.3%
Median household income	$46,653
Families living below poverty	22.8%
Individuals living below poverty	18.9%
High school graduate or higher (25 years or older)	86.4%
Bachelor's degree or higher (25 years or older)	29.0%
Foreign born	13.2%
Speak language other than English at home	27.5%

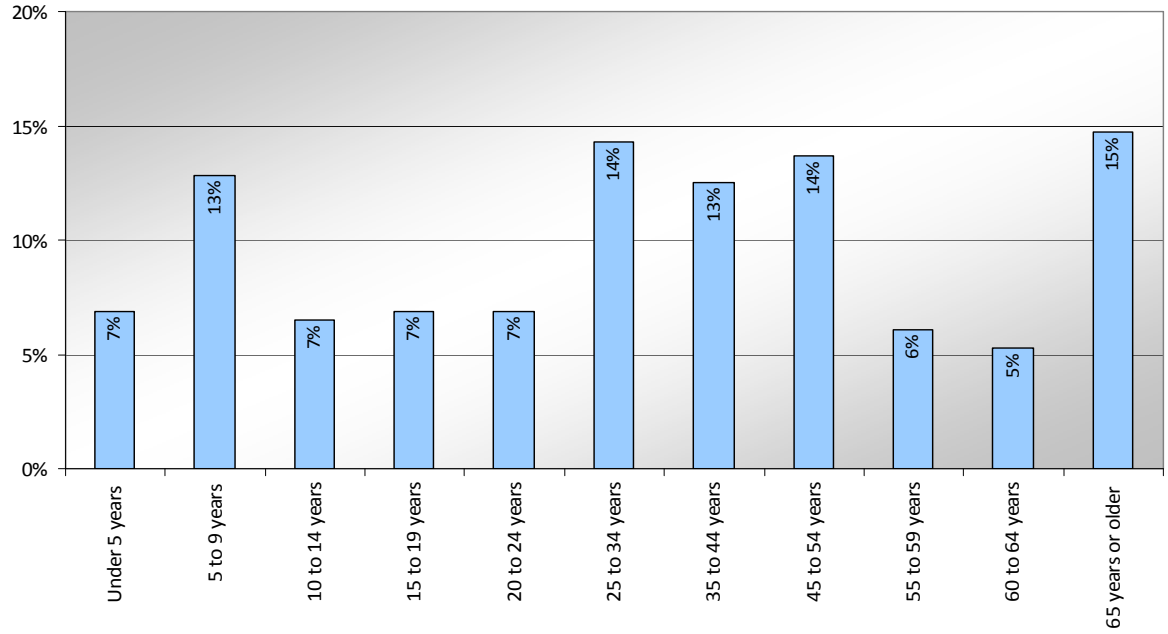
Race/Ethnicity, 2009

34% of Pima County residents are of Hispanic heritage



Age, 2009

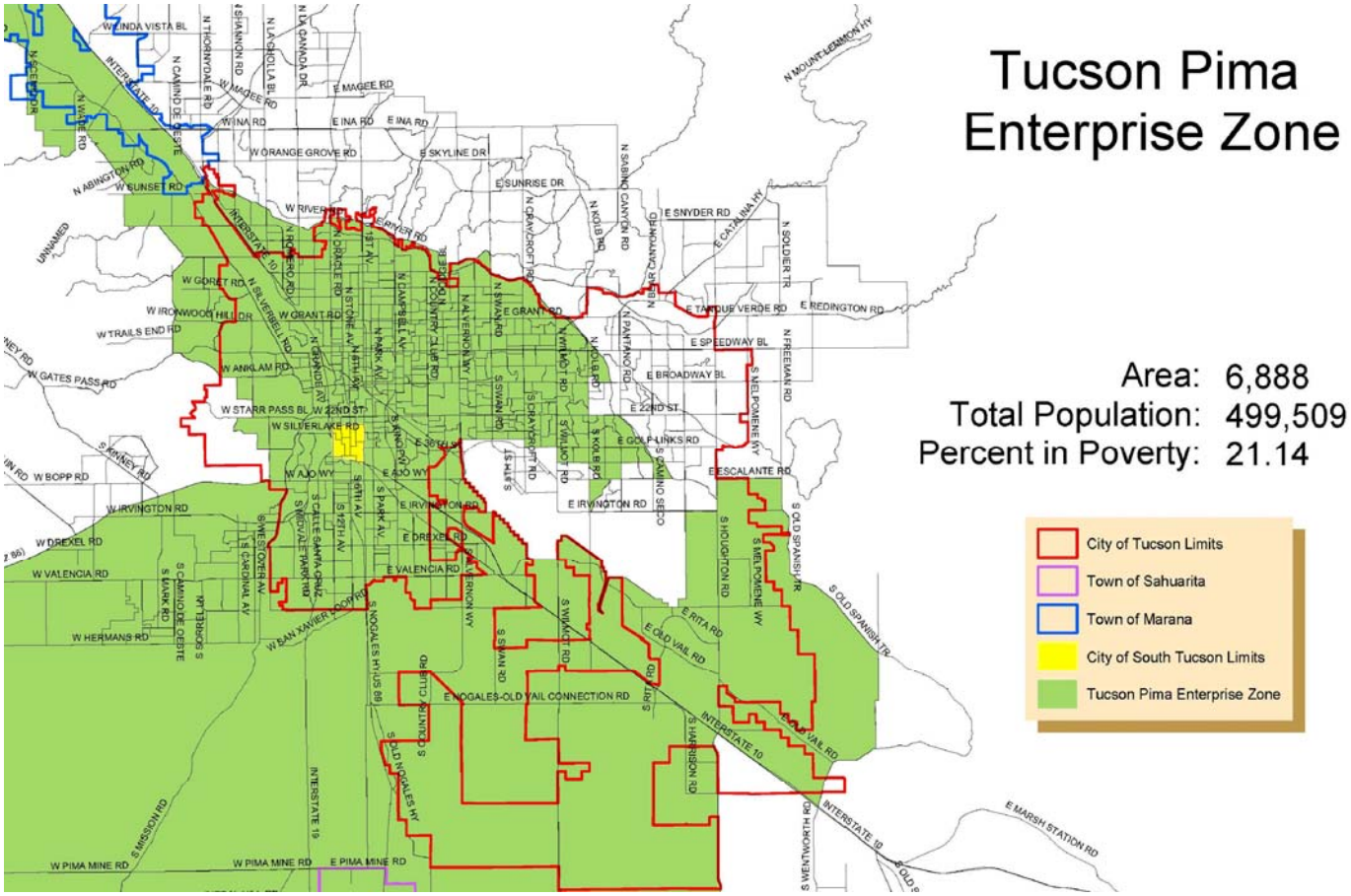
Median age = 37 years old



Economics

Native American nations and tribes account for ownership of 42% of land located in Pima County. The State of Arizona owns 15%, while the federal government owns 12% under the United States Forest Service and Bureau of Land Management. Individual or corporate ownership accounts for 14% of land, with the remaining 17% owned by other public entities.

Pima County has an Urban Enterprise Zone that includes the City of South Tucson; central Tucson; Sahuarita; parts of Marana and Pima County; and the Tohono O'odham Nation and Pascua Yaqui Tribe.[v] This Urban Enterprise Zone is designated to help encourage economic development in distressed neighborhoods through tax and regulatory relief to investors willing to launch businesses in the area. Pima County is also home to 12 designated Colonias. In Arizona, Colonias are communities that meet the federal definition of lacking sewer, wastewater removal, decent housing, or other basic services.



Adding to the economy in Pima County is Davis-Monthan (D-M) Air Force Base, which borders the southeastern edge of Tucson. The Base occupies approximately 16.6 square miles of land, and is owned by the United States Air Force, the State of Arizona, the City of Tucson, and several private owners. The 355th Fighter Wing is the host unit providing medical, logistical, and operational support to all D-M units, with a mission to train A-10 and OA-10 pilots, and provide close support and forward air control to ground forces worldwide. The Base is also home to the 12th Air Force, the 563rd Rescue Group, the Aerospace Maintenance and Regeneration Group (also known as the Aircraft Boneyard), and a regional United States Immigration and Customs Enforcement complex. These units, along with tenant organizations, represent a workforce of 6,100 Air Force personnel and 1,700 civilian personnel.

Pima County is also home to the University of Arizona, a large public research and land grant university. Founded in 1885, the mission of the University of Arizona is to provide a comprehensive, high-quality education that engages students in discovery through research and broad-based scholarships. Home to nearly 39,000 students, the University of Arizona employs over 11,000 faculty and staff. The University of Arizona brings in approximately $530 million in research funds to the community and is ranked 16th among all public universities by the National Science Foundation. The University of Arizona occupies 387 acres in central Tucson, and has the oldest continually maintained green space in Arizona.

PIMA COUNTY COMMUNITY HEALTH ASSESSMENT

Definition

According to the Public Health Accreditation Board, the purpose of a community health assessment (CHA) is to learn about the health status of a population. A CHA identifies areas for health improvement, determines factors that contribute to health issues, and identifies assets and resources that can be mobilized to address population health improvement. CHAs can be developed by all levels of government.[vi]

A CHA entails the collaborative collection and analysis of health data and information for a given population or community. Generally those involved include the local health department and other community health organizations. The types of data collected range from demographics and socioeconomic characteristics to morbidity, mortality, and other determinants of health status.[vi]

The health information collected is most often used to develop health priorities for the community, culminating in the development of a community health improvement plan.

The Process

In an environment of tightening financial resources dedicated to public health and health care, the Pima County Health Department (PCHD) initiated a community health assessment and improvement process to engage community members and stakeholders in examining the challenges and opportunities facing the health of Pima County residents.

Pima County modeled its CHA after the Mobilizing for Action through Planning and Partnership (MAPP) process developed by the National Association of County & City Health Officials (NACCHO). MAPP is a community-driven strategic planning process for improving community health that is generally facilitated by public health leaders. This framework is designed to help communities collect local health data and information, apply strategic thinking to prioritize local public health issues, and identify resources to address these priorities. The MAPP framework involves six steps: organizing, visioning, assessments, strategic issues, goals/strategies, and action cycle. MAPP as an interactive, community-based process can improve the efficiency, effectiveness, and ultimately the performance of local public health systems.

The Pima County CHA

Using MAPP as a guide, PCHD implemented the CHA following these steps:

1. Convened a team of PCHD staff, known as the Steering Committee, to develop and plan the CHA;
2. Collected and analyzed health data about the community that included secondary data, community member and stakeholder surveys, and facilitated group discussions with stakeholders;
3. Identified and convened a group of influential community leaders and stakeholders, known as the Community Health Assessment Taskforce (CHAT);
4. Shared and reviewed findings from collected community health data with the CHAT members;
5. Worked with the CHAT to identify community health priorities; and
6. Developed potential actions to address the highest health priorities.

In March, 2010, PCHD began internal discussions about conducting a community health assessment, and created an initial timeline and plan for the process. Recognizing the complexity of the task, PCHD solicited the assistance of CityMatCH, a national membership organization of city and county health departments' maternal and child health programs and leaders representing urban communities in the United States. The mission of CityMatCH is to improve the health and well-being of urban women, children, and families by strengthening the public health organizations and leaders in their communities. Areas of expertise include action planning, consensus building, and program evaluation.

In consultation with CityMatCH, PCHD created an internal Steering Committee comprised of employees and interns. The purpose of the Steering Committee was to provide leadership in the development and planning of a countywide community health assessment. The Steering Committee critically reviewed available data to assess content, value, and appropriateness; assisted with the development of new data collection efforts, including questionnaires specifically created for the community health assessment process; and identified and recruited community leaders who could serve on the CHAT. The Steering Committee provided insight and lent its expertise on health topics identified as community priorities, and supported the efforts and direction of the CHAT.

Throughout this process, CityMatCH provided PCHD with a range of technical assistance. As in their work with communities across the nation, CityMatCH provided PCHD guidance and facilitation services with regards to reviewing health data, developing and maintaining stakeholder relationships, identifying local health priorities, and providing necessary materials

and resources. CityMatCH conducted monthly meetings as a way to track progress of the community health assessment and to provide any needed technical assistance.

The Methodology

PCHD used a mixed-methods approach to collecting data for the CHA. A combination of secondary data, surveys, and group discussions were used. These various methods are described in more detail below.

Secondary Data Analysis

The team of epidemiologists at PCHD conducted a secondary data analysis using local, state, and national data sets to assess health status and health care access in Pima County.

Community Surveys

PCHD conducted two surveys from November, 2010 to February, 2011. The first survey targeted community members, while the second survey targeted community stakeholders from health and human service organizations.

The Steering Committee developed the questionnaires. The community member and stakeholder questionnaires were similar in scope and content, with slight variations in the wording.

The first section of the questionnaires focused on identifying factors that make a healthy community, behaviors that have the greatest impact on the health of the community, health services that are most important for the community, and health threats to the community. Respondents were asked to choose from a list of options, but were also given an "other" category for additional thoughts or ideas. The second section asked respondents to rate the health status and quality of life in Pima County using a five-point Likert scale anchored with strongly agree and strongly disagree. A few demographic items were included in the questionnaire as well. The community stakeholder survey also included an item inquiring if respondents would be interested in attending a discussion group on the topic of health in the community.

Epidemiologists analyzed data using the IBM SPSS software for statistical analysis.

Community member survey. The community member survey was conducted with SurveyMonkey, a free online survey software and questionnaire tool, as well as in paper format. Both versions of the survey were available in English and Spanish. A link to the online survey was placed on PCHD's homepage; the Pima County Public Library homepage; emailed to numerous health organizations, schools and educational institutions, and faith-based organizations; and shared through social media outlets. Paper versions of the survey were made available at public health clinics and public libraries throughout Pima County, and at local community events such as Tucson Meet Yourself.

A total of 595 community member surveys were collected; 52% were collected online and 48% were collected in paper format.

Community stakeholder survey. The Steering Committee defined a community stakeholder as someone who has both credibility with and influence over a significant number of people and works in some aspect of health and human services. A community stakeholder was also identified as someone affiliated with one of the following: higher education; behavioral health, including substance abuse; health care, including vector control and food-borne illness; community service organizations; advocacy groups; neighborhood associations; philanthropic organizations; employers; unions; faith-based organizations; first responders; the Arizona Health Care Cost Containment System (AHCCCS); environmental groups; and transportation departments.

The Steering Committee used Our Family Services, Inc., community resource directory to identify potential stakeholders. Invitations were electronically sent to identified stakeholders requesting their participation in the survey.

A total of 437 community stakeholders were invited to participate in the survey. Of those, 149 completed the survey, which accounted for 34% of the total invitees.

Stakeholder Group Discussions

PCHD conducted two group discussions in November and December, 2010. The purpose of these group discussions was to solicit feedback from community stakeholders regarding issues positively and negatively impacting the health of Pima County residents.

PCHD staff developed the group discussion questions. Sample questions included: "What are the community health issues most important to you?" and "What is the greatest health need affecting our community?"

As in the recruitment process for the community stakeholder survey, Our Family Services, Inc., community resource directory was used to identify potential stakeholders for the group discussions. Also, the community stakeholder survey advertised that PCHD would be hosting a series of discussion groups with community stakeholders to talk about the health of the community and discuss the results of the survey. Respondents who were interested in participating were asked to provide their email addresses. Invitations were electronically sent to identified community stakeholders requesting their participation in the group discussions.

The first discussion group was held at the Joel D. Valdez Main Library in downtown Tucson with seven community stakeholders, while the second group was held at Himmel Park Branch Library in central Tucson with eight stakeholders.

Stakeholder responses were transcribed and coded by interns from the University of Arizona, College of Public Health, using content analysis. Codes were derived from the categories found on the community stakeholder survey. Responses were coded based on how closely the subject matter reflected a topic. Responses were also assigned to more than one code if one or more topics were mentioned. All participant responses were cross-coded in order to establish consistency in the analysis process.

The Findings

This section presents information collected from the secondary data analysis, community surveys, and stakeholder group discussions.

Secondary Data Analysis – Health Status of Pima County

Mortality, morbidity, and Behavioral Risk Factor Surveillance System (BRFSS) data were used to assess the health status of Pima County.

Mortality. A mortality rate is a measure of the frequency of death in a given population during a specific timeframe. The leading causes of death in Pima County in 2009 were cancer and cardiovascular disease.

Leading Causes of Death in Pima County, 2009[vii]

Rank	*Cause of death*	*Rate**
1	Cancer	157.3
2	Cardiovascular disease	149.3
3	Accidents (unintentional injuries)	42.1
4	Chronic lower respiratory diseases	40.8
5	Cerebrovascular diseases (stroke)	31.4
6	Alzheimer's disease	19.0
7	Diabetes	17.4
8	Intentional self-harm (suicide)	16.4
9	Influenza and pneumonia	14.0
10	Chronic liver disease and cirrhosis	13.5

*per 100,000 individuals

For children one to 14 years of age in Pima County, the overall mortality rate was 20.6 per 100,000 children. The most common cause of death for this age group was unspecified drowning and submersion at a rate of 3.2 per 100,000 children.[vii]

For adults 65 years of age or older in Pima County, the overall mortality rate was 3,744.2 per 100,000 individuals. The most common causes of death for this age group were cardiovascular disease (1,030.7 per 100,000) and cancer of the bronchus, lung, and trachea (252.3 per 100,000).[vii]

Morbidity. A morbidity rate is a measure of the prevalence of a particular disease or disorder in a given population during a specific timeframe. Whereas mortality measures frequency of

death, morbidity measures the prevalence of disease. One indicator of morbidity is the number of hospital discharges in a community.

Leading Hospital Discharges in Pima County, 2009[vii]

Rank	*Hospital Discharge*	*Percent*
1	Unspecified other	78.4
2	Cardiovascular disease	9.7
3	Respiratory disease	8.5
4	Cerebrovascular diseases (stroke)	2.3
5	Diabetes	1.1

Additional data suggest that:

- Men account for more of the cardiovascular disease hospital discharges (55%) than women.[vii]
- Women account for more of the respiratory disease (52%), cerebrovascular disease (55%), and diabetes (54%) hospital discharges than men.[vii]
- Of the 3,888 hospital days in Pima County attributed to asthma, 69% were female and 69% were over 44 years of age.[vii]

Health status indicators are another measure of morbidity. The table below shows a comparison between Pima County and Arizona on several key health status indicators. An up arrow (▲) indicates that Pima County is performing better than Arizona in that indicator, while a down arrow (▼) indicates that Pima County is performing worse than Arizona.

Comparison of Health Status Indicators of Pima County and Arizona, 2009[vii]

	Pima County	Arizona	Pima County vs. Arizona
Maternal and Child Health			
Infant mortality (per 1,000)	6.3	5.9	▼
Mothers who receive early prenatal care	71.8%	80.3%	▼
Preterm births (per 1,000)	9.5	10.0	▲
Low birth weight babies (per 1,000)	7.0	7.1	▲
Responsible Sexual Behavior			
Primary and secondary syphilis (per 100,000)	5.3	3.5	▼
Adolescent pregnancies (per 1,000)	27.9	28.5	▲
Gonorrhea infections (per 100,000)	36.3	49.3	▲
New HIV/AIDS cases (per 100,000)	8.6	10.2	▲
Behavioral Health Hospital Visits (per 100,000)			
ER visits - psychosis*	1,425	885	▼
ER visits - neurotic disorders**	973	637	▼
Discharges - psychosis*	472	210	▼
Discharges - neurotic disorders**	120	63	▼

*Psychosis includes alcoholic psychoses, drug psychoses, schizophrenic disorders, and manic depressive disorders.

**Neurotic disorders include anxiety states, depression, drug dependence, nondependent abuse of drugs, and alcohol dependence syndrome.

Behavioral Risk Factor Surveillance System Data. The BRFSS is a random digit dial telephone health survey system administered by the Arizona Department of Health Services (ADHS) and developed by the United States Centers for Disease Control and Prevention (CDC).[viii] This survey system tracks information on health conditions and risk behaviors related to chronic diseases, injuries, and infectious diseases.

Pima County Risk and Protective Factors, 2010[viii]
Health Status
• Pima County reported higher rates of *fair or poor* health status (20%) compared to Arizona (16%) and the United States (15%).
Chronic Disease Prevalence
• Pima County reported a higher prevalence of diabetes (13%) compared to Arizona (11%) and the United States (9%). • Cardiovascular disease in Pima County was lower (3.7%) compared to Arizona (7%) and the United States (4.1%).
Overweight and Obesity
• Obesity in Pima County was higher (27%) than Arizona (25%), but almost equivalent to the United States (28%). • Fewer Pima County adults (18%) consumed the recommended five or more fruits and vegetables per day compared to Arizona (24%) and the United States (23%).
Health Care Coverage
• Fewer Pima County adults (78%) had health care coverage compared to Arizona (84%) and the United States (82%).
Tobacco Use
• There was a higher percentage of current smokers in Pima County (23%) compared to Arizona (14%) and the United States (17%).

Secondary Data Analysis – Health Care Access in Pima County

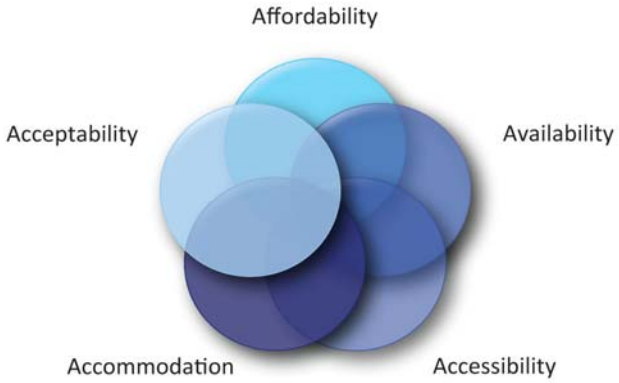
An analysis of health care access should begin with identifying the major community hospitals and health centers.

There are eight community hospitals and the Southern Arizona Veterans Affairs Health Care System in Pima County. University Medical Center (UMC) is the County's only Level I trauma center. Tucson Medical Center (TMC) and UMC have the only in-patient pediatric facilities in the area. St. Joseph's Hospital, part of the Carondelet Health Network, has the newest neurological facility joining TMC, UMC, and Northwest Medical Center that offer this service. Carondelet also manages St. Mary's Hospital and the Carondelet Heart & Vascular Institute. The other two hospitals serving Pima County are University Medical Center - South Campus and Oro Valley Hospital. Sells Hospital, run by the Indian Health Service and located on the Tohono O'odham Nation, serves only tribal members.

Pima County is also home to four federally qualified health centers: Desert Senita Community Health Center, El Rio Community Health Center, Marana Health Center, and United Community Health Center.

Even with the number of hospitals and health centers in Pima County, residents continually contend with issues related to health care access. As conceived by Penchansky and Thomas,[ix] health care access is dependent on the interplay of provider, patient characteristics, and expectations. These characteristics, affordability, availability, accessibility, accommodation, and acceptability, are more commonly known as the Five A's of Health Care Access.

The Five A's of Health Care Access



Affordability. Affordability is related to a patient's ability and willingness to pay for services, and can be measured by health insurance coverage. In 2009, 21% of adults in Pima County did not have health insurance, slightly better than the rate for all of Arizona (23%), but worse than the national average (17%). During 2009, 11% of children in Pima County did not have health insurance, almost equivalent to the rate for all of Arizona (12%), but worse than the national average (10%).[ii x xi] Without health insurance, individuals with limited financial resources are more dependent on charity or reduced fee health care services, which are increasingly scarce.

Availability. Availability is related to whether a health care provider has the resources to meet patient need, such as personnel, space, or technology. Workforce supply, as a measure of access to health care, can be calculated using the ratio of physicians to patients. According to the Arizona Physician Workforce Study, Arizona's population growth is outpacing the number of new physicians needed to provide adequate care. The physician supply in Pima County (276 physicians per 100,000 residents) is slightly below the national average (283 physicians per 100,000 residents). Comparatively, Arizona averages 207 physicians per 100,000 residents.[xii] The largest identified physician shortages have been among medical specialists in Arizona. These specialties include allergy, cardiovascular disease, infectious disease, gastroenterology, hematology, and endocrinology.[xii] Residents who live in rural areas of Pima County are more likely to have limited access to primary, emergency, and specialty care.

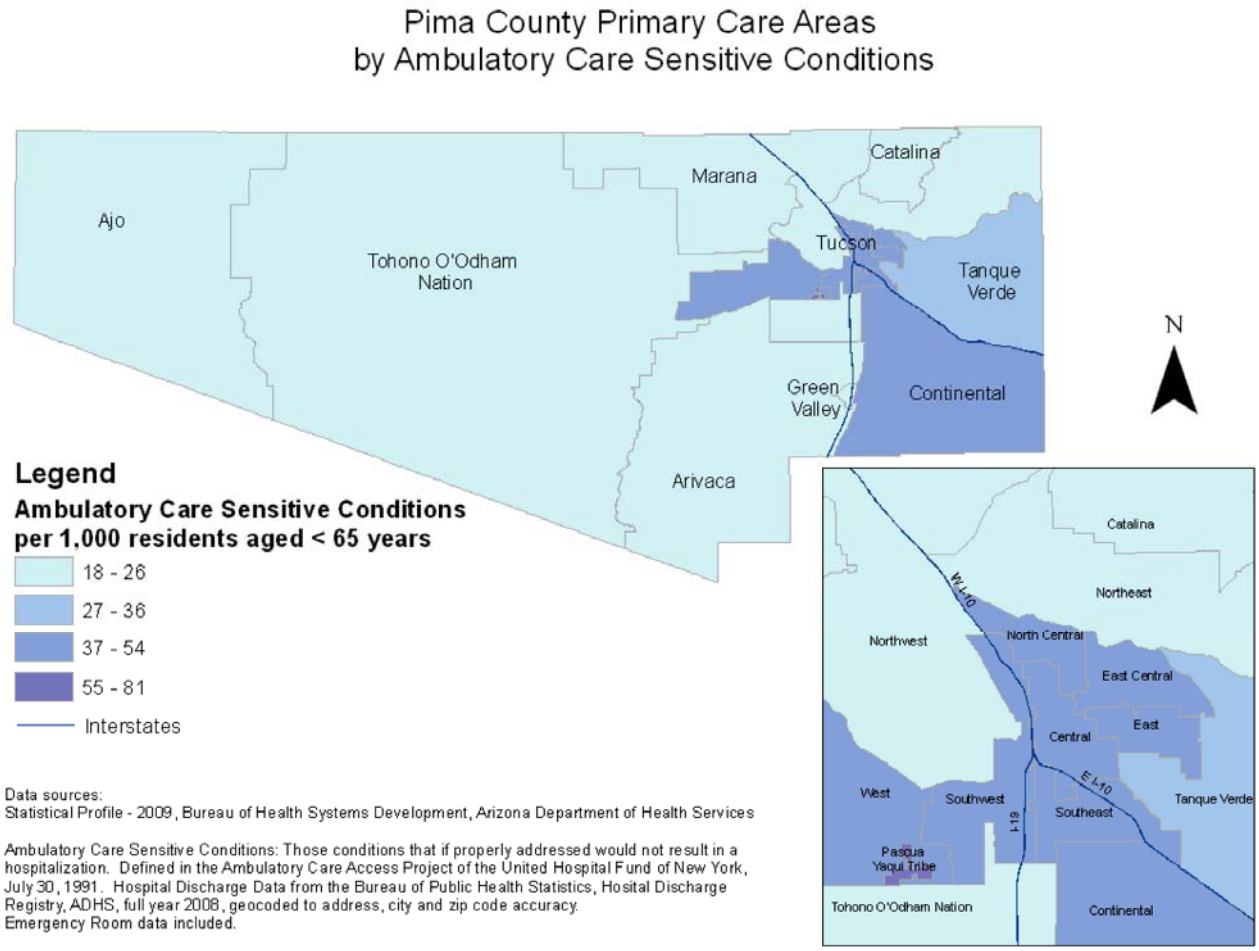
The United States Department of Health and Human Services, Health Resources and Services Administration (HRSA), in conjunction with ADHS, designates geographic regions with more than 2,000 residents per primary care provider as Health Professional Shortage Areas (HPSAs). HPSAs are identified as having shortages in dental, mental, or primary health care providers, and are based on three criteria: population-to-provider ratio, availability of health care resources, and rationale for the delivery of health care services to these areas. In Pima County, eight of the 18 primary care areas are identified as HPSAs. Additionally, HRSA has designated all of Pima County as a low-income mental health HPSA. This means that individuals and families earning less than 200% of the federal poverty level do not have adequate access to mental health professionals.

Although Pima County is large in size, roughly 80% of the population is concentrated in the eastern half of the county. However, that does not translate into sufficient numbers of primary medical, behavioral, and dental providers in that region. It is estimated that 23% of the eastern Pima County population live in areas with inadequate access to primary care practitioners and 31% live in areas with inadequate access to dental professionals.

Accessibility. Accessibility is focused on geography and the ease with which an individual can locate a health care provider in close proximity. To determine if an area is medically underserved (MUA), ADHS examines the availability of services based on a ratio of the population to primary care providers, the area's geographic accessibility to health care services, as well as a variety of other socioeconomic and health status indicators. Approximately 23% of the eastern Pima County population lives in MUAs. This indicates that residents lack adequate access to care and are unlikely to have their health care needs met.

Accommodation. Accommodation reflects health care providers' abilities to address the preferences and limitations of their patients, such as office hours, appointment availability, and communication. Accommodation can be measured using ambulatory care sensitive conditions (ACSC). ACSCs are conditions for which high quality and accessible outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease conditions. The greatest incidence of these conditions is found in areas of low socioeconomic status.

Areas of Highest ACSC per 1,000 Residents in Pima County	
Area	***Rate***
Pascua Yaqui Reservation	81.3
Tucson - west	52.4
Tucson - southeast	50.4
Tucson - north central	49.7
Tucson - southwest	49.6



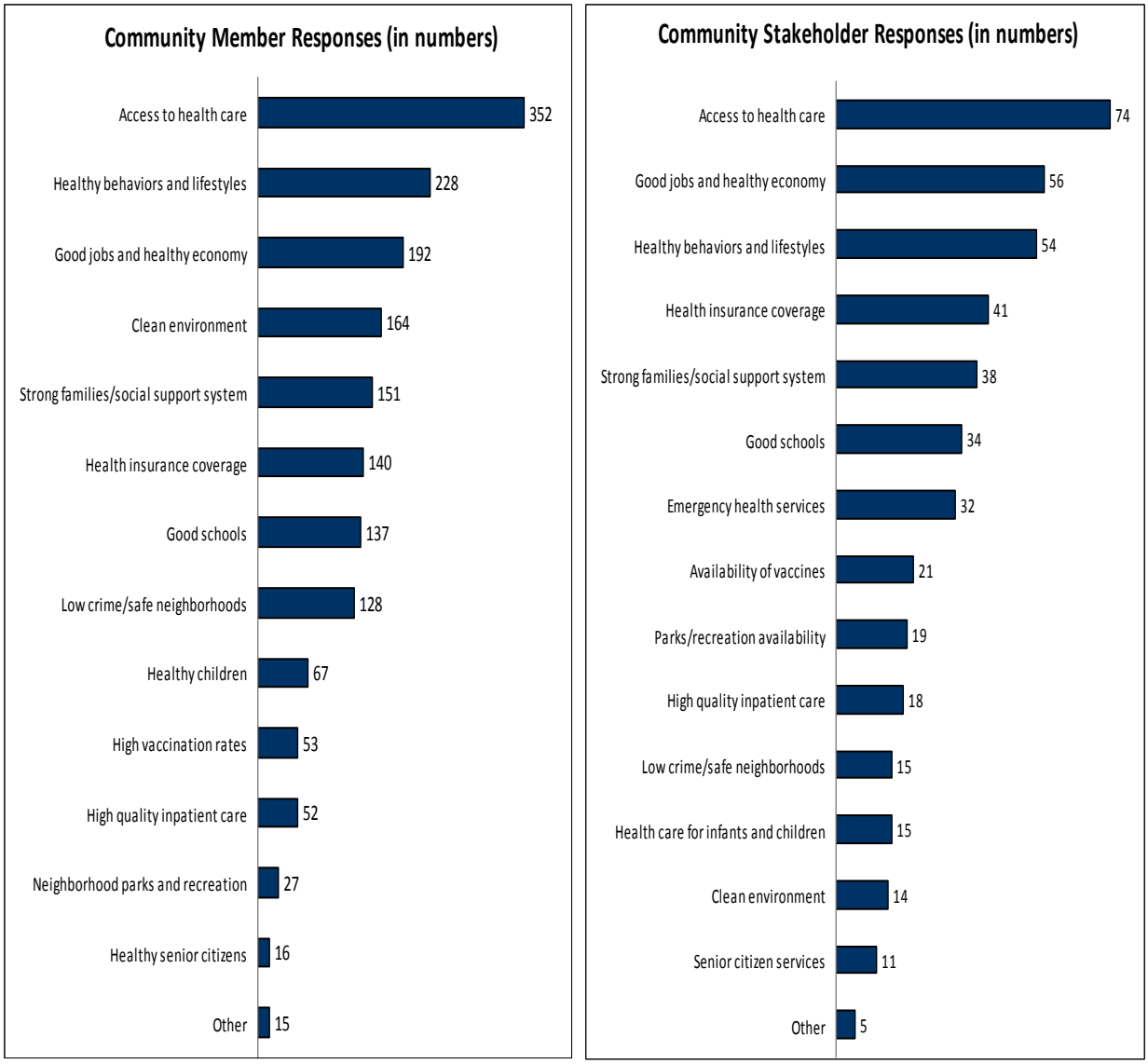
Acceptability. Acceptability addresses patient comfort with characteristics of a health care provider, such as age, gender, race, and ethnicity. Acceptability is also concerned with patients' health literacy or willingness to understand and accept their health status and needs.

In 2003, the National Assessment of Adult Literacy released its first report on the relationship between health literacy and background variables, such as educational attainment, age, race and ethnicity, where adults get information about health issues, and health insurance coverage. Health literacy was reported using four performance levels: below basic, basic, intermediate, and proficient. Of the adults surveyed nationwide, 53% had intermediate health literacy, 22% had basic health literacy, and 14% had below basic health literacy. Adults with basic or below basic health literacy were less likely to get information about health issues from written sources, relying mostly on radio and television. A larger percentage of respondents who were Hispanic (66%), African American (58%), and Native American (48%) had basic and below basic health literacy compared to White (28%) adults. There was a clear linear relationship between individuals' health literacy and their self-assessment of overall health, such that as an individuals' health literacy increases so does the self-assessment of their overall health.[xiii]

Community Member and Stakeholder Surveys

Factors that create a healthy community. Community members and stakeholders were asked to indicate the factors that create a healthy Pima County.

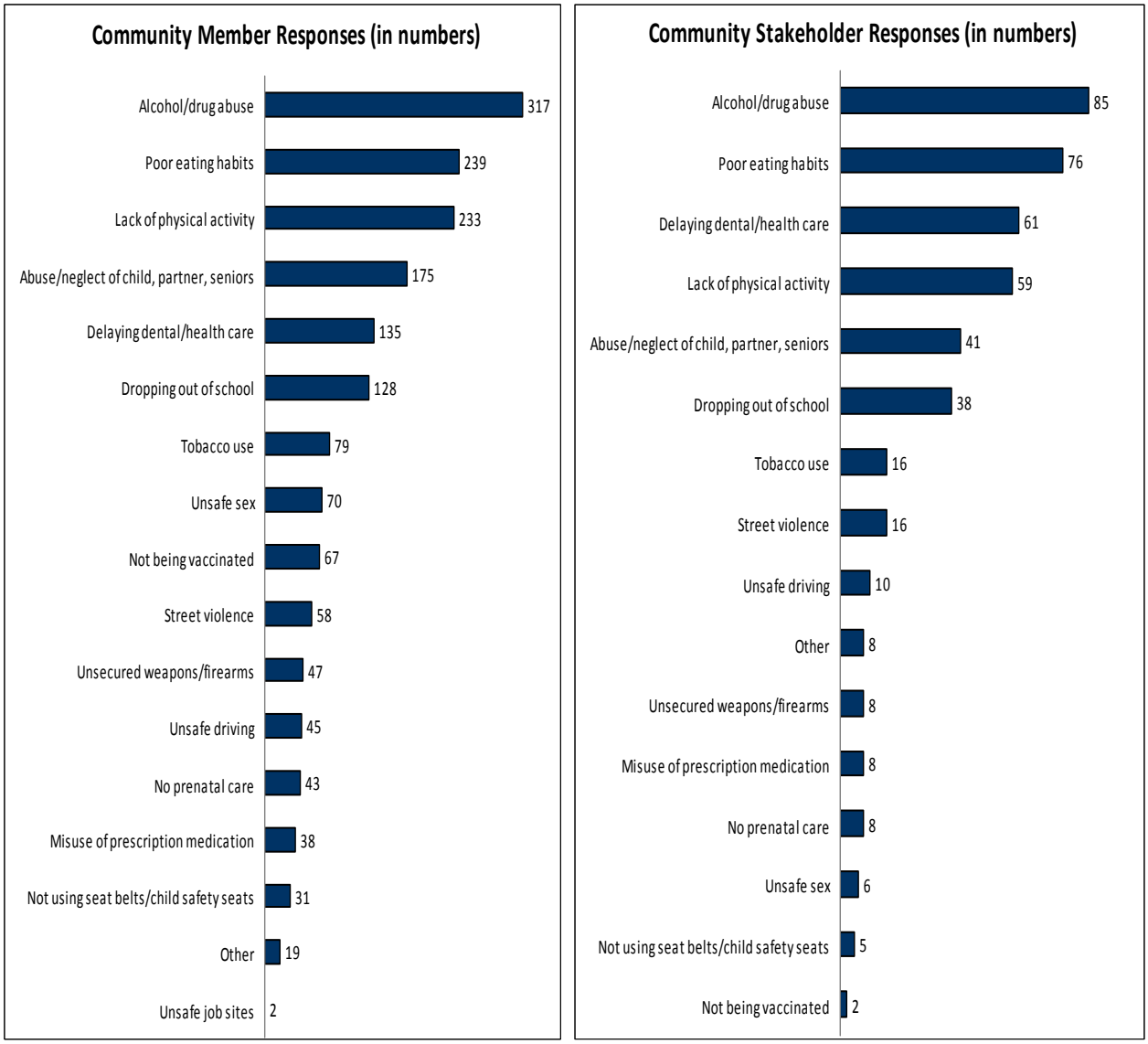
Factors that Create a Healthy Pima County



Community members and stakeholders indicated that access to health care, healthy behaviors and lifestyles, and good jobs and a healthy economy are the most important factors that impact the health of Pima County residents.

Behaviors that risk the health of the community. Community members and stakeholders were asked to indicate the behaviors that they feel pose a risk or negatively impact the health of Pima County residents.

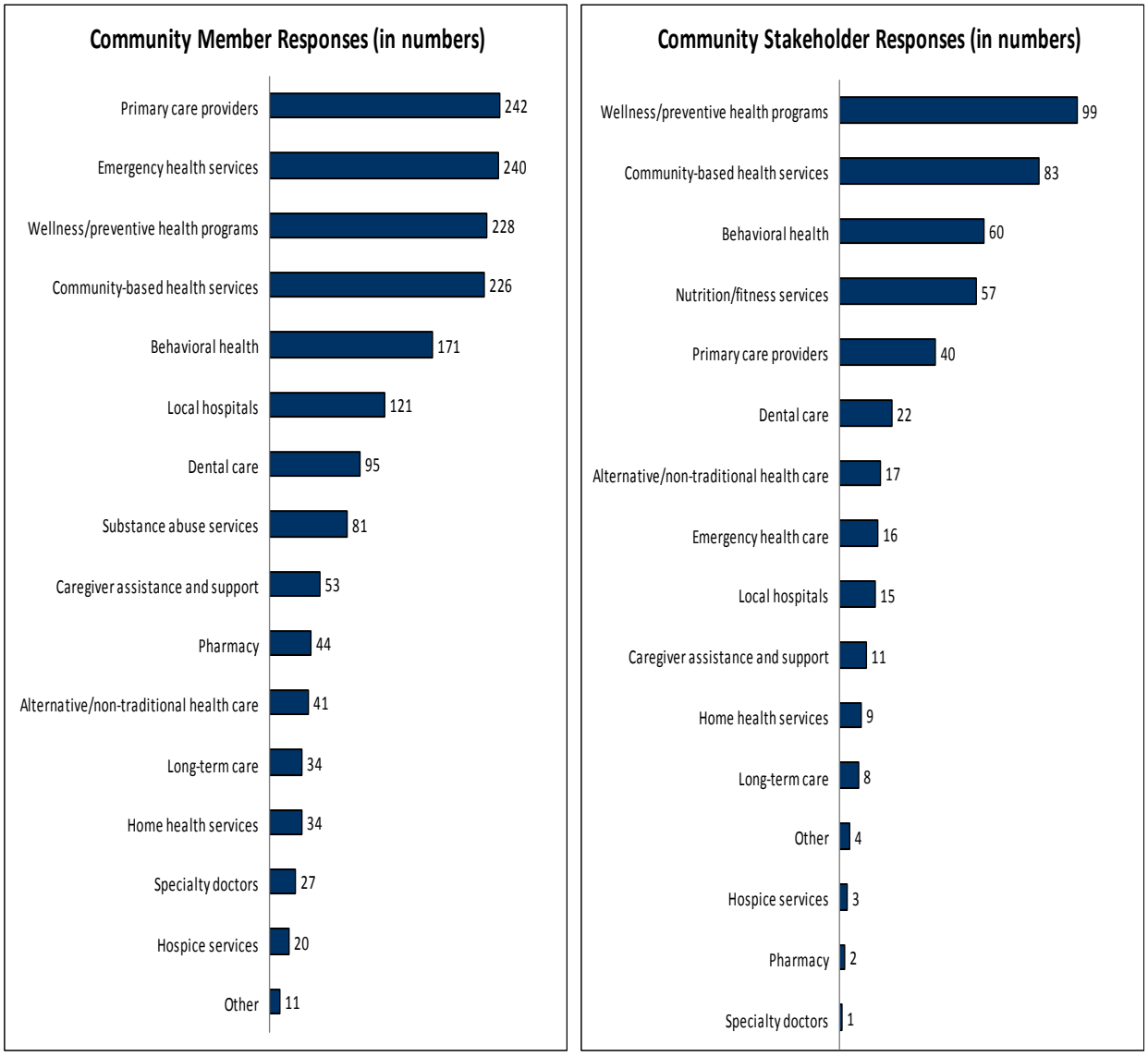
Behaviors that Pose a Risk to the Health of Pima County Residents



Community members and stakeholders indicated that alcohol and drug abuse, poor eating habits, and lack of physical activity pose a risk or negatively impact the health of Pima County residents. Community stakeholders also ranked delayed health and dental care as a potential risk.

Health services that impact the health of the community. Community members and stakeholders were asked to indicate the most important health services that they feel impact the health of Pima County residents.

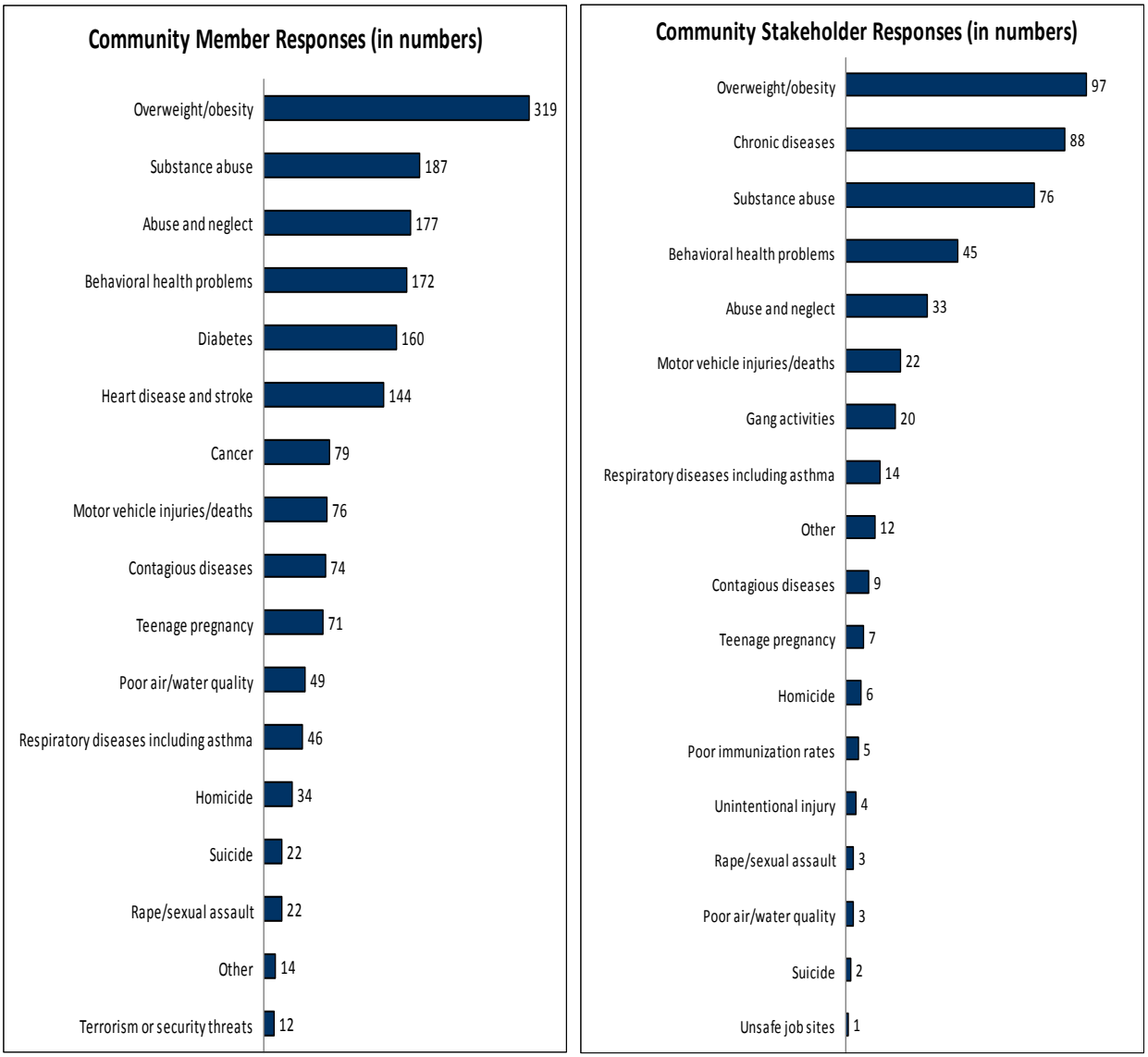
Important Health Services that Impact the Health of Pima County Residents



Community members indicated that primary care and family doctors, emergency health services, and wellness and preventive health programs are the most important health services in Pima County. Community stakeholders, on the other hand, indicated that wellness and preventive care programs, community-based health services, and behavioral health care are the most important health services in Pima County.

Threats to a healthy community. Community members and stakeholders were asked to indicate the greatest threats to the health of Pima County residents.

Threats to the Health of Pima County Residents



Community members and stakeholders indicated that obesity and substance abuse were two top threats to the health of Pima County residents. For the third, community members stated that abuse and neglect is a major threat to the health of the community, and stakeholders reported the general category of chronic diseases.

In summary, several themes emerged that impact the health of Pima County residents. Access to care was identified as the leading factor to create a healthy community, followed by healthy lifestyles and a healthy economy. Reported behaviors that pose the most risk to the health of

Pima County residents were substance abuse, poor eating habits, lack of physical activity, abuse and neglect, and delay in health and dental care. Even though community members and stakeholders differed on whether medical services or wellness programs have a more positive impact on Pima County residents, they agreed that obesity and substance abuse are top threats.

Community members and stakeholders were also asked to rate the health status and quality of life in Pima County. Overall, respondents rated their own health as generally good, while rating the health of Pima County residents lower. The majority of respondents indicated that Pima County is a safe place to live, a good place to raise children, and a good place to grow old. Both community members and stakeholders indicated that they are satisfied with the quality of life in Pima County. However, the majority of community members said that there are adequate health care services in Pima County, while fewer community stakeholders agreed.

Stakeholder Group Discussions

An analysis of participant responses revealed five main themes that impact the health of Pima County residents. These themes were: access to health care, economy, health education and literacy, quality of care, and obesity.

Access to health care. The phrase "access to health care" had different meanings for the discussion participants. For some, it meant the availability of affordable health insurance. For others, it meant having transportation to and from health care services. Participants described access to health care as an umbrella, under which falls health insurance availability, transportation to health care services, quality of care of health services, health care workforce competency, and rural lifestyle. Most participants agreed that access to health care meant having knowledge about what health care services are available to them in the community.

> *…access in quality care, is really a difficult thing in Pima County… trying to find someplace that could provide good care when I needed it without a two day, you know a 24-hour wait… personally I think being able to get access to care is hard.*
>
> *- Stakeholder comment*

Economy. Participants identified a healthy economy and availability of jobs as a leading factor for a healthy community. Participants also recognized low socioeconomic status as a contributor to health disparities. In Pima County, 19% of residents live in poverty, compared to Arizona (17%) and the United States (14%).[iv] The increase in poverty coincides with the rising unemployment rate. The unemployment rate in Pima County

has steadily increased since 1983, peaking at 9.6% in January, 2011. The national unemployment rate for this same month was 9.8%.[iii]

Health education and literacy. The lack of knowledge about available health education programs in Pima County was an identified concern for group participants. Health education programs may be available to residents, but they are not being sought out and used. Participants believed that this is because service providers are not adequately marketing their programs, resulting in residents being unaware of these programs.

> *…here you are a family who's been educated, who has a good job and all of a sudden because of medical bills, your life changes. Whether it's you having to quit your job or you end up in debt all of a sudden, you've impoverished a family that wasn't impoverished to begin with.*
>
> *- Stakeholder comment*

Quality of care. The quality of care of health services was an identified concern for group participants. Participants felt that the caliber of physicians that graduate from medical schools in Arizona has decreased over the years. Participants further noted that these recent graduates are opting to practice in states where physicians receive higher reimbursements from insurance carriers, leading to a physician shortage in Pima County.

> *I expect that my quality of care will be just as good as anybody in this country that has money. I want what the senators have. I want to know that the people I'm seeing are not just well educated but they continue to be educated, that it matters that I'm there.*
>
> *- Stakeholder comment*

Obesity. Participants identified obesity as a concern for Pima County residents. The consumption of high-fat, energy-dense, and fast-food, as well as the lack of physical activity in the United States has contributed to the obesity epidemic. Obesity is linked to the development of chronic diseases, such as diabetes, cancer, and heart disease.[xiv]

According to the 2010 BRFSS survey, obesity in Pima County was reported to be 27%.[viii] More female respondents reported being obese than male respondents, and the highest obesity prevalence was reported among respondents with only a high school diploma or GED.[viii] As previously stated, fewer Pima County adults (18%) consumed the recommended five or more fruits and vegetables per day compared to Arizona (24%) and the United States (23%).[viii] Additionally, 25% of Pima County respondents stated that they did not participate in any kind of physical activity or exercise in the previous month.[viii]

> *…obesity is the number one cause of disease and mortality in the United States…it astounds me. It's not cholera. It's not black plague. It's what you put in your mouth.*
>
> *- Stakeholder comment*

The Community Health Assessment Team (CHAT)

Recruiting Members

One of the primary objectives of the Steering Committee was to develop a list of potential CHAT members from a variety of organizations, including advocacy, behavioral health, community service, faith-based, health care, employers, unions, higher education, Native American nations and tribes, and philanthropy. The ideal CHAT member was defined as a local individual with a "big picture" perspective, interested in collaboratively addressing the health needs of the community, and capable of creating defined and realistic goals. The ideal member would be aware of the community's social, physical, political, and economic environment. The hope was that CHAT members would not only participate in the development of health priorities, but also serve as advocates for the CHA and its next steps.

Individuals from organizations representing different sectors were identified based on their vision, vested interest in the health of Pima County, willingness to actively participate, influence within and outside their organizations, and ability to set aside personal agendas or interests for the sake of building consensus. The Health Department Director explained the purpose of the CHAT to potential members and personally invited them to join.

Information Sharing

CHAT members participated in a facilitated retreat where PCHD staff introduced them to the CHA process. Facilitators presented steps that were implemented and the community health information that had been collected during the process. The goal of the retreat was to identify health priorities that should be addressed in Pima County. CHAT members heard a presentation that highlighted the current health status of Pima County on a number of factors and a presentation that highlighted the findings from the community and stakeholder surveys and stakeholder discussion groups. Fourteen members participated in the retreat.

Facilitators asked CHAT members what stood out from the health information presentations and subsequent discussion. The themes that emerged are represented in the Wordle below (the larger the word, the more often it was stated).

SWOT Analysis

After reviewing the community health information, facilitators assisted CHAT members with performing a modified strengths, weaknesses, opportunities, and threats (SWOT) analysis.

In simplistic terms, a SWOT analysis asks:

- What are the community's strengths?
- What are the community's weaknesses?
- What opportunities are present for the community?
- What threats does the community face?

A SWOT analysis assists with identifying the key internal and external factors that are important to achieving community goals and/or objectives; assists with identifying community strengths and vulnerabilities; assists with identifying the most important factors that influence survival, financial viability, and growth opportunities; and provides direction and serves as the basis for the development of a strategic plan and/or a plan of action.

A SWOT analysis is more than just defining strengths, weaknesses, opportunities, and threats. It is the "analysis" or interplay of these that form a crucial part of the process. A SWOT analysis is used as a tool in the creative development of possible strategies (strategic plan) or actions (action plan).

Facilitators asked CHAT members to think into the future and identify the strengths and weaknesses that could have influenced all of their efforts, as well as to consider the benefits that could be achieved and the difficulties that might be encountered.

Pima County's Strengths, Weaknesses, Opportunities, and Threats Identified by CHAT Members

S

● Passion ● Energy ● Creativity ● Collaboration ● Diversity ● Many levels of expertise ● Talents ● Experience ● Perseverance

W

● Limited financial resources ● Political impact/strength ● Time constraints ● Lack of representation ● Need more stakeholders ● Health disparities in community ● Limited access to data ● Poor economy ● Size of Pima County ● Limited access to closed systems, such as Indian Health Service and Veterans Administration

O

● Healthier community ● Outcomes ● Cost savings ● Momentum ● Stronger collaboration ● Increased resources through leveraging ● Sense of achievement ● Identified as a best practice/national model

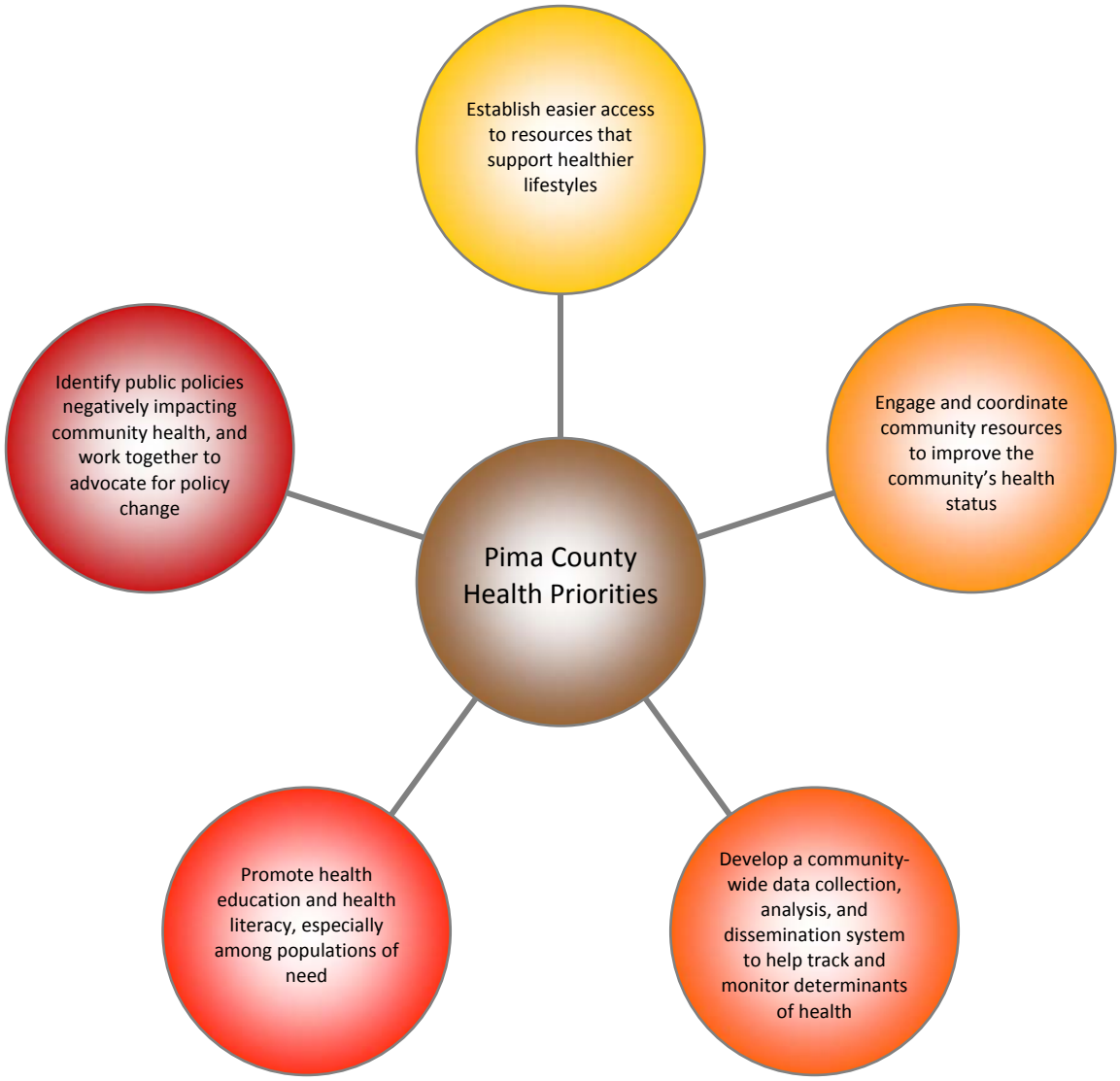
T

● Lack of support ● Exhaustion and burnout ● Legislation enacted to prohibit progress and/or in retribution ● Further cuts in funding ● Unintended consequences of success, such as negative publicity ● Overselling or having unrealistic expectations ● Criticism from others

Identifying Priorities

During the retreat, professional facilitators engaged CHAT members in the nominal group technique to identify the most important health priorities for Pima County. This technique is a structured form of small group discussion to reach consensus. Nominal group technique gathers information by asking participants to respond to questions posed by a facilitator, and then asks participants to prioritize the ideas or suggestions of all group members. The process prevents the domination of the discussion by single individuals, encourages all group members to participate, and results in a set of prioritized solutions or recommendations that represent the group's collective preferences.

Through this process, the following health priorities were identified:



After identifying the health priorities, facilitators assisted members with developing potential objectives for future implementation. Objectives are presented for each health priority.

- Coordinate and maintain ongoing anti-obesity efforts in the community;
- Increase the availability of physical activity and exercise in schools and workplaces;
- Promote community involvement through mentoring or volunteerism;
- Promote mental and physical health among youth;
- Reduce barriers to healthy food distribution in neighborhoods, schools, and parks;
- Investigate food deserts (areas lacking access to healthy foods) and identify strategies to remedy shortage;
- Address bullying with schools and parents;
- Improve night safety by increasing lighting and access to blue 911 phones; and
- Create additional walking paths and set aside undeveloped green space.

- Coordinate and leverage resources to reduce duplication of community services;
- Assist with inter-organizational communication to promote programming;
- Build on current collaborative efforts and create new relationships to address identified needs;
- Engage stakeholders and targeted populations, such as neighborhood associations, to develop strategies to improve health;
- Build on grassroots efforts and empower those being served to participate and aid in implementation; and
- Encourage professional and lay community experts to share knowledge and strategies with neighbors.

- Assess local public opinion and expectations regarding health and health status;
- Search current data for social determinants of health;
- Establish processes to measure health improvements and baselines;
- Research health disparities among various ethnic and racial groups;
- Develop systems for sharing de-identified health data;
- Identify root causes, barriers, and incentives for making changes to lifestyle;
- Foster and develop a network of researchers to help disseminate information to providers and the community; and
- Identify how best to find and share better health statistics faster.

- Continue to advocate for K-12 school system improvements related to reading and literacy;
- Educate community residents about health statistics, prevention, chronic disease, and other relevant topics;
- Enhance public awareness of issues, including sexually transmitted disease, prenatal care, dementia, and Alzheimer's research; and
- Implement culture and gender-specific outreach to promote health literacy, such as Promatora or lay health advisor models.

- Encourage coordinated care via patient-centered medical homes;
- Advocate for the protection and expansion of AHCCCS;
- Mobilize coordinated grassroots support for health-oriented topics among professionals and other members of the community;
- Increase the number of opportunities for those with limited educational attainment to receive caregiver training;
- Identify policies that negatively contribute to the community health status;
- Expand federally qualified health centers to health professional shortage areas;
- Reduce barriers to the recruitment of health care providers; and
- Improve health care access by increasing primary care provider availability.

At the end of the retreat, CHAT members expressed their enthusiasm for the community health assessment and believed that this process could lead to a healthier community, cost savings, stronger collaborations, and increased resources through leveraging assets. CHAT members also indicated a willingness to serve on action groups developed around each health priority that will be implemented during the community health improvement process. Additionally, many CHAT members stated that they would speak with their organizations about this process in order to strengthen their commitment.

NEXT STEPS: COMMUNITY HEALTH IMPROVEMENT PLAN

Having completed a CHA and established health priorities, the next step in the process is to develop and implement a community health improvement plan for Pima County. The Steering Committee met and developed a framework for implementing the improvement plan over the next five years. Once the framework is presented to the CHAT, it may be revised or improved upon and a timeline will be developed.

Community Health Improvement Plan (CHIP) Framework

The CHIP will begin with developing and recruiting action groups for each identified health priority. The Steering Committee and the CHAT will be responsible for recruiting action group members. Participants will include members of the CHAT, vested stakeholders and professional organizations with interest in the established health priorities, and community members with a personal and/or professional interest in the topic. To ensure continuity in the process, each action group will be chaired by members of the CHAT.

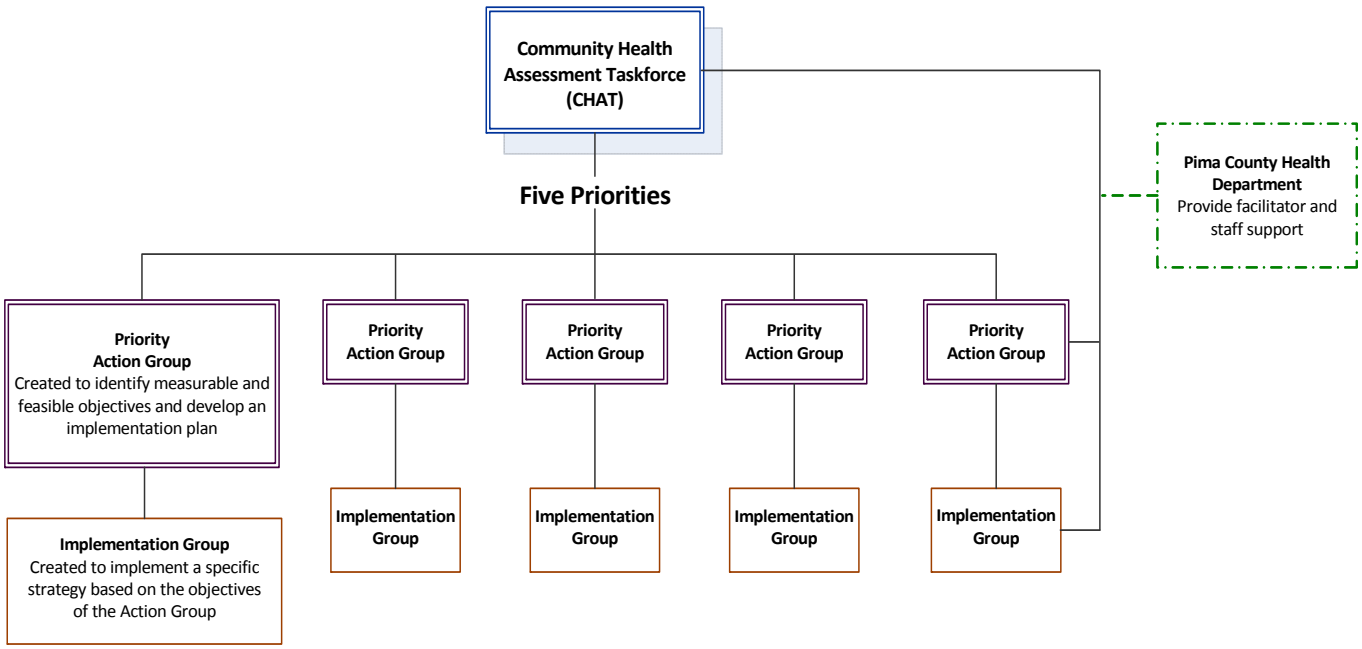
Each action group will be responsible for the identification of measurable and feasible objectives, and an implementation plan to meet those objectives. Specifically, each action group will address the following questions:

- Why is the health priority important?
- How is the action group going to meet the health priority's goal?
- Who is the target population?
- Who are potential partners?
- What are the available resources to accomplish the health priority's goal?
- When will tasks be completed?
- How will short-term progress be measured? What are the process measures?
- How will long-term progress be measured? What are the outcome measures?

As needed, action groups may choose to divide workload among implementation groups. Implementation groups would be developed to execute specific tactics or strategies in support of the health priority. Work assigned to implementation groups may be time or task specific. For example, if the action group working on community health data wants to investigate the feasibility and cost of conducting a random digit dial survey of local health behaviors, then an implementation group could be created and charged with completing tasks by certain dates.

The CHIP framework is presented below.

Pima County Community Health Improvement Plan Framework



PCHD will serve as facilitators during the implementation phase and provide support to action and implementation groups. Additionally, the Steering Committee will report on issues raised, resources needed, and barriers to implementation to the Health Department Director and Board of Health, as necessary and appropriate. The Steering Committee will meet periodically to discuss progress made and resolve issues that arise during the planning and implementation phases of the CHIP.

Action groups will follow an improvement timeline developed collaboratively with the Steering Committee and the CHAT. As part of this process, action groups will provide an e-Progress Report that informs the Steering Committee and the CHAT on progress being made towards the achievement of the health priorities, provide implementation success stories and strategies, and needed resources or assistance. The CHAT will meet periodically to monitor progress and celebrate achievements.

After the five-year implementation cycle, the Steering Committee and the CHAT will convene to discuss implementing a new community health assessment and developing a new community health improvement plan. Engaging in a continuous process will allow for an assessment and improvement process that takes into account changes in the physical, social, economic, and political environment that shapes the health of the community.

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- Kristin Barney, Tobacco/Chronic Disease Program
- Gail Bradford, Epidemiology Program
- Susanna Feingold, Public Health Nursing Program
- Marcy Flanagan, Community Surveillance and Investigation Division
- Julia Flannery, Records and Administrative Services Division
- Donald Gates, Communities Putting Prevention to Work
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- Crystal Kynard-Amerson, Intern, University of Arizona, College of Public Health
- Rene Lozano, STD/HIV Program
- Michelle McDonald, MD, Chief Medical Officer
- Brad McKinney, Records and Administrative Services Division
- Rod Norrish, Epidemiology Program
- Catherine O'Grady, Intern, University of Arizona, College of Public Health
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- Wanda Wong, Community Nutrition Services Program
- Lisa Woodson, Epidemiology Program

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