



Carondelet Health Network
St. Joseph's • Holy Cross • St. Mary's Hospitals

2018

Holy Cross Hospital Community Health Needs Assessment



1171 W. Target Range Road
Nogales, Arizona 85621

www.carondelet.org/our-locations/holy-cross

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Introduction

Background and Purpose

Holy Cross Hospital is a general community hospital located in Nogales, Arizona, providing emergency care, general surgery, labor and delivery services, and important health and wellness education for residents throughout Santa Cruz County. First established in 1960, this 25-bed critical access hospital is part of the Carondelet Health Network. Carondelet is jointly owned by Tenet Health Care Corporation, Dignity Health and Ascension. Carondelet is operated by Tenet, a leading diversified health care services company.

The Patient Protection and Affordable Care Act of 2010 requires tax-exempt hospitals to conduct Community Health Needs Assessments every three years and adopt Implementation Strategies to address prioritized health needs identified through the assessment. A Community Health Needs Assessment (CHNA) identifies significant health needs in the service area, provides information to select priorities and resources for action, and serves as the basis for community benefit programs and activities to help address needs. This assessment incorporates both primary data collection and secondary data analysis to identify and prioritize significant health and social needs of people residing in the service area.

This is Holy Cross Hospital's first Community Health Needs Assessment conducted since ownership changes for the Carondelet Health Network. (See footnote on p. 9.)

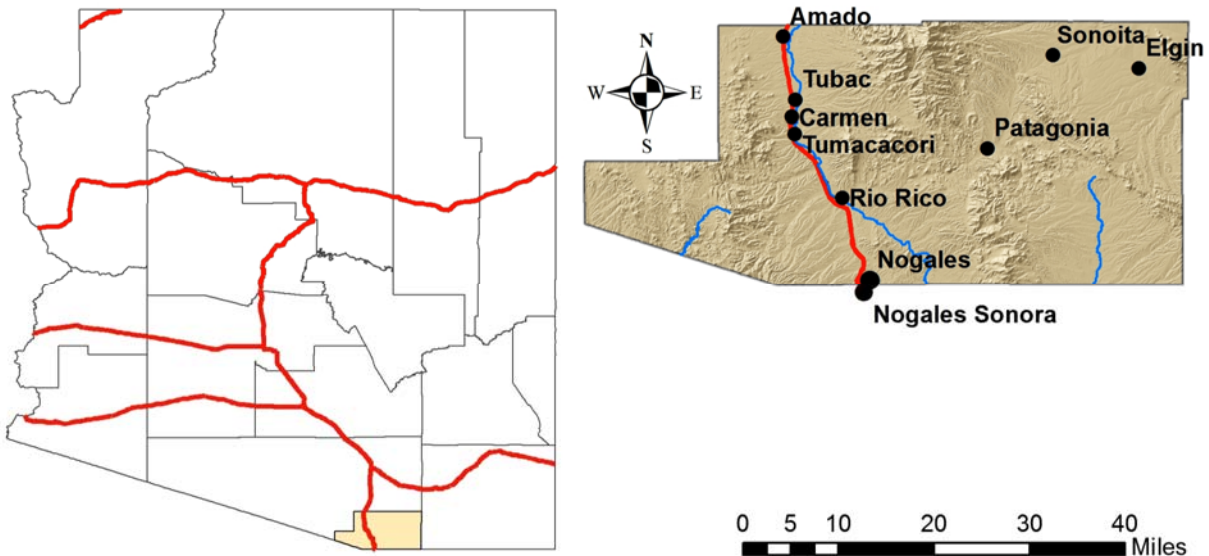
Service Area / Definition of Community

Holy Cross Hospital is located at 1171 W. Target Range Road, Nogales, Arizona, 85621, in the County of Santa Cruz. The primary service area for Holy Cross Hospital is divided into primary and secondary markets encompassing the following places:

- Primary
 - Nogales: 85621
 - Rio Rico: 85648
- Secondary
 - Elgin: 85611
 - Sonoita: 85637
 - Patagonia: 85624

Holy Cross Hospital tracks ZIP Codes of origin for all patient admissions and includes all who received care without regard to insurance coverage or eligibility for financial assistance. The service area was determined from the ZIP Codes that reflect a majority of patient admissions.

Map of Santa Cruz County, Arizona



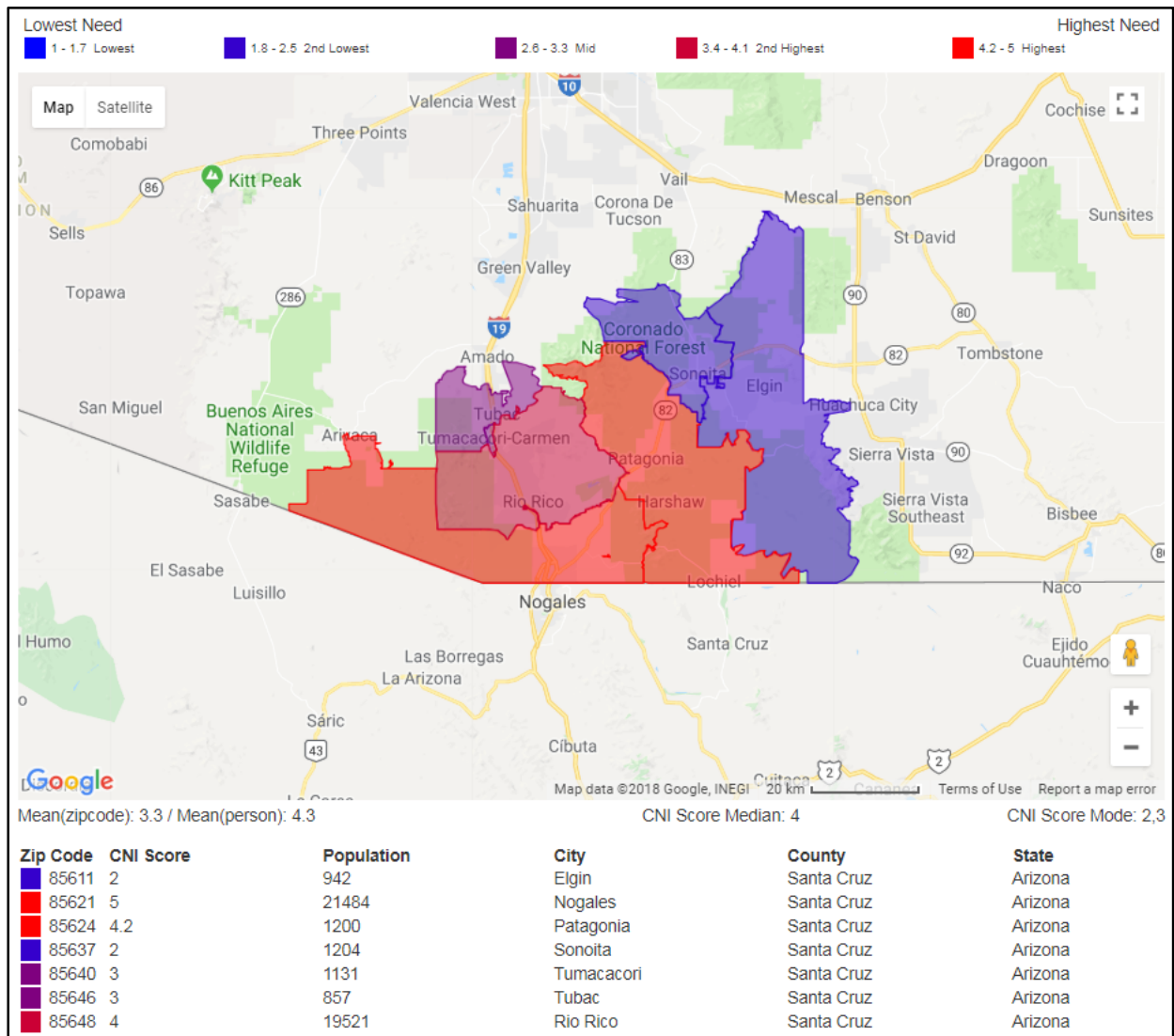
Community Need Index

One tool used to assess and pinpoint relative health need is the Community Need Index (CNI) created and made publicly available by Dignity Health and Truven Health Analytics. The CNI analyzes data at the zip code level on five factors known to contribute or be barriers to health care access: income, culture/language, education, housing status, and insurance coverage.

Scores from 1.0 (lowest barriers) to 5.0 (highest barriers) for each factor are averaged to calculate a CNI score for each zip code in the community. Research has shown that communities with the highest CNI scores experience twice the rate of hospital admissions for ambulatory care sensitive conditions as those with the lowest scores.

In the map on the following page, the cities of Nogales (CNI = 5.0), Patagonia (4.2) and Rio Rico (4.0) are the highest need areas within the community. Nogales and Rio Rico together compose 92 percent of the hospital service area's population.

Community Need Index Map



Secondary Data Collection

Secondary data were collected from a variety of local, county, and state sources to present a community profile, social determinants of health, access to health care, birth indicators, the leading causes of death, chronic disease, communicable disease, preventive practices, health behaviors, and substance abuse. When available, these data sets are presented in the context of Santa Cruz County and Arizona, framing the scope of an issue as it relates to the broader community.

Analyses were conducted at the most local level possible for the hospital's primary service area, given the availability of the data. Many data indicators are only available at

the county or state level. Sources of data include: U.S. Census American Community Survey, Arizona Department of Education, Arizona Department of Health Services, Arizona Department of Economic Security, County Health Rankings, Centers for Disease Control and Prevention, Arizona Health Matters, and others.

Secondary data for the hospital service area were collected and documented in data tables with narrative explanation. The tables present the data indicator, the geographic area represented, the data measurement (e.g. rate, number, or percent), county and state comparisons (when available), the data source, data year and an electronic link to the data source. The report includes benchmark comparison data that measure Holy Cross Hospital data findings as compared to Healthy People 2020 objectives (Appendix 1). Healthy People 2020 objectives are a national initiative to improve the public's health by providing measurable objectives and goals that are applicable at national, state, and local levels.

Primary Data Collection

Targeted interviews were used to gather information and opinions from persons who represent the broad interests of the community served by the hospital. Community stakeholders identified by the hospital and by community partners were contacted and asked to participate in the needs assessment. Interview participants included leaders and representatives of medically underserved, low-income, and minority populations, as well as the local governmental public health department, per IRS requirements. Four interviews with six individuals were completed during May 2018, in addition to consulting with Holy Cross Hospital staff.

Community stakeholder input is summarized in the "Primary Data: Community Stakeholder Interviews" section beginning on page 46, and a list of interview participants with titles and organizations can be found in Appendix 2.

Additional sources of quantitative and qualitative data were reviewed for the CHNA. A number of recent assessments that included community input were examined to augment the stakeholder interviews. These resources included:

- Local Foods, Local Places (November 2017). *Strengthening Local Foods System and Downtown Revitalization: Actions and Strategies for Nogales, Arizona.*
- Mullins, J. (October 2016). *Santa Cruz County Women's Behavioral Health Initiative Focus Groups Report.*
- Mullins, J, Thatcher, L, & Armijo, W. (April 2018). *Qualitative Needs Assessment of Elder Health and Wellbeing Services in Santa Cruz County, Arizona.*
- US Environmental Protection Agency (December 2017). *Healthy Places for Healthy People, Nogales, Arizona.*

Analysis of the primary data occurred through a process that compared and combined responses to identify themes. The results of the primary data collection were reviewed in conjunction with the secondary data. Primary data findings were used to corroborate the secondary data-defined health needs, serving as a confirming data source. The responses are included in the following CHNA chapters.

Prioritized Significant Health Needs

The CHNA identified the following prioritized significant health and health-related needs, which are described throughout the report:

- Mental Health (1st)
- Economic Insecurity (2nd)
- Overweight and Obesity (2nd)
- Access to Health Care (2nd)
- Diabetes (3rd)
- Birth Indicators (3rd)
- Dental Care (4th)
- Substance Abuse (4th)

Consultants and Organizations that Helped Conduct the CHNA

Holy Cross Hospital contracted with Biel Consulting, Inc. (www.bielconsulting.com) and worked with Dignity Health to help it complete this CHNA report.

Written Comments on Previous CHNA

Given that this is the first CHNA for Holy Cross Hospital since a change in ownership, it does not include public comments on a previous CHNA report. A mechanism for the provision of written comments on this 2018 CHNA report is immediately below and on the hospital's web site.

CHNA Adoption and Public Availability

The Board of Directors of Holy Cross Hospital adopted this CHNA report on June 5, 2018.¹ The report is widely available to the public on the hospital's web site, and a paper copy is available for inspection upon request at the hospital. Written comments on this report can be submitted to the Carondelet Holy Cross Hospital, Director of Support Services, 1171 W. Target Range Road, Nogales, Arizona 85621 or by e-mail to dsanchez@carondelet.org.

¹ IRS Section 501(r) regulations require that a newly acquired hospital conduct a CHNA by the last day of the organization's second taxable year beginning after the date on which the hospital facility was acquired. Dignity Health became a part owner of Holy Cross Hospital on September 1, 2015, and reports Holy Cross on its IRS Form 990 Schedule H. The end of the second taxable year after the acquisition date is June 30, 2018.

Identification of Significant Health Needs

Significant health needs were identified based on the results of the primary and secondary data collection and analysis. Each health need was confirmed by more than one indicator or data source (i.e., the health need was suggested by more than one source of secondary or primary data). In addition, the health needs were based on the size of the problem (relative portion of population afflicted by the problem) or the seriousness of the problem (impact at individual, family, and community levels).

To determine size or seriousness of a problem, the health needs identified in the secondary data were measured against benchmark data, specifically county or state rates or Healthy People 2020 objectives. Indicators related to the health needs that performed poorly against these benchmarks were considered to have met the size or seriousness criteria. Additionally, primary data sources were asked to identify community and health issues based on the perceived size or seriousness of a problem.

The identified significant needs included (in alphabetical order):

- Access to health care (including transportation)
- Birth indicators
- Dental care
- Diabetes
- Economic insecurity
- Mental health
- Overweight and obesity (including healthy food and physical activity)
- Substance abuse (alcohol, drugs and tobacco)

Resources to Address Significant Needs

Through the CHNA process, community stakeholders identified community resources potentially available to address identified health needs. The identified community resources are presented in Appendix 3.

Priority Health Needs

The identified significant health needs were prioritized with input from the community. Input on the significant health needs was gathered from community stakeholders. The following criteria were used to prioritize the health needs:

- The perceived severity of a health issue or health factor/driver as it affects the health and lives of those in the community;
- The level of importance the hospital should place on addressing the issue.

Interviewees and other stakeholders with knowledge of the hospital service area were sent a link to an online survey using the service Survey Monkey. The stakeholders were asked to rank each identified significant health need. The percentage of responses were noted as those that identified the need as having severe or very severe impact on the community, had worsened over time, and had a shortage or absence of resources available in the community. Not all survey respondents answered every question, therefore, the response percentages were calculated based on respondents only and not on the entire sample size.

Diabetes, economic insecurity, mental health and overweight/obesity had the highest scores for significant and severe impact on the community in the survey.

Overweight/obesity and mental health had the highest rankings for worsened over time; and mental health, access to health care, and overweight/obesity were rated highest on insufficient resources available to address the need.

Significant Health Needs Ranked by Importance Score

Significant Health Need	Significant and Severe Impact on the Community	Worsened Over Time	Insufficient or Absent Resources
Access to health care	66.7%	33.3%	83.3%
Birth indicators	80.0%	0%	33.3%
Dental care	60.0%	20.0%	60.0%
Diabetes	100%	60.0%	40.0%
Economic insecurity	100%	60.0%	80.0%
Mental health	100%	66.7%	100%
Overweight and obesity	100%	83.3%	83.3%
Substance abuse	80.0%	60.0%	80.0%

The stakeholders were asked to rank order the community needs according to highest level of importance. The total score for each significant health need (possible score of 4) was divided by the total number of responses for which data were provided, resulting in an overall average for each health need. Mental health, economic insecurity, overweight/obesity and access to health care were ranked as the top priority needs in

the service area. Calculations from community stakeholders resulted in the following prioritization of the significant health needs:

Significant Health Needs	Priority Ranking (Total Possible Score of 4)
Mental health	4.00
Economic insecurity	3.83
Overweight and obesity	3.83
Access to health care	3.83
Diabetes	3.67
Birth indicators	3.67
Dental care	3.50
Substance abuse	3.50

Additional detail regarding community input on these health needs is described primarily in the report section “Primary Data: Community Stakeholder Interviews” beginning on page 46.

Impact Evaluation

Since this is the first CHNA for Holy Cross Hospital since its change in ownership, there is no evaluation of the impact of actions taken since the immediately preceding CHNA to address identified significant health needs.

Community Profile

Population

The population of the Holy Cross service area is 44,709.

Population, 5-Year Estimates, 2012-2016

	ZCTA*	Number
Elgin	85611	760
Nogales	85621	22,548
Patagonia	85624	1,399
Rio Rico	85648	18,673
Sonoita	85637	1,329
Holy Cross Service Area		44,709
Santa Cruz County		46,437
Arizona		6,728,577

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP05. <http://factfinder.census.gov>

*ZIP Code Tabulation Area

From 2009-2013 to 2012-2016, Arizona saw a 3.8% growth in population. During this same time period the population in the service area declined by 2%.

Total Population, 2009-2013 Compared to 2012-2016

	2009-2013	2012-2016	Percent Change
Holy Cross Service Area	45,602	44,709	-2.0%
Santa Cruz County	47,122	46,437	-1.5%
Arizona	6,479,703	6,728,577	3.8%

Source: U.S. Bureau of the Census, American Community Survey, 2009-2013 and 2012-2016, DP05. <http://factfinder.census.gov>

Population by Age

Children and youth, ages 0-17, make up 29.3% of the area population; 9.9% of the service area are 18-24 years of age; 22.1% are 25-44, 23.8% are 45-64; and 14.8% of the population are seniors, 65 years of age and older.

The area has higher rates of children and fewer adults and seniors when compared to the county and the state. Rio Rico (31.6%) and Nogales (29.7%) have the highest percentage of youth under age 18. Elgin has the highest percentage of seniors (39.3%) within the service area.

Population by Age

	Ages 0-4	Ages 5-17	Ages 18-24	Ages 25-44	Ages 45-64	Ages 65+
Elgin	1.8%	11.3%	0.8%	9.3%	37.4%	39.3%
Nogales	7.3%	22.4%	11.6%	20.3%	22.3%	16.1%

	Ages 0-4	Ages 5-17	Ages 18-24	Ages 25-44	Ages 45-64	Ages 65+
Patagonia	5.1%	9.8%	7.1%	13.8%	33.7%	30.5%
Rio Rico	8.1%	23.5%	9.0%	26.1%	23.7%	9.6%
Sonoita	1.4%	15.0%	2.0%	12.4%	33.3%	35.8%
Holy Cross Service Area	7.3%	22.0%	9.9%	22.1%	23.8%	14.8%
Santa Cruz County	7.2%	21.3%	9.7%	21.3%	24.6%	15.9%
Arizona	6.5%	17.6%	9.9%	25.8%	24.3%	15.9%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP05. <http://factfinder.census.gov>

Race/Ethnicity

The majority population of the service area is comprised of Hispanics/Latinos (85.3%). Whites make up 13.3% of the population, with all other races/ethnicities combined making up less than 1.4% of the population.

The area has a larger percentage of Hispanics/Latinos and smaller percentage of all other races and ethnicities when compared to the state. Nogales has the lowest percentage of Whites (6.1%) and the largest percentage of Hispanics/Latinos (92.6%) and Asians (1%) of all area cities. Elgin has the largest percentage of Whites (93.2%) and smallest percentage of 6.8% Hispanics/Latinos (6.8%) in the service area.

Population by Race and Ethnicity

	Hispanic or Latino	White	Asian	Black/African American	American Indian/Alaska Native	Native Hawaiian/Pacific Islander	Other/Multi
Elgin	6.8%	93.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Nogales	92.6%	6.1%	1.0%	0.3%	0.0%	0.0%	0.0%
Patagonia	30.1%	61.7%	0.6%	0.0%	0.0%	0.0%	7.9%
Rio Rico	89.0%	10.1%	0.6%	0.2%	0.0%	0.0%	0.2%
Sonoita	13.5%	84.5%	0.6%	0.7%	0.7%	0.0%	0.0%
Holy Cross Service Area	85.3%	13.3%	0.8%	0.2%	0.0%	0.0%	0.3%
Santa Cruz County	83.2%	15.3%	0.8%	0.2%	0.2%	0.0%	0.3%
Arizona	30.5%	56.1%	3.0%	4.0%	4.0%	0.2%	2.2%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP05. <http://factfinder.census.gov>

Language

In the service area, English is spoken in the home by 20.4% of residents, fewer than in the county (22.5%). In those homes where other languages are spoken, 25.7% do not speak English well. 28.2% of Nogales's population speaks English less than 'Very Well'.

English Spoken at Home, Ability to Speak English, Population 5 Years & Over

	Speaks Only English	Speaks a Language Other than English	
		Speaks English "Very Well"	Speaks English Less Than "Very Well"
Elgin	94.1%	4.3%	1.6%
Nogales	12.7%	59.1%	28.2%
Patagonia	70.4%	20.9%	8.7%
Rio Rico	18.3%	55.4%	26.3%
Sonoita	80.1%	10.1%	9.8%
Holy Cross Service Area	20.4%	53.8%	25.7%
Santa Cruz County	22.5%	52.7%	24.8%
Arizona	73.1%	17.8%	9.1%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP02. <http://factfinder.census.gov>

In the service area, 78.6% speak Spanish at home, a larger percentage of Spanish speakers than found in the state (20.4%). An Asian language is spoken by 0.5% of the service area population (primarily Korean). An Indo-European language other than Spanish is spoken by 0.4% of the population (primarily French).

Language Spoken at Home for the Population 5 Years and Over

	English Only	Spanish	Asian	Other Indo-European
Elgin	94.1%	5.0%	0.0%	0.9%
Nogales	12.7%	86.6%	0.7%	0.1%
Patagonia	70.4%	26.5%	0.0%	3.2%
Rio Rico	18.3%	80.8%	0.4%	0.6%
Sonoita	80.1%	17.4%	0.0%	2.0%
Holy Cross Service Area	20.4%	78.6%	0.5%	0.4%
Santa Cruz County	22.5%	76.5%	0.5%	0.4%
Arizona	73.1%	20.4%	2.0%	2.0%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP02. <http://factfinder.census.gov>

English Learners

The percentage of students who are English Learners in the area school districts is 18.1%, higher than the rate of English Learners in the state (6.4%).

English Language Learners, 2016-2017

	Number	Percent
Nogales Unified School District	1,174	20.5%
Patagonia Elementary School District	0	0%
Patagonia Union High School District	0	0%

	Number	Percent
Santa Cruz Elementary School District	51	16.5%
Santa Cruz Valley Unified School District	527	15.5%
Sonoita Elementary School District	0	0%
Holy Cross Service Area	1,752	18.1%
Arizona	72,261	6.4%

Source: Office of Superintendent of Public Instruction, Arizona, 2016-2017 <http://www.azed.gov/accountability-research/data/>

Social and Economic Factors/Social Determinants of Health

Healthy People 2020 defines social determinants of health as “conditions in the environments in which people live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.”² Social Determinants of Health typically include five broad focus areas: economic stability, education, social and community context, health and health care, and neighborhood and built environment.

Income

The median household income in the Holy Cross service area is \$39,442. This is slightly higher than found in the county (\$38,941) but lower than the state (\$51,340). Sonoita has the highest median income in the service area (\$74,250), while Nogales has the lowest median income (\$28,367 per household).

Median Household Income

	Median Household Income
Elgin	\$55,083
Nogales	\$28,367
Patagonia	\$36,445
Rio Rico	\$48,761
Sonoita	\$74,250
Holy Cross Service Area	\$39,442
Santa Cruz County	\$38,941
Arizona	\$51,340

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP03. <http://factfinder.census.gov>

Poverty

Poverty thresholds are used for calculating official poverty population statistics and are updated each year by the Census Bureau. From 2012-2016, the federal poverty threshold for one person ranged from \$11,170 in 2012 to \$11,880 2016, and for a family of four from \$23,050 in 2012 to \$24,300 in 2016.

In the Holy Cross service area, over one-fifth (22.3%) of the population was living at or below 100% of the Federal Poverty Level (FPL), and over half (53.5%) were considered low-income (living at or below 200% FPL). These poverty rates are higher than the state rates (17.7% 100% FPL and 38.1% at or below 200% FPL). However, this overall rate masks the disparities in the population as viewed by community. Nogales has the highest rate of poverty (30.5%) followed by Patagonia (20.1%). Sonoita has by far the

² <https://www.cdc.gov/socialdeterminants/faqs/index.htm>

lowest levels of poverty (9.0% and low-income (13.9%) of the service area cities.

Ratio of Income to Poverty Level

	Below 100% Poverty		Below 200% Poverty	
	Number	Percent	Number	Percent
Elgin	99	13.0%	184	24.2%
Nogales	6,750	30.5%	14,271	64.4%
Patagonia	279	20.1%	779	56.0%
Rio Rico	2,651	14.2%	8,288	44.4%
Sonoita	120	9.0%	185	13.9%
Holy Cross Service Area	9,899	22.3%	23,707	53.5%
Santa Cruz County	10,083	21.9%	24,341	52.8%
Arizona	1,165,636	17.7%	2,504,135	38.1%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, S1701. <http://factfinder.census.gov>

Families in Poverty

In Nogales, 42.9% of families with children are living in poverty. Elgin has no families with children living in poverty.

Families Living in Poverty

	Percent
Elgin	0.0%
Nogales	42.9%
Patagonia	8.3%
Rio Rico	16.7%
Sonoita	2.9%
Holy Cross Service Area	29.5%
Santa Cruz County	29.2%
Arizona	25.0%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, S1701. <http://factfinder.census.gov>

Families with a female head of household (HOH) are defined as those where a female maintains a household with related children under the age of 18 and no husband present. 41.7% of area families with a female HOH are living in poverty.

Female HOH with Children Living in Poverty

	Earnings Below 100% Poverty	
	Number	Percent
Elgin	0	0.0%
Nogales	511	49.7%
Patagonia	2	30.8%
Rio Rico	149	28.5%

	Earnings Below 100% Poverty	
	Number	Percent
Sonoita	0	0.0%
Holy Cross Service Area	662	41.7%
Santa Cruz County	667	41.5%
Arizona	67,660	39.3%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP02 & DP03. <http://factfinder.census.gov>

Unemployment

From 2012 to 2016, unemployment in the civilian labor force in Santa Cruz County was 9.7% and for Arizona it was 8%. In the service area, the unemployment rate was 9.9%, higher than the county and state. The highest rate of unemployment in the service area was in Nogales (13.1%). Sonoita had the lowest unemployment rate at 1.8%.

Employment Status for the Civilian Labor Force, 16 and Over, 2012-2016

	Civilian Labor Force	Unemployed	Unemployment Rate
Elgin	312	16	5.1%
Nogales	9,092	1,193	13.1%
Patagonia	537	26	4.8%
Rio Rico	7,963	582	7.3%
Sonoita	567	10	1.8%
Holy Cross Service Area	18,471	1,827	9.9%
Santa Cruz County	19,272	1,879	9.7%
Arizona	3,129,344	249,972	8.0%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP03. <http://factfinder.census.gov>

Housing

The service area has 16,775 housing units. 57.1% of housing units in the service area are owner-occupied. Nogales has the lowest rate of home-ownership; 45.2% of housing units are owner-occupied. Renters occupy 40.7% of the housing units, the highest rate of rentals in the service area. Rio Rico has the highest rate of owner-occupied units, at 72.2% of all existing units; they also have the lowest rate of vacancies (7.4% of all units). The highest rate of vacancies can be found in Elgin (37.8%).

Housing Units

	Owner Occupied		Renter Occupied		Vacant	
	2011	2016	2011	2016	2011	2016
Elgin	52.5%	58.2%	8.2%	4.0%	39.4%	37.8%
Nogales	42.0%	45.2%	36.1%	40.7%	21.9%	14.0%
Patagonia	34.2%	49.4%	23.1%	19.5%	42.7%	31.1%
Rio Rico	64.5%	72.2%	11.7%	20.4%	23.8%	7.4%

	Owner Occupied		Renter Occupied		Vacant	
	2011	2016	2011	2016	2011	2016
Sonoita	61.1%	70.5%	4.2%	7.7%	34.8%	21.8%
Holy Cross Service Area	51.5%	57.1%	23.7%	29.2%	24.9%	13.7%
Santa Cruz County	50.7%	56.8%	22.9%	29.0%	26.4%	14.3%
Arizona	55.4%	52.6%	27.8%	31.5%	16.8%	15.9%

Source: U.S. Census Bureau, American Community Survey, 2007-2011 & 2012-2016, DP04. <http://factfinder.census.gov>

Education

Over one-quarter of the population of the Holy Cross Hospital service area (26.5%) does not hold a high school diploma; this is higher than the county (25.2%) and almost double the state rate (13.8%). 27.0% hold a college degree, compared to 28.6% for the county and 36.4% at the state level.

Educational Attainment, Percent of Population Age 25+

	Less Than 9 th Grade	9 th to 12 th Grade	HS Grad	Some College, No Degree	AA Degree	BS Degree	Graduate Degree
Elgin	0.0%	4.1%	17.6%	27.2%	6.6%	24.3%	20.2%
Nogales	19.0%	16.7%	28.6%	17.2%	4.3%	9.7%	4.6%
Patagonia	7.5%	2.7%	24.8%	20.8%	7.0%	18.5%	18.7%
Rio Rico	9.2%	11.3%	25.8%	22.4%	8.8%	17.6%	4.9%
Sonoita	1.7%	2.8%	17.7%	22.7%	5.2%	28.1%	21.9%
Holy Cross Service Area	13.4%	13.1%	26.6%	19.9%	6.3%	14.4%	6.3%
Santa Cruz County	12.8%	12.4%	26.2%	20.0%	6.1%	15.1%	7.4%
Arizona	6.1%	7.7%	24.3%	25.5%	8.5%	17.5%	10.4%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP02. <http://factfinder.census.gov>

High School Graduation Rate

Among the schools in the service area, 91.6% of students eligible for graduation with their cohort (four years after starting high school) graduated. This is higher than the county (which also includes one online high school) and is higher than the state graduation rate (80.2%). All area school districts exceeded the Healthy People 2020 objective of an 87% graduation rate.

High School 4-Year Cohort Graduation, 2015-2016

	Graduates	Rate
Nogales Unified School District	365	90.3%
Patagonia Union High School District	17	100.0%
Santa Cruz Valley Unified School District	265	93.0%

	Graduates	Rate
Holy Cross Service Area	647	91.6%
Santa Cruz County	656	91.0%
Arizona	64,135	80.2%

Source: Office of Superintendent of Public Instruction, Arizona, 2015-2016. <http://www.azed.gov/accountability-research/data/>

Food Access

Food insecurity is the percentage of the population who lack adequate access to food. In Santa Cruz County, 9% of the population is food insecure, which is less than the state rate of food insecurity (16%). Limited access to healthy food is the percentage of the population who are low income and do not live close to a grocery store. In Santa Cruz County, 13% of the population has limited access to healthy food. This rate is higher than the state rate of 8%.

Food Access

	Food Insecurity*	Limited Access to Healthy Food^
Santa Cruz County	9%	13%
Arizona	16%	8%

Source: County Health Rankings, 2018. *Map the Meal Gap, 2015. ^USDA Food Environment Atlas, 2015. www.countyhealthrankings.org.

Homelessness

As part of the Balance of State Continuum of Care (BOSCO)C's annual Point-in-Time Count, conducted by the Arizona Department of Housing, 1,768 individuals were reported as experiencing homelessness in the count, conducted January 23-27, 2017. These individuals were counted in the 13 rural counties of Arizona, referred to as the 'Balance of State', which includes Santa Cruz County. 40.8% of this population, or 722 individuals, were unsheltered. This is a 27% reduction from 2016. 6% of the sheltered and 44% of the unsheltered identify as chronically homeless. 238 of the homeless, or 13.5%, were veterans.

Homeless in Santa Cruz County, 2017

	Sheltered		Unsheltered	
	Number	Percent	Number	Percent
Santa Cruz County	1,046	59.2%	722	40.8%

Source: Arizona Department of Economic Security, Homelessness in Arizona Annual Report, 2017. <https://des.az.gov/documents-center?qt-content-tab=1>

Crime

In 2016, the rate of violent crime (murder, forcible sex offences, robbery, and aggravated assault) and the rate of property crime (larceny-theft and burglary, and 10 other crimes) were lower than the state rate for all service area police and sheriff's departments. Care should be taken when interpreting rates for individual police

departments due to small population sizes in the service areas.

Crime Rates per 100,000 Persons, 2016

	Violent Crimes		Property Crimes		Larceny-Theft	
	Number	Rate per 100,000 Persons	Number	Rate per 100,000 Persons	Number	Rate per 100,000 Persons
Nogales Police Department	62	282.4	502	2,286.5	304	1,384.7
Patagonia Marshall's Office	1	103.5	5	517.6	0	0
Santa Cruz County Sheriff's Office	5	18.1	206	744.8	98	354.3
Santa Cruz County	68	134.4	713	1,409.6	402	794.8
Arizona	27,704	405.3	202,425	2,961.4	146,765	2,147.1

Source: Arizona Association of Sheriffs and Police Chiefs' Crime in Arizona 2016 Annual Report
<https://www.azdps.gov/about/reports/crime>

Access to Health Care

Health Insurance

Health insurance coverage is considered a key component to accessing health care. 78.1% of the adult population in the Holy Cross Hospital service area has health insurance, a lower rate than the county (78.4%) or the state (81.5%). Over half (53.1%) of residents have private health insurance, and 31.5% rely on public health coverage. (Rates of private insurance + public insurance do not match the ‘private and/or public’ coverage because some residents have both public and private insurance coverage.)

Patagonia has the highest rate of uninsured (28.9%). Elgin has the smallest percentage of uninsured residents (10.7%). The highest rate of public health coverage is found in Nogales (39.8%) and the lowest is in Sonoita (11.7%).

Adult Health Insurance Coverage, Ages 18-64

	No Health Insurance Coverage	Private and/or Public Health Coverage	Public Health Coverage	Private Health Coverage
Elgin	10.7%	89.3%	24.9%	75.7%
Nogales	23.1%	76.9%	39.8%	43.4%
Patagonia	28.9%	71.1%	28.7%	51.0%
Rio Rico	20.9%	79.1%	23.9%	61.4%
Sonoita	13.2%	86.8%	11.7%	81.0%
Holy Cross Service Area	21.9%	78.1%	31.5%	53.1%
Santa Cruz County	21.6%	78.4%	30.8%	54.2%
Arizona	18.5%	81.5%	19.6%	65.2%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP03. <http://factfinder.census.gov>

Among children in the service area, 10.3% are uninsured (89.7% insured). Sonoita has the highest rate of uninsured children (16.4%).

Uninsured Children, Ages 0-17

	Number	Percent
Elgin	0	0.0%
Nogales	578	8.6%
Patagonia	9	4.3%
Rio Rico	729	12.4%
Sonoita	36	16.4%
Holy Cross Service Area	1,352	10.3%
Santa Cruz County	1,352	10.2%
Arizona	161,185	10.0%

Source: U.S. Census Bureau, American Community Survey, 2012-2016, DP03. <http://factfinder.census.gov>

Health Professional Shortages

The Health Resources and Services Administration (HRSA) – a department of the U.S. Department of Health and Human Services – tracks areas of the U.S. where shortages of health professionals exist in one of three areas: primary care, dental, and mental health. Health Professional Shortage Area (HPSA) designations are given a number from 1 to 26, with 1 being the least urgent to 26 having the most urgent need for practitioners. Nogales and Rio Rico have been designated as a Health Professional Shortage Area (HPSA) and assigned priorities, as has Mariposa Community Health Center (MCHC).

For primary care, both cities were given a priority score of 12 out of 26, and MCHC was given a score of 14. For dental care, the low-income population of Nogales received a 21 – a very high priority; Rio Rico received a score of 15, and MCHC a score of 18. For mental health care, HRSA indicated there were zero mental health care practitioners for the area; Nogales received a priority score of 19, Rio Rico 15, and a score of 23 for MCHC – a very high priority.

Health Professional Shortage Area (HPSA) Priority Rankings

	Primary Care	Dental	Mental Health
Mariposa Community Health Center	14	18	23
Nogales	12	9	19
Nogales, low-income population	N/A	21	N/A
Rio Rico	12	15	15

Source: Health Resources and Services Administration, 2018.

<https://datawarehouse.hrsa.gov/tools/analyzers/HpsaFindResults.aspx>

In Arizona there is one Primary Care Provider (PCP) for every 424 individuals; in Nogales the ratio is one PCP for every 816 persons, and in Rio Rico it is one PCP for every 1,990 persons. The ratio of dentists to residents is 1 for every 1,760 Arizonians, one for every 5,916 residents of Nogales, and one for every 6,965 residents of Rio Rico.

Medical and Dental Provider Ratios, 2017

	Primary Care Providers		Dentists	
	Number	Ratio to Population	Number	Ratio to Population
Nogales	29.0	1:816	4	1:5,916
Rio Rico	14.0	1:1,990	4	1:6,965
Santa Cruz County	43	1:1,198	8	1:6,439
Arizona	16,418	1:424	3,955	1:1,760

Source: Arizona Department of Health Services, Health Systems Development, 2017 Primary Care Area Statistical Profile.

<https://azdhs.gov/prevention/health-systems-development/data-reports-maps/index.php#statistical-profiles-pca>

Financial Barriers to Care

On average, 17.2% of adults in the state could not see a doctor due to cost.

Adults with Unmet Medical Need Due to Cost, 5-Year Average

	Percent
Arizona	17.2%
U.S.	14.4%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Children Dental Care

Arizona's children are more likely to have experienced dental decay by the time they are in Kindergarten and the third grade than are children nationwide. They are also more likely to have untreated dental decay upon examination, as more than a quarter (27%) of Kindergartners and 28% of third-graders have untreated decay.

Children with Dental Decay, 2014-2015

	Kindergarten / 5 Years		Third Grade	
	Decay Experience	Untreated Decay	Decay Experience	Untreated Decay
Arizona	52%	27%	65%	28%
U.S. *	36%	21%	52%	23%

Source: Arizona Department of Health Services, Healthy Smiles, Healthy Bodies 2015 Survey.
<https://www.azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/oral-health/healthy-smiles-healthy-bodies-data-brief-2015.pdf>

* U.S. data is from 2005-2010 population screening, including 5-year-olds, while Arizona data are from a 2014-2015 school year screening including Kindergartners.

Access to Primary Care Community Clinics

Community clinics provide primary care (including medical, dental and mental health services) for uninsured and medically underserved populations. There are five Section 330 funded grantees (Federally Qualified Health Centers – FQHCs) serving the Holy Cross Hospital service area, including: Mariposa Community Health Center, Inc; El Rio Santa Cruz Neighborhood Health Center; United Community Health Center Inc; Chiricahua Community Health Centers; and Marana Health Center. Mariposa Community Health Center is by far the largest FQHC in the service area.

Using ZCTA (ZIP Code Tabulation Area) data for the service area and information from the Uniform Data System (UDS)³, 53.0% of the population in the community where Holy

³ The UDS is an annual reporting requirement for grantees of HRSA primary care programs:

- Community Health Center, Section 330 (e)
- Migrant Health Center, Section 330 (g)
- Health Care for the Homeless, Section 330 (h)
- Public Housing Primary Care, Section 330 (i)

Cross Hospital is located is categorized as low-income (200% of Federal Poverty Level) and 22.4% are at or below the Federal Poverty Level. 92.5% of low-income residents in the area are served by a Section 330 funded Community Health Center provider. The FQHCs have a total of 21,926 patients in the service area; however, there remain 1,781 low-income residents, approximately 7.5% of the population at or below 200% FPL, that are not served by a Section 330-funded grantee.

Low-Income Patients Served and Not Served by FQHCs

Patients served by Section 330 Grantees in Service Area	Penetration among Low-Income Patients	Penetration of Total Population	Low-Income Not Served	
			Number	Percent
21,926	92.5%	49.0%	1,781	7.5%

Source: UDS Mapper, 2016. <https://www.udsmapper.org>

Birth Indicators

Births

In 2016, Holy Cross Hospital reported 725 births; 444 (61.2%) were to Arizona residents. From 2012 to 2016, the average number of births in the Holy Cross Hospital service area was 628, which is close to the total births at the county level (637).

Total Births and Birth Rate, 5-Year Average, 2012-2016

	Number*
Nogales	324.0
Rio Rico	304.0
Holy Cross Service Area	628.0
Santa Cruz County	637.0
Arizona	85,352.8

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016. <https://pub.azdhs.gov/health-stats/report/ahs/index.php>. Data for Elgin, Sonoita and Patagonia either not made available or were included in Nogales and Rio Rico totals.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Most births in Santa Cruz County were to Hispanic or Latino mothers (92.7%); 6.4% of births were to Whites, 0.4% to Asians, and 0.3% were to African American women.

Births by Mother's Race, Santa Cruz County, 5-Year Average, 2012-2016

	Percent *
Hispanic or Latino	92.7%
White, non-Hispanic	6.4%
Asian or Pacific Islander	0.4%
Black or African American	0.3%
Native American or AK Native	0.0%

Source: Arizona Department of Health Services, 2012-2016, <https://pub.azdhs.gov/health-stats/menu/index.php?pg=births>

* Percentages are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Public Payer for Births

'Public Payer' includes the Arizona Health Care Cost Containment System (AHCCCS), which is Arizona's Medicaid program, and Indian Health Services (IHS). In the Holy Cross Hospital service area, 69.2% of births were paid for by public payers, which is higher than the state rate of 54.1%. The percentage of births paid for by a public payer is higher in Nogales (76.2%) than in Rio Rico (61.8%).

Public Payer for Births, 5-Year Average, 2012-2016

	Number*	Percent of Births
Nogales	247.0	76.2%
Rio Rico	187.8	61.8%

	Number*	Percent of Births
Holy Cross Service Area	434.8	69.2%
Santa Cruz County	440.8	69.3%
Arizona	46,134.0	54.1%

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016. <https://pub.azdhs.gov/health-stats/report/ahs/index.php>. Data for Elgin, Sonoita and Patagonia were either not made available or were included in Nogales and Rio Rico totals.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Teen Births

On average, there were 77.6 births per year in the county to girls and women between the ages of 10 to 19 years old. Teen birth rates at the county level occurred at a five-year average rate of 18.6 per 1,000 females, ages 10 to 19. This rate is higher than the state rate (17.9 births per 1,000). Teen birth have decreased in the county from 2007-2011 when average rate was 30.2 births per 1,000 females, ages 10-19.

Births to Young Mothers, 10-19, 5-Year Average, 2007-2011 & 2012-2016

	Births to Teen Mothers	Rate per 1,000 Females, 10-19	
		2007-2011	2012-2016
Santa Cruz County *	77.6	30.2	18.6
Arizona *	6,647.2	28.3	17.9

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016; rates from table 5A-3. <https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Prenatal Care

In the Holy Cross Hospital service area, 59.9% of women who gave birth received prenatal care in their first trimester. This rate is higher than the county (59.5%) but lower than the state rate (73.3%). 5.5% of women who gave birth received no prenatal.

Pregnant women in Rio Rico are more likely to get prenatal care than those in Nogales. The Healthy People 2020 objective is for 77.9% of women to obtain prenatal care in the first trimester.

Prenatal Care, 5-Year Average, 2012-2016

	Prenatal Care in 1 st Trimester	Percent of Births	No Prenatal Care	Percent of Births
Nogales	182.4	56.3%	22.0	6.8%
Rio Rico	193.6	63.7%	12.6	4.1%
Holy Cross Service Area	376.0	59.9%	34.6	5.5%
Santa Cruz County	380.4	59.5%	36.6	5.8%
Arizona *	62,584.0	73.3%	1,594.0	1.9%

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016. <https://pub.azdhs.gov/health-stats/report/ahs/index.php>. Data for Elgin, Sonoita and Patagonia were either not made available or were included in Nogales and Rio Rico totals.

* Numbers and percentages are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Pregnant women in Santa Cruz County attend fewer prenatal visits (an average of 8.8) than those in Arizona (11.4). Married women and non-Hispanic White women had more prenatal visits. Women who have private insurance are more likely to receive more prenatal visits than those who have public insurance (AHCCCS) or who were self-pay.

Number of Prenatal Visits, 5-Year Average, 2012-2016

	Average Number of Visits	White	Hispanic or Latino	Birth Payment Source		
				Self-Pay	AHCCCS	Private Insurance
Santa Cruz County	8.8	10.7	8.6	7.5	8.5	10.0
Arizona	11.4	12.0	10.9	10.8	10.8	12.2

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.

<https://pub.azdhs.gov/health-stats/report/ahs/index.php>

Low Birth Weight

Low birth weight is a negative birth indicator. Babies born at a low birth weight are at higher risk for disease, disability and possibly death. In the service area 7.3% of babies born were low birth weight. The Healthy People 2020 objective for low birth weight infants is 7.8% of live births. The percentage of low birth weight infants in the Holy Cross service area favorably meets this benchmark.

Low Birth Weight (Under 2,500 g), 5-Year Average, 2012-2016

	Low Weight Births*	Percent
Nogales	22.4	6.9%
Rio Rico	23.2	7.6%
Holy Cross Service Area	45.6	7.3%
Santa Cruz County	46.8	7.3%
Arizona	6,030.0	7.1%

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.

<https://pub.azdhs.gov/health-stats/report/ahs/index.php>. Data for Elgin, Sonoita and Patagonia either were not made available or were included in Nogales & Rio Rico totals.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Infant Mortality

The infant mortality count and rate in Santa Cruz County was suppressed due to fewer than six infant deaths per year for 2013 to 2016 (there were 6 in 2012, for a rate of 8.9 per 1,000 live births for that year). The infant death rate in Arizona (5.6) is less than the Healthy People 2020 objective of 6.0 infant deaths per 1,000 live births.

Infant Mortality Rate, 5-Year Average, 2012-2016

	Infant Deaths	Rate per 1,000 Live Births
Santa Cruz County	< 6	< 8.9
Arizona	480.8	5.6

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.

<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

Breastfeeding

Breastfeeding has been proven to have considerable benefits to baby and mother. The American Academy of Pediatrics recommends babies be fed only breast milk for the first six months of life. The CDC collects data on breastfeeding at the state level through landline phone and cellphone sampling. Arizona met or exceeded the Healthy People 2020 goals related to babies who were ever breast fed and babies breastfed exclusively through three months.

Breastfeeding in Arizona

	Arizona	U.S.	Healthy People 2020 Objective
Ever Breast fed	85.0%	81.1%	81.9%
Breast fed at 6 months	54.8%	51.8%	60.6%
Breast fed exclusively through 3 months	46.3%	44.4%	46.2%
Breast fed exclusively through 6 months	23.8%	22.3%	25.5%
Breast fed at one year	30.0%	30.7%	34.1%
Breast fed but received formula supplementation within the first 2 days of life	18.0%	17.1%	14.2%

Source: CDC Breastfeeding Report Card, 2016. Data based on 2013 births.

<https://www.cdc.gov/Breastfeeding/pdf/2016Breastfeedingreportcard.pdf>

Leading Causes of Death

Age-Adjusted Death Rate

Age-adjusted death rates are an important factor to examine when examining mortality data. The crude death rate is a ratio of the number of deaths to the entire population. Age-adjusted death rates eliminate the bias of age in the makeup of the populations being compared. When adjusted for age, the death rate in the county is 540.3 per 100,000 persons, lower than the state rate of 687.8.

Age-Adjusted Death Rate, 5-Year Average, 2012-2016

	Average Number of Deaths	Rate per 100,000 Persons
Santa Cruz County	291.8	540.3
Arizona	52,018.8	687.8

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.
<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

Leading Causes of Death

The four leading causes of death in Santa Cruz County were cardiovascular disease, cancer, accidents (unintentional injuries), and cerebrovascular disease. The age-adjusted rate of death is higher at the county level than at the state level for cerebrovascular disease, diabetes, and flu & pneumonia.

Leading Causes of Death, Rates per 100,000 persons, 5-Year Average, 2012-2016

	Santa Cruz County		Arizona
	Number *	Age-Adjusted Rate	Age-Adjusted Rate
Cardiovascular disease	88.6	163.6	186.5
Cancer	67.2	118.9	144.1
Accident (unintentional injury)	17.4	35.6	46.7
Cerebrovascular disease (stroke)	18.6	35.6	29.2
Diabetes	15.6	27.6	24.0
Alzheimer's disease	13.8	26.6	34.0
Chronic Lower Respiratory Disease	12.2	22.8	44.0
Chronic liver disease & cirrhosis	7.2	13.0	14.3
Flu & pneumonia	7.0	9.7	9.6
Essential (primary) hypertension & hypertensive renal disease	7.5	9.2	10.7
Suicide	7.0	8.4	17.0

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.
<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Cancer Mortality

The rate of death for all cancers in the service area is 118.9 per 100,000 persons. This is less than the state cancer death rate (144.1), as well as the Healthy People 2020

objective of 161.4 per 100,000 persons for all cancers.

The age-adjusted lung cancer death rate in the service area is 18.4 per 100,000 persons; this is less than the rate of lung cancer in the state (34.6). Prostate cancer deaths accounted for 14.8 deaths annually per 100,000 men, age-adjusted; this was lower than the state rate of 18.1.

When examining the rate of death due to colorectal cancer, the age-adjusted, five-year average for the service area is 11.2 per 100,000 persons. This is lower than the state rate (13.0) and the Healthy People 2020 objective of 14.5 deaths per 100,000 persons because of colorectal cancer.

The female breast cancer death rate in the service area was 10.3 per 100,000 women. This rate is less than the state rate (19.3 per 100,000 females), and the Healthy People 2020 objective of 20.7 deaths from breast cancer per 100,000 women.

Cancer Age-Adjusted Death Rate per 100,000 Persons, 5-Year Average, 2012-2016

	Santa Cruz County		Arizona
	Number *	Age-Adjusted	Age-Adjusted
All Cancers (malignant neoplasms)	67.2	118.9	144.1
Lung cancer	10.6	18.4	34.6
Prostate cancer	≤ 5.0	14.8	18.1
Colorectal cancer	< 7.7	11.2	13.0
Breast cancer (female)	< 7.0	10.3	19.3
Skin cancer (melanoma)	≤ 5.0	2.8	2.8
Cervical cancer	≤ 2.0	2.2	2.2

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.
<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Alcohol, Drugs and Firearm Deaths

The age-adjusted rates of death in Santa Cruz County due to alcohol use (10.1 per 100,000 persons), drug use (9.3), and injury by firearms (6.3) are lower than at the state level. The Healthy People 2020 objective for deaths due to drug use is 11.3 per 100,000 persons; the county compares favorably to this objective.

In 2016, death rates for opioid use in the county occurred at a rate of 8.8 per 100,000 persons. This is lower than the state rate of 11.1 per 100,000 persons.

Age-Adjusted Death Rate per 100,000 Persons, 5-Year Average, 2012-2016

	Santa Cruz County		Arizona	
	Number *	Age-Adjusted	Number *	Age-Adjusted
Alcohol-induced deaths	≤ 5.6	10.1	1,149.8	16.0
Drug-induced deaths	≤ 5.2	9.3	1,228.0	18.3
Opioid-induced deaths (2016)	≤ 5	8.8	740	11.1
Injury by firearms	≤ 5.0	6.3	944.0	13.9

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.

<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

HIV/AIDS Mortality

There were no reported cases of death due to HIV/AIDS in Santa Cruz County from 2012 to 2016. The state rate (1.5 deaths per 100,000 individuals) is below the Healthy People 2020 objective of 3.3 deaths per 100,000 persons.

HIV/AIDS Age-Adjusted Death Rate per 100,000 Persons, 5-Year Average, 2012-2016

	Number*	Age-Adjusted
Santa Cruz County	0.0	0.0
Arizona	96	1.5

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016.

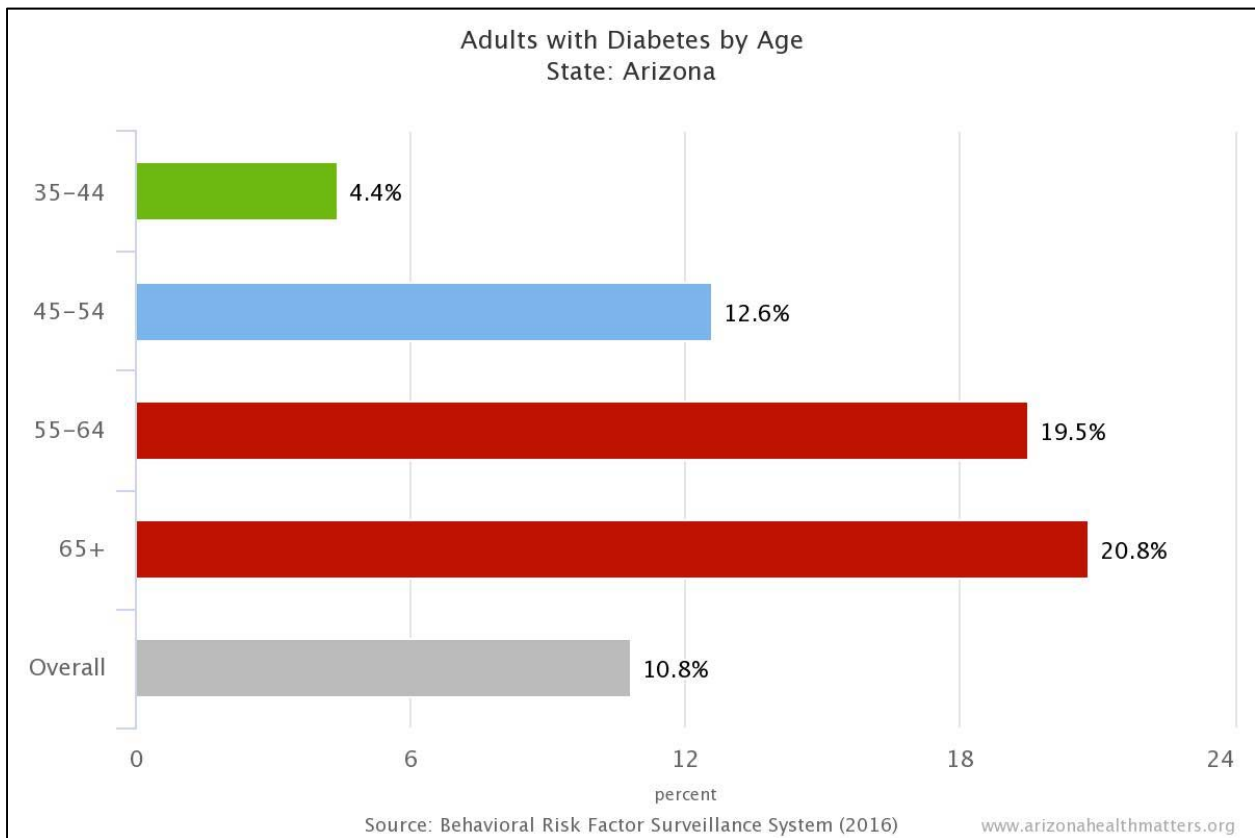
<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Chronic Diseases

Diabetes

10.8% of adults in Arizona have been diagnosed with diabetes, compared with 10.5% of the U.S. population. The rate of diabetes among adults, ages 35-44, was 4.4%, which is significantly better (green) than the overall (U.S.) value. 12.6% of adults, ages 45-54, have been diagnosed with diabetes, which is not significantly different (blue) than the overall value. Adults 55 and over have rates of diabetes that are significantly worse (red) than the overall value. 19.5% of adults 55-64 and 20.8% of adults 65 and older have been diagnosed with diabetes.



Source: Arizona Health Matters, BRFSS, 2016. www.arizonahealthmatters.org

High Blood Pressure

High blood pressure is called the “silent killer” because it often has no warning signs or symptoms. It is associated with increases in morbidity and mortality and correlates with a number of other health issues. 29.7% of Arizona adults, 18 and older, reported being diagnosed with high blood pressure.

Adult High Blood Pressure Prevalence, 4-Year Average

	Percent
Arizona	29.7%
U.S.*	31.0%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.

<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

*This question was not asked in 2012, and in 2014 was only asked at the state level, not nationally; thus the U.S. rate is a 3-year average.

Asthma

14.5% of adults in Arizona reported having asthma, which is higher than the national rate (13.8%). In Santa Cruz County, 4.1% of adults were diagnosed with asthma.

Adult Asthma Prevalence, 5-Year Average, 2011-2014 / 2015

	Percent
Santa Cruz County *	4.1%
Arizona	14.5%
U.S.	13.8%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.

<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

* Source: Arizona Department of Health Services, 2016 Arizona Asthma Burden Report, 2011-2014.

<https://www.azdhs.gov/documents/prevention/tobacco-chronic-disease/az-asthma-burden-report.pdf>

Asthma Hospitalization

In 2016, 38,172 emergency department (ED) visits in Arizona hospitals listed asthma as the first-listed diagnosis (1.6% of all ED visits); 258 of those visits were in Santa Cruz County, or 1.4% of all county ED visits. These rates have increased from 2014 to 2016.

Asthma ED Visits, Number, and Percentage of Total ED Visits, 2014-2016

	Santa Cruz County		Arizona	
	Number	Percent	Number	Percent
2014	169	1.1%	27,481	1.3%
2015	187	1.2%	30,419	1.3%
2016	258	1.4%	38,172	1.6%

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2014-2016.

<https://pub.azdhs.gov/health-stats/report/ahs/index.php>

Colorectal and Breast Cancer

The incidence of colorectal cancer, averaged over three years, is 25.1 per 100,000 persons for Santa Cruz County, which is lower than the state rate of 32.8 per 100,000 persons.

In Santa Cruz County, breast cancer rates in women occur at a rate of 69.6 per 100,000 persons, which is lower than the state rate of 114.1 per 100,000 persons.

Colorectal and Breast Cancer Incidence, per 100,000 Persons, 3-Year Average

	Santa Cruz County	Arizona
Colorectal cancer	25.1	32.8
Breast cancer (female)	69.6	114.1

Source: Arizona Department of Health Cancer Registry Database, 2013-2015.

http://healthdata.az.gov/query/module_selection/azcr/AzCRSelection.html

Communicable Diseases

Influenza Incidence

The rate of influenza per 100,000 persons was 294.4 in Santa Cruz County, which was less than the rate of influenza in the state (350 per 100,000 persons).

Influenza Rate per 100,000 Persons

	Santa Cruz County	Arizona
Influenza	294.4	350

Source: Arizona Department of Health Services, Epidemiology and Disease Control, Influenza Summary 2015-2016, <https://www.azdhs.gov/preparedness/epidemiology-disease-control/flu/index.php#surveillance-home>

Bacterial Infections

Santa Cruz County consistently has a larger-than-statewide rate of infection with fecal-borne bacterial illnesses: approximately double the rate for Campylobacteriosis, Shigellosis and Salmonellosis.

Bacterial infections, per 100,000 Persons, 5-Year Average 2012-2016

	Santa Cruz County		Arizona *	
	Number	Rate	Number	Rate
Campylobacteriosis	15.6	31.5	150.0	16.0
Shigellosis	9.2	18.5	606.0	9.0
Salmonellosis (except S. Typhi & S. Paratyphi)	15.8	31.8	990.0	14.8

Source: Arizona Department of Health Services, AZ Health Status & Vital Statistics Annual Reports, 2012-2016. <https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

* Numbers are not exact due to annual rounding to protect privacy of small geographic areas or populations.

Sexually Transmitted Infections

Rates of STIs in Santa Cruz County and the state continued to rise. Statewide, cases of chlamydia were up 7% from 2015 to 2016, rates of Gonorrhea were up 25%, and rates of early syphilis were up 22% year over year.

Chlamydia occurs at a rate of 430.5 cases per 100,000 persons in Santa Cruz County (200 individual cases), which, while lower than the rate for Arizona (511.5 per 100,000 persons) represents a 19.5% increase in cases from 2015 and a 46.0% increase from 2013. The rate of Gonorrhea is 45.2 per 100,000 for the county (representing 21 cases), which is lower than the state rate of 151.3 per 100,000 persons, and down 4.5% from 2015; however, this lower rate still represents an increase in cases from 2013 (13 cases). Early syphilis occurs at a rate of 10.6 per 100,000 persons in Arizona. In 2015 and 2016, the number of early syphilis cases diagnosed in Santa Cruz County was not reported since there were fewer than 6 cases per year.

Sexually Transmitted Diseases, Rate per 100,000 Persons, by year, 2013-2016

	Santa Cruz County				Arizona
	2013	2014	2015	2016	2016
Chlamydia, all genders	289.6	359.2	344.7	430.5	511.5
Gonorrhea, all genders	27.5	34.2	47.1	45.2	151.3
Early Syphilis, all genders	0.0	0.0	> 0	> 0	10.6

Source: Arizona Department of Health Services, Office of Disease Integration and Services, Sexually Transmitted Diseases 2013-2016 Annual Reports. <https://azdhs.gov/documents/preparedness/epidemiology-disease-control/disease-integrated-services/std-control/reports/2016-std-annual-report.pdf>

HIV/AIDS

HIV incidence is the number of persons newly diagnosed with HIV each year, including those also diagnosed with AIDS. In 2016, Santa Cruz County the rate of HIV/AIDS was 116.2 per 100,000 persons. There were 4 new cases of HIV/AIDS diagnosed in 2016. 90.7% of existing HIV/AIDS cases in Santa Cruz County were among men; the highest number of cases was among men, ages 50-54. 66.7% of cases were contracted through men having sex with men, 13% through heterosexual sex and 5.6% through IV drug use; the remaining cases had a combination of risk factors or an unknown or unreported risk factor.

HIV/AIDS Incidence and Prevalence, per 100,000 Persons, 2016

	New Diagnoses		Prevalence	
	Number	Rate	Number	Rate
Santa Cruz County	4	8.6	54	116.2
Arizona	780	11.4	17,462	255.7

Source: Arizona Department of Health Services, HIV Epidemiology Program, 2017 Arizona HIV/AIDS Epidemiology Annual Report. <https://azdhs.gov/documents/preparedness/epidemiology-disease-control/disease-integrated-services/hiv-epidemiology/reports/2017/annual-report.pdf>

Preventive Practices

Health screenings and immunizations are effective methods to help prevent disease.

Routine Medical Exams

In the previous 12 months, on average, 63.9% of adults in Arizona received a routine medical exam. This rate is lower among uninsured Arizonans; only 35.4% of uninsured Arizonians had a routine medical exam in the previous year compared to 69.9% of those insured.

Adults Reporting Routine Medical Exam in Past Year, 5-Year Average

	Percent
Insured Arizonans	69.9%
Uninsured Arizonans	35.4%
All Arizonans	63.9%
Nationally	68.4%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Child Immunizations

The rate of childhood immunizations among children aged 19-35 months is 73.1% in Arizona, which is lower than the national rate of 73.8%.

Child Immunizations, Age 19-35 Months, 4:3:1:3:3:1, 2016

	Percent
Arizona	73.1%
U.S.	73.8%

Source: Centers for Disease Control, 2016 National Immunization Survey
<https://www.cdc.gov/vaccines/imz-managers/coverage/childvaxview/data-reports/index.html>

The rate of school-required immunizations among Kindergarten-aged children varies by vaccination type, but rates are higher for Santa Cruz County compared to Arizona, for all vaccinations; personal exemptions exist for less than 1% (0.8%) of students, compared to 4.9% for Arizona.

Kindergarten Immunization Completion, 2016-2017 School Year

	Complete for DTaP	Complete for HepB	Personal Exemption	Medically Exempt	Exempt from Every Vaccine
Santa Cruz County	97.8%	99.0%	0.8%	0.1%	0.3%
Arizona	93.9%	95.3%	4.9%	0.3%	2.4%

Source: Arizona Department of Health Services, Arizona Immunization Program, 2016-2017.
<https://azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage>

Flu Shots

It is recommended that adults receive a flu shot every year, particularly those at high risk of disease, such as the elderly. In Arizona, one-third (33.3%) of adults received a flu shot. Among seniors the rate rose to 56.0%, which is lower than the Healthy People 2020 objective of 70% of adults, 18 and older, receiving a flu shot.

Flu Shots, Adults 18+, 5-Year Average, 2011-2015

	Percent
Arizona	33.3%
U.S.	39.4%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Mammograms

56.6% of women, ages 40 and older, in Arizona have had a mammogram in the past 12 months. This is lower than the national rate of 59.3%.

Mammogram in the Past 12 Months, Women 40+, 2014

	Percent
Arizona	56.6%
U.S.	59.3%

Source: Arizona Department of Health Services, Public Health Statistics, 2014 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Cervical Cancer Screenings

Women 21 to 65 years of age in Arizona have had a pap test in the past three years at a rate of 73.9%. This falls short of the Healthy People 2020 objective of 93.0%.

Pap Test in Last Three Years, Women Ages 21-65, 2014

	Percent
Arizona	73.9%
U.S.	75.8%

Source: Arizona Department of Health Services, Public Health Statistics, 2014 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Colorectal Cancer Screening

In Arizona, 35.8% of adults, 50 and over, have been screened for colorectal cancer via a Fecal Occult Blood Test (FOBT); 66% have received a colonoscopy/sigmoidoscopy.

Colorectal Cancer Screening, Adults 50+, 2012-2014, 3-Year Average

	Fecal Occult Blood Test	Colonoscopy / Sigmoidoscopy
Arizona	35.8%	66.0%
U.S.	34.3%	67.9%

Source: Arizona Department of Health Services, Public Health Statistics, 2014 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Health Behaviors

Years of Healthy Life and Life Expectancy

Average life expectancy in Santa Cruz County is 73.8 years, which is higher than the state (72.7).

Life Expectancy, 5-Year Average

	Life Expectancy
Santa Cruz County	73.8
Arizona	72.7

Source: Arizona Department of Health Services, *AZ Health Status & Vital Statistics Annual Reports, 2012-2016*.
<https://pub.azdhs.gov/health-stats/report/ahs/index.php>.

Fair or Poor Health

When asked to self-report on health status, 18% of adults in the state indicated they were in fair or poor health.

Fair or Poor Health, Adults, 5-Year Average, 2011-2015

	Percent
Arizona	18.0%
U.S.	16.9%

Source: Arizona Department of Health Services, *Public Health Statistics, 2011-2015 from 2015 BRFSS Report*.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Frequent Mental Distress

Frequent mental distress is defined as 14 or more bad mental health days in the last month. In Arizona, 11.9% of the adult population experienced frequent mental distress, compared to 11.4% nationwide.

Frequent Mental Distress, 5-Year Average, 2011-2015

	Percent
Arizona	11.9%
U.S.	11.4%

Source: Arizona Department of Health Services, *Public Health Statistics, 2011-2015 from 2015 BRFSS Report*.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Mental Health Issues Prevalence Estimates

A Center for Population Science & Discovery *Issue Brief* (2016)⁴ examined the geographic, ethnic, age, and sociodemographic profile of Santa Cruz County. It was estimated that, on an annual basis, there were 2,600 adults and 500 children (under 18

⁴https://pophealth.uahs.arizona.edu/sites/default/files/uploads/santa_cruz_county_mental_health_brief_8-23-16.pdf

years) suffering from depression, 160 new mothers suffering from postpartum depression, 3,960 individuals suffering from anxiety, 3,500 women suffering from domestic violence, 2,700 individuals over age 16 experiencing some form of substance abuse, 1,050 individuals experiencing bipolar symptoms, and 350 adults with schizophrenia.

Diagnosis and treatment rates were unavailable for Santa Cruz, but due to the lack of mental health providers it was estimated that 80% or more of these individuals have not received a diagnosis and/or treatment. This results in an enormous burden of unmet mental health care in Santa Cruz.

Activity Limitation

Among adults in Arizona, 16.1% have limited activity for 14 or more days in the past month as a result of physical, mental or emotional problems, compared to 14.9% for the nation.

Activity Limitation, Adults, 5-Year Average

	Percent
Arizona	16.1%
U.S.	14.9%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report. <http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Adults Overweight and Obese

In Arizona, 63.3% of the adult population is overweight or obese, having a Body Mass Index (BMI) greater than or equal to 25. More than one-third of the population (35.8%) is overweight and 27.5% is obese (having a BMI of 30 or more). The percentage of overweight adults is higher than the national average and the rate of obesity is slightly lower. The Healthy People 2020 objective is that less than 30.5% of adults are obese.

Adult Overweight and Obese, 4-Year Average, 2012-2015

	Overweight	Obese	Overweight and Obese
Arizona	35.8%	27.5%	63.3%
U.S.	35.5%	29.1%	64.6%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report. <http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Youth Overweight and Obese

14.7% of Arizona high school students are overweight (top 15% BMI for age and gender) and an additional 10.9% considered obese (the top 5% of BMI for age and gender).

Youth Overweight and Obesity, High School Students, 2015

	Overweight	Obese	Overweight and Obese
Arizona	14.7%	10.9%	25.6%
U.S.	16.0%	13.9%	29.9%

Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBSS), 2015.
https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2015/ss6506_updated.pdf

Adults Physical Activity

The CDC '2-Level' recommendation for adult physical activity is moderate activity equal to or greater than 150 minutes in a week or vigorous activity equal to or greater than 75 minutes a week, PLUS muscle-strengthening activities that are moderate or high-intensity and involve all major muscle groups on 2 or more days a week. In Arizona, 69.7% of adults met one or both physical activity recommendations. More people met the aerobic recommendations (50.6%) than the strengthening recommendations (34.5%).

Adults Meeting Physical Activity Guidelines, 5-Year Average

	Percent Meeting One or Both Recommendations	Percent Meeting Aerobic Recommendation	Percent Meeting Strength Recommendation
Arizona	69.7%	50.6%	34.5%
U.S. *	65.9%	51.5%	32.3%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>
 *U.S. Rates are a 4-Year average; the question was not asked nationally in 2014.

Youth Physical Activity

The CDC recommendation for youth physical activity is 60 minutes or more each day for five or more days per week. Over half (53.6%) of Arizona high school students met this activity recommendation in 2015, a number which has been steadily climbing over the past 10 years.

Youth Physical Activity, High School, 2-Year Average

	2005	2007	2009	2011	2013	2015
Arizona	32.3%	32.0%	46.8%	47.4%	41.9%	53.6%
U.S.	35.8%	34.7%	37.0%	49.5%	47.3%	51.4%

Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBSS), 2015.
<https://sortablestats.cdc.gov/#/detail>

Substance Abuse

Smoking

The percentage of adults, 18 and over, in the state who smoke cigarettes is 16.6%. This exceeds the Healthy People 2020 objective of 12% of the population who smoke cigarettes.

Adult Smokers, 5-Year Average, 2011-2015

	Percent
Arizona	16.6%
U.S.	19.1%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Youth Smoking

Smoking rates among high school students have been falling annually over the past ten years. In 2015, 10.1% of high school students in Arizona indicated they had smoked cigarettes one or more times in the past 30 days.

Youth Smokers, High School Students

	2005	2007	2009	2011	2013	2015
Arizona	21.4%	22.2%	19.7%	17.4%	14.1%	10.1%
U.S.	23.0%	20.0%	19.5%	18.1%	15.7%	10.8%

Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBSS), 2015.
<https://sortablestats.cdc.gov/#/detail>

Youth Marijuana Use

From 2011 to 2015, an average of 23.2% of high school students in Arizona indicated they had used marijuana one or more times in the past 30 days.

Youth Marijuana Use, High School, 2011, 2013 & 2015, 3-Year Average

	Percent
Arizona	23.2%
U.S.	22.7%

Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBSS), 2015.
<https://sortablestats.cdc.gov/#/detail>

Alcohol Use

Heavy drinking is defined as greater than 60 drinks per month for men and greater than 30 drinks a month for women. In Arizona, 5.9% of adults engaged in heavy drinking over the past year.

Adult Heavy Drinking, 5-Year Average

	Percent
Arizona	5.9%
U.S.	6.1%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

Binge drinking is defined as five or more drinks on one occasion for men and four or more drinks for women. In Arizona, 15.1% of adults engaged in binge drinking over the past year.

Adult Binge Drinking, 5-Year Average

	Percent
Arizona	15.1%
U.S.	16.9%

Source: Arizona Department of Health Services, Public Health Statistics, 2011-2015 from 2015 BRFSS Report.
<http://azdhs.gov/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/index.php>

The percent of high school students reporting having five or more drinks of alcohol within a couple of hours, on at least one day in the past 30 days, has steadily dropped over the past 12 years. In Arizona, in 2015, 19% of high school students engaged in binge drinking in the past month.

Youth Binge Drinking, High School Students

	2003	2005	2007	2009	2011	2013	2015
Arizona	34.8%	30.8%	30.4%	27.4%	26.5%	20.1%	19.0%
U.S.	28.3%	25.5%	26.0%	24.2%	21.9%	20.8%	17.7%

Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBSS), 2015.
<https://sortablestats.cdc.gov/#/detail>

Santa Cruz County has a high liquor store density. Liquor store density is the number of liquor stores per 100,000 persons. The county rate is 10.8, which is higher than the rate in Arizona (3.3) and in the U.S. (10.5).

Liquor Store Density, Rate per 100,000 Persons

	Rate
Santa Cruz County	10.8
Arizona	3.3
U.S.	10.5

Source: Arizona Health Matters, US Census County Business Patterns, 2015. www.arizonahealthmatters.org

Primary Data: Community Stakeholder Interviews

The CHNA team conducted telephone interviews with community stakeholders to obtain information and perspectives on community health needs and priorities, and on resources potentially available to address those needs. This section summarizes input received on health needs. Interview participants and their affiliations are listed in Appendix 2. A list of resources identified through the interviews and other means is in Appendix 3.

Interview Topics and Questions

Community stakeholders reflected on a series of questions in semi-structured interviews lasting from 30 to 60 minutes each. The primary discussion questions were:

What are some of the major health issues affecting individuals in the community? (And what groups in the community are most affected by these needs?)

What are the most important socioeconomic, behavioral, environmental or clinical factors contributing to poor health in the community? (And what groups in the community are most affected by these factors?)

For needs identified through secondary data analysis:

- What are the issues/challenges/barriers faced for this need?
- Are there specific sub-populations and areas in the community that are most affected by this need?
- What resources are available in the community to help address this need?
- Where do community residents go to receive help or obtain information for this need?

Do you have any other comments or concerns you want to share?

Interview Findings Summary

While a range of health issues was identified by interview participants, several were consistent across most interviews. These included in approximate order of stated frequency and importance:

- Diabetes
- Overweight and obesity
- Mental health and substance use
- Access to care, particularly for specialists
- Teen births

Participants also mentioned heart disease, cancer, oral health, transportation (as a facilitating factor for access to care and services), and support for older adults' health.

Diabetes, Overweight and Obesity

Diabetes was viewed as a top or the top health need by all interview participants, frequently with overweight and obesity. It was seen to disproportionately affect Latinos, who compose the majority of the population. Gestational diabetes is an issue for women who are overweight or obese. Diet, nutrition and physical activity were also discussed by interview participants in the context of diabetes.

Mental Health and Substance Use

It was reported that there is a limited number of providers of care for mental health and substance use, and that there is no psychiatrist in the county. Without adequate resources to identify and treat mental health conditions, some of those afflicted are incarcerated instead. Stigma is a significant barrier to care-seeking and treatment, and broad community education on mental health issues and needs, prevention and early intervention, are vital. There is very little substance abuse counseling, and what is available is often that which is assigned to individuals by the court system.

Access to Care

This issue was raised in terms of the lack availability of providers locally, a lack of coverage for many in the community, transportation challenges and language barriers. Specialists come into the area sometimes 1-2 days per week from the Tucson area, and not many specialists are based locally. The available FQHC clinic sites and the hospital are vitally important in providing medical care. For mental health and for dental care, the lack of providers is particularly acute. Adults without dental coverage either go without care or obtain care in Mexico. In fact, seeking lower cost health care in Mexico was a frequent theme raised by interview participants.

It was reported to be a challenge to recruit Spanish-speaking providers to the area; at least one organization uses community health workers to help bridge the language gap, as well as to reach into communities with health messages and services.

With generally low incomes, a seasonal economy, and a high percentage of immigrants (documented and undocumented), public and primary health coverage is relatively low making access more difficult.

There is no county public transportation. There is a Nogales bus, some private van services and taxis. Some people take taxis to the hospital emergency department, which is expensive for low-income individuals. Transportation challenges are most acute for older adults and people living outside of Nogales.

Teen Births

It was mentioned that a high rate of teen births relative to other counties in the state has been a persistent issue. There was a feeling that the schools do not offer much sexual health education, and that there needs to be more work to help develop both strong self-esteem and life opportunities for young women. Similarly, boys and young men need to view young women and girls with respect and as equals. In many cases, grandparents are in the position of raising their children's kids.

Socioeconomic, Behavioral, Environmental or Clinical Factors Contributing to Health

In addition to specific health issues, interview participants also discussed broader community characteristics that impact health and well-being, identifying several overlapping and interrelated issues.

Employment (and therefore unemployment) is significantly seasonal, due in large part to the nature of the prominent produce processing, packaging and transportation industry in the local economy. This has an impact on household economies and health care seeking ability and behavior. The county was reported to be generally economically depressed.

There was an expressed need for more health education and health literacy in the community, and support groups for those living with and managing specific conditions. Health issues raised in those regard included for cancer, diabetes, heart conditions. Community health workers were described as an existing resource and effective strategy for helping deliver these services.

The need for health literacy extends to education on effective, appropriate use of health care coverage such as Medicare and Medicaid (AHCCCS). People who become newly covered do not necessarily know about health care provider options, and how to make the system work for them. People often default to seeking urgent and emergency care at the hospital emergency department, without having established a relationship with a primary care provider and using that resource for routine needs.

Older adults were reported to be particularly vulnerable due to a general lack of personal resources, isolation and mobility limitations. One respondent stated that a long term care facility is needed locally, with too many elderly residents living alone and with limited means to care for themselves. However, the cost of such services would be a barrier.

Access to nutritious food was seen as important to supporting good health, especially helping to prevent certain chronic conditions. Poverty is a significant contributor to a lack of affordability of and access to healthy, nutritious food.

The community was viewed as having a lack of local educational resources, due in part to the low population size limiting funding for the community college.

Appendix 1. Healthy People 2020 Benchmark Comparisons

Where data are available, health and social indicators in the Holy Cross Hospital service area are compared to national Healthy People 2020 objectives. The **bolded items** are indicators in the service area that do not meet established benchmarks; non-bolded items meet or exceed benchmarks.

Service Area Data	Healthy People 2020 Objectives
High school graduation rate 91.6%	High school graduation rate 87%
Heart disease deaths 163.6 per 100,000	Heart disease deaths 103.4 per 100,000
Cancer deaths 118.9 per 100,000	Cancer deaths 161.4 per 100,000
Breast cancer deaths 10.3 per 100,000	Breast cancer deaths 20.7 per 100,000
Colorectal cancer deaths 11.2 per 100,000	Colorectal cancer deaths 14.5 per 100,000
Stroke deaths 35.6 per 100,000	Stroke deaths 34.8 per 100,000
Unintentional injury deaths 35.6 per 100,000	Unintentional injury deaths 36.0 per 100,000
Suicides 8.4 per 100,000	Suicides 10.2 per 100,000
Drug-related deaths 9.3 per 100,000 persons	Drug-related deaths 11.3 per 100,000 persons
HIV/AIDS deaths 0.0 per 100,000 persons	HIV/AIDS deaths 1.6 per 100,000 persons
1st trimester prenatal care 59.9% of women	1 st trimester prenatal care 77.9% of women
Low birth weight infants 7.3% of live births	Low birth weight infants 7.8% of live births
Infant death rate Less than 8.9 per 1,000 live births	Infant death rate 6.0 per 1,000 live births
Child health insurance rate 89.7%	Child health insurance rate 100%
Adult health insurance rate 78.1%	Adult health insurance rate 100%
Persons unable to obtain medical care 17.2%	Persons unable to obtain medical care 4.2%
Adult obese 27.5%	Adult obese 30.5%
Annual adult influenza vaccination, 18+ 33.3%	Annual adult influenza vaccination, 18+ 70%
Adults engaging in binge drinking 15.1%	Adults engaging in binge drinking 24.4%
Cigarette smoking by adults 16.6%	Cigarette smoking by adults 12%
Cigarette smoking by teens 10.1%	Cigarette smoking by teens 16.0%

Appendix 2. Community Input Participants

Community input was obtained in May 2018 via telephone interviews and an online health issues prioritization survey, from public health professionals and representatives from organizations that represent medically underserved, low-income, or minority populations and other community residents.

Participating individuals and their affiliations are in the table below.

Name	Title	Organization
Marcela Chavez	Executive Director	United Way of Santa Cruz County
Mauricio Chavez	Workforce Innovation and Opportunity Act Program Director	Santa Cruz County One-Stop Career Center
Victor Dominguez	Epidemiologist, Public Health Emergency Preparedness	Santa Cruz County Health Services
Gail Emrick	Executive Director	Southeast Arizona Area Education Center
Susan Kunz	Chief of Program Development	Mariposa Community Health Center
Patty Molina	Senior Director of Community Health Services	Mariposa Community Health Center
Yolanda Soto	President and CEO	Borderlands Produce Rescue
Jeff Terrell	Director, Environmental Health Services	Santa Cruz County Health Services

Appendix 3. Community Resources

Holy Cross Hospital solicited community input through stakeholder interviews to identify resources potentially available to address identified significant needs. These identified resources are listed in the table below.

This is not a comprehensive list of all available resources. For additional resources refer to 2-1-1 Arizona at <https://211arizona.org/>.

- Arizona Department of Economic Security
- Borderlands Produce Rescue
- Boys & Girls Club of Santa Cruz County
- Cenpatico Integrated Care (behavioral health)
- Center for Rural Health at the University of Arizona
- Community Food Bank of Southern Arizona
- Consulate General Of Mexico (Nogales)
- Healthy Places for Healthy People Steering Committee (and action plan)
- Mariposa Community Health Center (a federally qualified health center with contracts to provide a number of public health services)
- Nogales Community Development
- Nogales Medical Clinic
- Nogales Women's Club
- Santa Cruz Community Foundation
- Santa Cruz County Elder Wellness Network (approx. 12 member agencies)
- Santa Cruz County Health Services
- Santa Cruz County Provisional College
- Santa Cruz County Women's Behavioral Health Initiative
- Southeast Arizona Area Health Education Center
- Southeastern Arizona Community Action Program
- United Community Health Center at Amado
- United Way of Santa Cruz County
- Vivir Mejor (for diabetes)
- Women's Foundation of Southern Arizona