



HEALTHY STARTS HERE

Needs Assessment FFY2020

Arizona Department of Health Services
Bureau of Nutrition and Physical Activity
Research and Development

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EXECUTIVE SUMMARY

AZ Health Zone, formerly known as the Arizona Nutrition Network, has provided SNAP-Ed services through an interagency agreement with the Department of Economic Security for nearly 20 years. It is the nutrition and physical activity promotion component of the Supplemental Nutrition Assistance Program (SNAP). Statewide services are provided through local implementing agencies to support behavioral changes, including increased fruit and vegetable consumption and regular physical activity. The program focuses on policy, systems, and environmental changes (PSE) in addition to providing direction education to SNAP and SNAP-eligible participants. Efforts are aimed at improving access to healthy foods and safe places to be physically active. Taken together, education, marketing, and PSE changes are more effective than any of these strategies alone when supporting health promoting behaviors.

The goal of AZ Health Zone is to help families in low resourced communities in Arizona to be healthy and active. Working with local implementing agencies throughout the state, the program encourages those eligible for SNAP-Ed to improve nutrition, feeding practices, and decrease hunger, as well as increase physical activity and decrease sedentary behaviors.

Each of these has been shown to reduce the risk of many chronic diseases such as heart disease, type 2 diabetes and certain types of cancer, and promote overall health.

In order to more effectively direct resources and coordinate activities, a statewide needs assessment is conducted every five years in order to understand the population served and design interventions that are relevant to the needs of the target audience. The needs assessment describes the target population in terms of its economic and demographic profile, health, access to health care and health habits, as well as the kind of social media and technology used and environmental factors that affect opportunities for healthy choices. All of this information is examined in the context of other programs to identify gaps and design strategies to address them.

This report also serves as a resource for local implementing agencies to inform their own community needs assessments, yet does not replace the need for local assessments. Information on many topics is provided on a county or community level and refers to other useful documents that provide more detailed information on select topics.

METHODOLOGY DESCRIPTION AND JUSTIFICATION

Needs assessment is an ongoing process, which is part of an overall strategy to align programmatic activity with goals and priorities, and to identify promising practices and barriers to progress. Needs are constantly assessed, using preexisting data whenever possible. Primary research is also conducted regularly to evaluate programmatic activities and assess their impact, and these data are shared with community partners. This needs assessment, paired with the program evaluation reports, provides an opportunity to formally assess performance and evaluate strategies, using data from all of these sources.

There are five systematic ways that are used to identify needs and resources. Any of the following could lead to an issue emerging for further examination and discussion with community partners:

- A trend in Arizona that is moving in a desirable or undesirable direction
- Arizona compares favorably or unfavorably to the nation on a measure
- Disparity among subgroups of the population (e.g., racial/ethnic groups, geographic location, age group)
- Arizona's performance against a defined standard or target
- Partner/stakeholder input

Quantitative analysis gives important information in terms of measuring progress, as well as objective data on what factors are associated with successes vs. failures. An understanding of these factors must be taken into account when setting goals for performance measures. For example, having an adequate income and health insurance are often associated with success on performance measures.

Consequently, it is important to take into account the likely impact of increasing unemployment and loss of health insurance in setting a goal for a measure. Given the context of an economic recession, long-term goals to maintain current levels of performance could be aggressive for some performance measures.

PREEXISTING DATA SOURCES

The AZ Health Zone needs assessment makes use of several preexisting data sources. Each of the following data sources provides standardized data, which allow comparisons of Arizona data to national data as well as trends in Arizona over time.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

The Behavioral Risk Factor Surveillance System is comprised of survey data from all 50 states and the District of Columbia, with assistance from the Centers for Disease Control and Prevention (CDC). The system consists of telephone surveys based on random-digit-dialing methods, which are used to select a representative sample of residents age 18 years and older. The BRFSS questionnaire consists primarily of questions about personal behaviors that increase risk for one or more of the ten leading causes of death in the United States. In 2011, the CDC changed its sampling methodology, which renders estimates

produced through 2010 incomparable to those produced from 2011 forward. Arizona also asks three questions about food assistance each year to identify respondents who live in households receiving WIC, SNAP, or free and reduced lunches, which allows us to track how the behaviors in our target population change over time.

UNITED STATES CENSUS – AMERICAN COMMUNITY SURVEY (ACS)

Every ten years, the United States Census does a complete count of the population, including collection of certain demographic data. Additionally, each year, the United States Census American Community Survey collects additional demographic, housing, and socioeconomic statistics. Summaries of these data are available at www.census.gov through a variety of tools, including Fact Finder and QuickFacts. These summaries are based on time periods of one, three, or five years, with the longer time intervals containing data on smaller geographic units.

The Public Use Microdata Sample (PUMS) contains a sample of actual responses from the ACS. Detailed information on nearly all of the questions from the ACS are included at both a single person and household level, as well as calculated variables such as poverty status, making it possible to study individuals within the context of their families and other household members. The individual-level responses allow for much more flexible queries than what is available through the United States Census American FactFinder. The smallest geographical unit in the PUMS is the Public Use Microdata Areas (PUMA), which are contiguous, non-overlapping areas containing no fewer than 100,000 people at the time of the year 2000 Census. Beginning with the 2012 ACS PUMS, the files rely on PUMA boundaries that were drawn by state governments after the 2010 Census.

YOUTH RISK BEHAVIOR SURVEILLANCE SYSTEM (YRBSS)¹

The Youth Risk Behavior Surveillance System was established by the CDC to monitor the prevalence of youth behaviors that most influence health. The YRBSS focuses on priority health-risk behaviors among high school-aged youth that result in the most significant mortality, morbidity, disability, and social problems during both youth and adulthood. Although the YRBSS is the best available source of data on behaviors of high school students in Arizona, these data are not available by income strata. Since it is well established that lower-income populations, in general, are at increased risk than those at higher incomes, YRBSS data may present a more favorable picture of the health and risk behaviors than would be found specifically among low-income youth in the target population.

SCHOOL HEALTH PROFILES²

The School Health Profiles is a system of surveys established by the CDC to assess school health policies and practices. Profiles are based on biennial surveys of high school and middle school principals and lead health education teachers. They provide information related to school health education requirements and content, physical education and physical activity, practices related to bullying and sexual

¹ Profiles for results prior to 2017 can be accessed at: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=AZB>

² CDC Adolescent and School Health School Health Profiles, retrieved 03/23/2016. Retrieved from: www.cdc.gov/healthyyouth/data/profiles/index.htm

harassment, school health policies related to tobacco-use prevention and nutrition, school-based health services, family engagement and community involvement, and school health coordination.

EMPOWER IMPLEMENTATION REPORT: YEARS 1-4³

The Arizona Department of Health Services (ADHS) Empower Program offers licensed child care facilities discounted licensing fees for agreeing to implement ten standards focusing on physical activity, sun safety, breastfeeding-friendly environments, Child and Adult Care Food Program, fruit juice, family-style meals, oral health, staff training, smokers' helpline, and smoke-free campuses.⁴ The Empower Implementation Report includes four years of self-reported implementation levels, beginning with state fiscal year 2014 (Year one: July 2013 through June 30, 2014) through state fiscal year 2017 (Year four: July 2016 through June 30, 2017). The number of reports analyzed each year is as follows: year 1- 1,527; year 2- 1,109; year 3- 1,667; and year 4- 2,100.

PRIMARY DATA COLLECTION

TARGET POPULATION SURVEY, NOVEMBER 10, 2015

ADHS commissioned WestGroup Research to conduct intercept interviews with 2,296 low-income women between the ages of 18 and 49 with children ages 2 to 11 between April 8 and May 31, 2015. Interviews were conducted at a wide variety of locations in Phoenix, Tucson, Flagstaff, and Yuma, as well as several outlying areas (e.g., Prescott, Prescott Valley, Cottonwood, Casa Grande, and Coolidge). Questions were asked about eating meals at home, fast food, and other restaurants, consumption of specific foods, grocery shopping preferences and behavior, participation in physical activity, participation in food assistance programs, and reasons for not participating in SNAP and/or WIC.

SOCIAL MEDIA & TECHNOLOGY RESEARCH, OCTOBER 31, 2017

ADHS commissioned WestGroup Research to obtain current information about social media and technology access and use among the SNAP-Ed target audience. Intercept interviews with 801 low-income women between the ages of 18 and 49 with children ages 2 to 11 were conducted in July and August of 2017 at a wide variety of locations in Phoenix, Tucson, Yuma, and Northern Arizona, specifically Flagstaff, Prescott, Prescott Valley, and Cottonwood.

ARIZONA NUTRITION NETWORK RECIPE PROJECT REPORT, JULY 13, 2017

ADHS commissioned Evaluation Strategies to conduct surveys to learn more about meal planning, recipe usage and selection, available ingredients, available kitchen tools, appliances, gadgets and cookware, and cooking methods. The target audience for the survey was low-income women residing in Arizona between the ages 18 and 49 years old with children ages 0-11 living in their homes. A total of 677

³ Empower Implementation Report, Years 1-4 can be accessed at <http://azdhs.gov/prevention/nutrition-physical-activity/index.php#reports>.

⁴ To learn more about the program, please see the Empower Guidebook, Third Edition: Ten Ways to Empower Children to Live Healthy Lives, Standards for Empower Child Care Facilities in Arizona.

intercept surveys were completed at 32 sites, including grocery stores, elementary schools, WIC offices, Head Start and child care centers, health centers, and food banks. A sampling strategy was designed to ensure that the number of survey respondents from each area of the state was proportional to the number of eligible women in the area.

OVERVIEW OF THE STATE

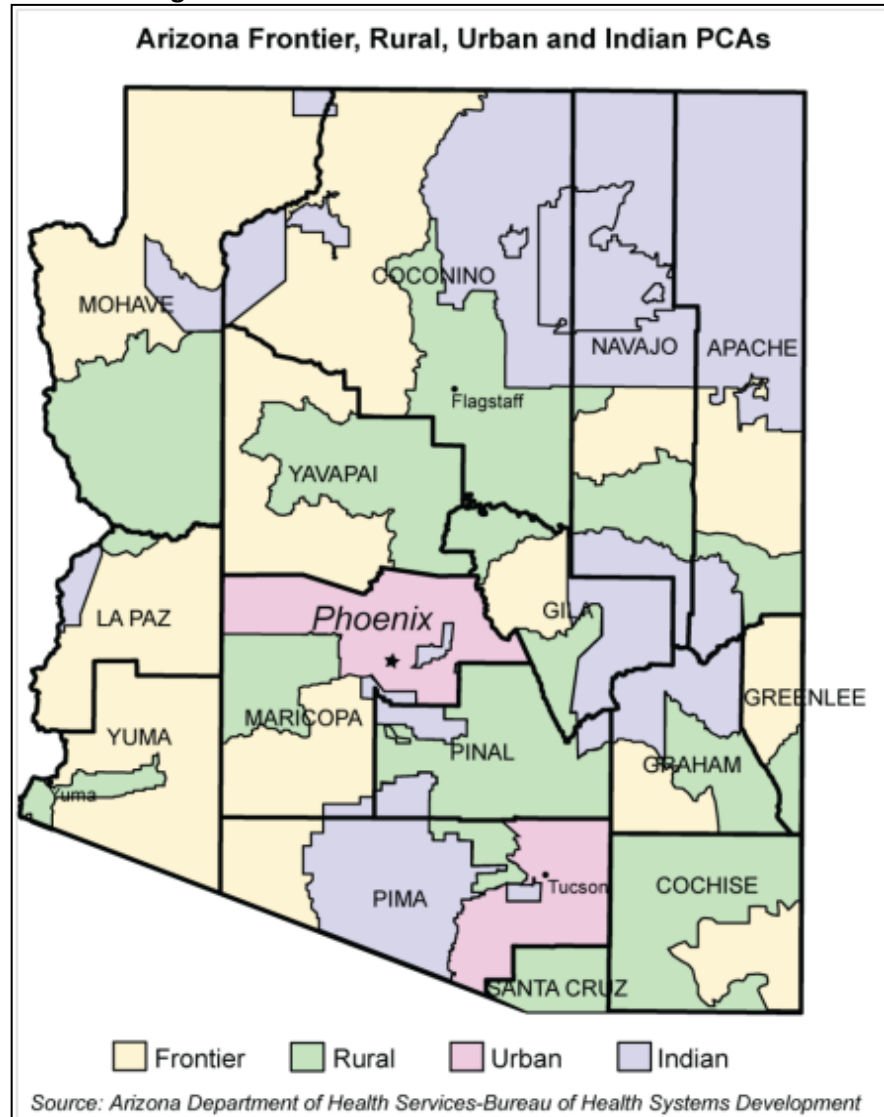
Arizona is the sixth largest state in the nation, with a total area of 114,000 square miles – about 400 by 310 miles. Arizona is also one of the youngest states. The end of the Mexican-American War in 1848 resulted in Mexico ceding 55 percent of its territory, including parts of present-day Arizona, to the United States. It was not until 1863 that a separate territory was carved out for Arizona. On February 14, 1912, President Taft signed the bill making Arizona the forty-eighth state.

Arizona had approximately 56 people per square mile at the time of the last census in 2010; however, much of the population lives in urban areas, where the population density is much higher. Maricopa County had a density of 414.9 people per square mile and Pima County had 106.7 people per square mile. The two least populous counties, Greenlee and La Paz, had only 4.6 people per square mile in 2010. (See Appendix A: County Statistics, Table 1 for population estimates and density by county).⁵

Twenty-one federally-recognized Native American tribes are located in Arizona, each representing a sovereign nation with its own language and culture. Tribal lands span the state and even beyond state borders, with the Navajo Reservation crossing into New Mexico and Utah, and the

Tohono O’odham Reservation crossing international boundaries into Mexico. Figure 1 is an Arizona map showing frontier, rural, urban, and Indian areas of the state.

Figure 1.



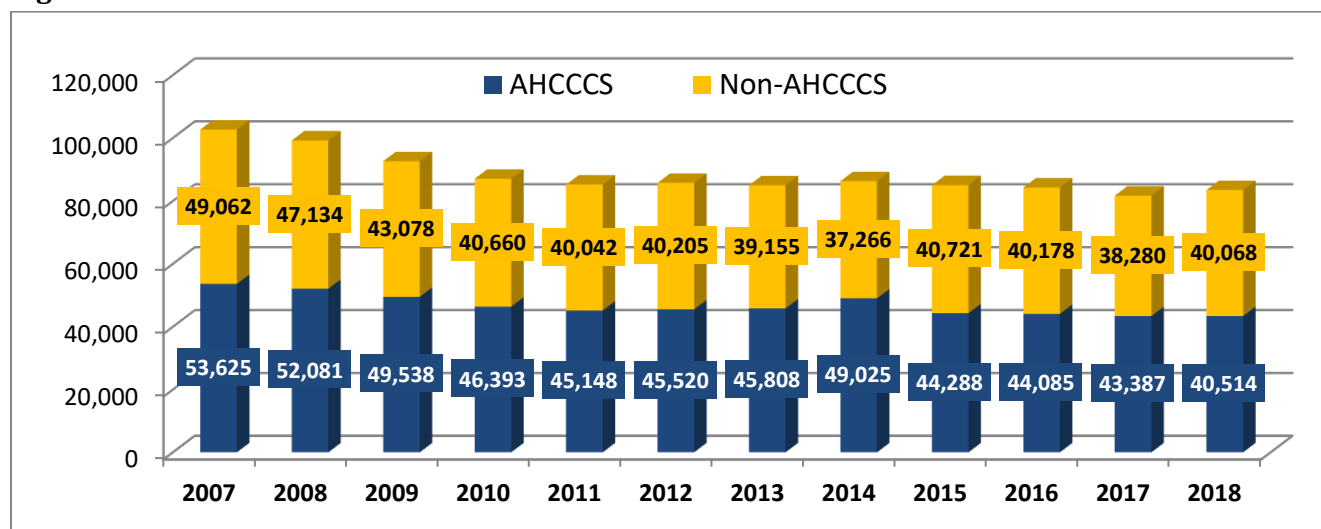
⁵ Source: US Census Bureau QuickFacts, accessed on 2/19/2018 at <https://www.census.gov/quickfacts/fact/table>.

POPULATION TRENDS

The population of Arizona grew from 5,130,607 in the year 2000 to 6,392,017 in 2010. This increase of 24.6 percent was well over twice the national growth rate of 9.7 percent in the same time period.⁶ By July 2018, the population of Arizona was estimated to have grown to over 7 million people (7,171,646). Approximately one in four people in Arizona (22.9%) are under 18 years of age, with 6.1 percent under age 5, and 17.5 percent are age 65 or older.⁷ For the time period 2013 to 2017, the average household size among Arizona residents was 2.68, and 81.9 percent lived in the same household at the time of the survey as they had lived one year prior. Approximately 8.5 percent of residents under age 65 had a disability. (For similar statistics on household size and mobility by county, see Appendix A: County Statistics, Table 1; for disability by county, see Appendix A: County Statistics, Table 3.)

After increasing steadily for many years, the number of births to Arizona residents peaked in 2007 and subsequently declined during the recession. After appearing to stabilize in the middle of the decade, the number of births have been declining again in recent years. Arizona’s Medicaid program, known as AHCCCS, is the payer for over half of all births in Arizona each year (see Figure 2). See Table 2 in Appendix A: County Statistics for births in each county by AHCCCS vs. other payers.

Figure 2. Births in Arizona 2000-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All Payers	102,687	99,215	92,616	87,053	85,190	85,725	84,963	86,291	85,009	84,263	81,667	80,582
AHCCCS	53,625	52,081	49,538	46,393	45,148	45,520	45,808	49,025	44,288	44,085	43,388	40,514
AHCCCS as % of births	52.2%	52.5%	53.5%	53.3%	53.0%	53.1%	53.9%	56.8%	52.1%	52.3%	53.1%	50.3%

⁶ Hedding, Judy, Population of Arizona: The Population in Arizona Continues to Grow, About.com Phoenix. Retrieved 10/03/2011. Retrieved from <http://phoenix.about.com/od/statistics/qt/arizonapopulation.htm>.

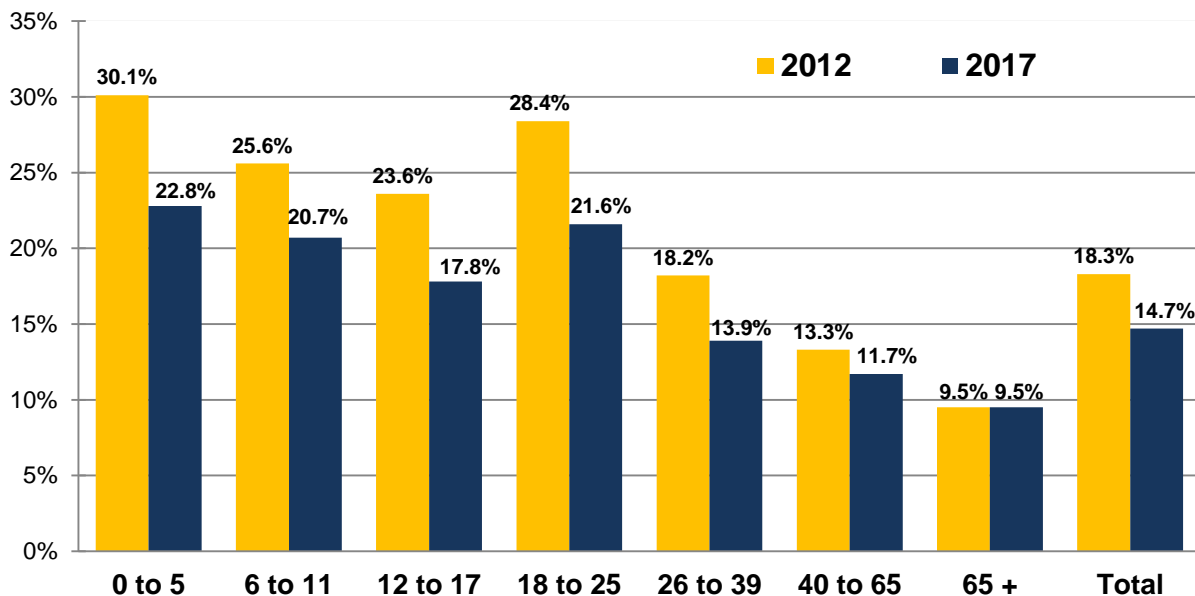
⁷ U.S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/> on 8/30/2019.

ECONOMY

Per capita income in Arizona for the period from 2013 to 2017 was \$27,964, with a median household income (in 2017 dollars) of \$53,510. During that same time period, 14.9 percent of Arizona residents lived in poverty, and 12.0 percent had no health insurance.⁸ Comparable statistics for each of these measures can be found for each county in Appendix A: County Statistics, Table 3.

Looking specifically at 2017, 14.7 percent of the Arizona population lived in poverty, with 6.8 percent living in extreme poverty (defined as incomes below 50 percent of the federal poverty level [FPL]). Another 19.7 percent lived in near poverty (between 100 percent and 200 percent of the federal poverty level). Figure 3 shows Arizona's poverty rate at the time of the 2013 needs assessment, and again for 2017 by age group.⁹

Figure 3. Poverty by Age Group



After reaching an historic low of 3.6 percent from April through July of 2007, the seasonally adjusted unemployment rate in Arizona steadily climbed to a peak of 10.4 percent in November and December of 2010.¹⁰ Unemployment subsequently declined as the economy recovered from the recession. By July 2019, the seasonally adjusted unemployment rate in Arizona was 4.9 percent, compared to a rate of 3.7

⁸ U.S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/> on 8/27/2019.

⁹ United States Census, Public Use Microdata Sample (PUMS), Arizona 2017, accessed on 8/30/2019.

¹⁰ Arizona Department of Administration, Office of Employment and Population Statistics, Arizona Unemployment Statistics Program Seasonally Adjusted Statistics Report 2013. Retrieved 01/09/2014 from <http://www.workforce.az.gov/local-area-unemployment-statistics.aspx>.

percent in the United States. Unemployment rates vary widely by county in Arizona, ranging from Maricopa County with a rate of 4.1 percent, to Yuma County, with a rate of 17.0 percent in 2018. Table 1 shows the civilian labor force by employed or unemployed status, as well as the unemployment rate in each county for 2018.¹¹

Table 1. Employment and Unemployment in the Civilian Labor Force Arizona 2018				
County	Civilian Labor Force	Employed	Unemployment	Unemployment Rate
Apache	20,665	18,585	2,080	10.1
Cochise	49,774	46,985	2,789	5.6
Coconino	77,083	72,850	4,233	5.5
Gila	21,518	20,251	1,267	5.9
Graham	14,878	14,114	764	5.1
Greenlee	4,280	4,098	182	4.3
LaPaz	8,938	8,381	557	6.2
Maricopa	2,229,526	2,137,219	92,307	4.1
Mohave	85,442	80,508	4,934	5.8
Navajo	40,598	37,447	3,151	7.8
Pima	486,261	464,433	21,828	4.5
Pinal	178,216	169,264	8,952	5.0
Santa Cruz	19,325	17,522	1,803	9.3
Yavapai	105,618	100,899	4,719	4.5
Yuma	97,636	80,997	16,639	17.0
Statewide Total	3,439,755	3,273,550	166,205	4.8

CHARACTERISTICS OF THE SNAP-ELIGIBLE POPULATION

This section will describe the population in Arizona that is eligible for SNAP in terms of numbers, geographic distribution, and demographic characteristics.

SNAP PARTICIPANTS

The recession resulted in a large increase in the proportion of Arizona households receiving SNAP benefits. According to the 2011 American Community Survey, one in five Arizona residents lived in households that received SNAP benefits.¹² The Arizona Department of Economic Security reported that 465,535 households, including 1,084,695 persons (548,412 adults and 536,283 children) received

¹¹ Bureau of Labor Statistics – LAUS data retrieved on 8/22/2019 from <https://www.census.gov/did/www/saige/>.

¹² United States Census, Public Use Microdata Sample (PUMS), Arizona, 2011.

benefits through SNAP in November of 2013.¹³ By July of 2019, there 819,225 persons (449,987 adults and 369,238 children) receiving SNAP benefits. Table 2 shows the distribution of households and recipients throughout the state in July 2019, organized by county into four regions.¹⁴

Table 2. Supplemental Nutrition Assistance Program, July 2019					
Region	County	Households	Persons	Adults	Children
Maricopa					
	Maricopa	197,994	428,159	221,376	206,783
Northern					
	Apache	9,642	22,359	12,975	9,384
	Coconino	7,730	16,608	9,423	7,185
	Mohave	17,871	32,296	21,475	10,821
	Navajo	11,759	27,482	15,585	11,897
Central					
	Gila	5,117	10,503	6,214	4,289
	La Paz	1,676	3,223	1,937	1,286
	Pinal	21,019	47,824	25,731	22,093
	Yavapai	10,276	18,676	11,939	6,737
	Yuma	17,494	41,973	23,433	18,540
Southern					
	Cochise	10,511	20,757	12,837	7,920
	Graham	2,614	5,479	3,170	2,309
	Greenlee	304	608	374	234
	Pima	66,978	132,818	77,727	55,091
	Santa Cruz	4,368	10,460	5,791	4,669
State		385,303	819,225	449,987	369,238

ELIGIBLE POPULATION

People living in households with incomes below 185 percent of the FPL are eligible for SNAP-Ed. In 2017, 31.6 percent of Arizona residents lived in one of these households, and 36.1 percent of them were receiving SNAP benefits.¹⁵ This section will focus on the demographic characteristics of the entire SNAP-eligible population, regardless of whether they received SNAP benefits. Analysis in this section is based on the United States Census Public Use Microdata Area (PUMA) dataset for 2017, unless otherwise mentioned.

¹³ Arizona Department of Economic Security, Family Assistance Administration Statistical Bulletin November, 2013, Table 6: Supplemental Nutrition Assistance Program: Arizona. Retrieved on 01/10/2013 from: <http://www.azdes.gov/appreports.aspx>.

¹⁴ Arizona Department of Economic Security, Family Assistance Administration Statistical Bulletin July 2019: Supplemental Nutrition Assistance Program: Arizona. Retrieved on 8/21/2019 from: <http://www.azdes.gov>.

¹⁵ United States Census, Public Use Microdata Sample (PUMS), Arizona, 2017, accessed on 10/21/2018.

GEOGRAPHIC DISTRIBUTION

Different geographic areas within Arizona vary widely in the percentage of people living in a household with an income below 185 percent of the FPL, from a high of 62.1 percent to a low of 7.3 percent. Table 3 shows the number of people in households below 185 percent of the FPL, total population, and the percentage of households with incomes below 185 percent of the FPL in each PUMA.

Table 3. Number and Percent of Eligible Population (below 185% FPL) By PUMA in 2017

PUMA Code	PUMA Name	# Below 185% FPL	Total Pop	% Under 185% FPL
900	Cochise & Santa Cruz Counties--Sierra Vista City	62,555	162,440	38.5%
400	Coconino County--Flagstaff City	41,125	128,171	32.1%
800	Gila, Graham, Greenlee & Pinal (East) Counties	45,671	106,932	42.7%
111	Maricopa County (Northeast)--Scottsdale City	21,545	116,388	18.5%
134	Maricopa County (West) & Gila River Indian	29,709	125,488	23.7%
133	Maricopa County--Avondale (Central) & Litchfield Park	43,307	122,002	35.5%
106	Maricopa County--Chandler City (Northeast)	34,450	119,791	28.8%
107	Maricopa County--Chandler City (South)	9,947	104,005	9.6%
130	Maricopa County--El Mirage City & Sun City	36,563	120,264	30.4%
100	Maricopa County--Gilbert (South) & Queen Creek	15,903	155,623	10.2%
105	Maricopa County--Gilbert Town (North)	22,721	142,152	16.0%
126	Maricopa County--Glendale City (North)	31,730	121,466	26.1%
124	Maricopa County--Glendale City (South)	59,100	117,597	50.3%
132	Maricopa County--Goodyear, Glendale (West) & Litchfield Park (Northwest) Cities	18,664	119,374	15.6%
101	Maricopa County--Mesa City (East)	42,715	177,674	24.0%
102	Maricopa County--Mesa City (North Central)	39,658	142,179	27.9%
104	Maricopa County--Mesa City (South Central)	40,722	115,488	35.3%
103	Maricopa County--Mesa City (West)	50,858	109,133	46.6%
127	Maricopa County--Peoria City (South & Central)	27,978	112,144	24.9%
112	Maricopa County--Scottsdale (North), Phoenix (Far Northeast) Cities & Cave Creek	9,070	124,033	7.3%
110	Maricopa County--Scottsdale City (Southwest) & Paradise Valley Town	26,278	137,074	19.2%
131	Maricopa County--Surprise City (Central)	15,999	116,752	13.7%
108	Maricopa County--Tempe (South) & Chandler	22,339	114,711	19.5%
109	Maricopa County--Tempe City (North)	52,635	107,886	48.8%
600	Mohave & La Paz Counties--Lake Havasu City	87,582	222,621	39.3%
300	Navajo & Apache Counties	85,652	175,605	48.8%
129	Phoenix (Far North) & Peoria (Northwest) Cities	13,811	131,928	10.5%
121	Phoenix (Southwest) & Tolleson Cities	68,153	149,973	45.4%

Table 3. Number and Percent of Eligible Population (below 185% FPL) By PUMA in 2017

PUMA Code	PUMA Name	# Below 185% FPL	Total Pop	% Under 185% FPL
117	Phoenix City (East)	34,755	101,454	34.3%
128	Phoenix City (North)	21,608	107,888	20.0%
114	Phoenix City (Northeast Central)	30,419	107,630	28.3%
113	Phoenix City (Northeast)	18,106	104,484	17.3%
115	Phoenix City (Northwest Central)	31,650	99,823	31.7%
119	Phoenix City (South)	45,890	118,004	38.9%
116	Phoenix City (Uptown)	45,936	109,208	42.1%
125	Phoenix City (West)	51,702	110,376	46.8%
120	Phoenix City--Ahwatukee & South Mountain	13,143	105,486	12.5%
118	Phoenix City--Downtown & Sky Harbor International	52,735	115,020	45.8%
122	Phoenix City--Maryvale (East)	80,096	128,966	62.1%
123	Phoenix City--Maryvale (West)	71,117	137,722	51.6%
203	Pima County (North Central)--Oro Valley Town	25,087	117,745	21.3%
204	Pima County (Northeast)	16,390	103,227	15.9%
205	Pima County (Southeast)--Tucson City (Far Southeast) & Sahuarita Town	23,100	128,069	18.0%
201	Pima County (West)	44,932	111,495	40.3%
805	Pinal County (Central)--Florence Town, Eloy	47,058	118,637	39.7%
803	Pinal County (North)--Apache Junction City	35,302	138,708	25.5%
807	Pinal County (West)--Maricopa, Casa Grande & Eloy (Southeast) Cities	40,726	137,327	29.7%
202	Tucson (West) & Marana Cities	31,587	116,690	27.1%
206	Tucson City (Northeast)	34,776	94,161	36.9%
207	Tucson City (Northwest)	50,743	94,284	53.8%
208	Tucson City (South)	62,873	109,027	57.7%
209	Tucson City (Southeast)	49,097	116,169	42.3%
500	Yavapai County	70,983	223,559	31.8%
700	Yuma County--Yuma City	83,727	202,681	41.3%
	Arizona	2,169,978	6,856,734	31.6%

RACE/ETHNICITY/LANGUAGE SPOKEN

The racial composition of the eligible population in Arizona tends to represent higher proportions of racial minorities compared to White residents than in the non-eligible population, although the largest single racial group, representing 70.3 percent of the potentially eligible in 2017, is White (see Table 4).

Table 4. Racial Composition in 2017 Eligible Population vs. Not Eligible		
	Under 185% FPL	At or over 185% FPL
White	70.3%	81.2%
Black or African American	5.3%	3.7%
American Indian and Alaska Native	7.9%	2.9%
Asian	2.7%	3.6%
Native Hawaiian and other Pacific Islander	0.3%	0.2%
Some other race alone	8.9%	5.0%
Multiple races	4.6%	3.5%
Total	100%	100%

Nearly half of the eligible population (44.3 percent) was Hispanic in 2017, compared to 25.3 percent of those with incomes over 185 percent of the FPL. More than one in three Arizona residents (35.8 percent) speak a language other than English at home, and 32.1 percent report speaking English “less than very well.” Half of the population living in eligible households spoke a language other than English; a total of 38.6 percent spoke Spanish. See Table 5 below. For statistics by county on race, Hispanic ethnicity, and language spoken in the home, see Appendix A: County Statistics, Table 4.

Table 5. Household Language in 2017 Eligible Population vs. Not Eligible		
	Under 185% FPL	At or over 185% FPL
English only	49.9%	70.7%
Spanish	38.6%	21.1%
Other Indo-European language	2.1%	3.0%
Asian and Pacific Island languages	2.5%	2.8%
Other	6.8%	2.4%
Total	100.0%	100.0%

AGE, GENDER, FAMILY COMPOSITION

More than half (53.1 percent) of the eligible population is female, compared to 49.7 percent of those with incomes at or over 185 percent of the FPL. Table 6 below shows that a higher proportion of the eligible population (62.4 percent) live in households with children under the age of 18, compared to 44.8 percent of those with higher incomes (see Table 6). Appendix A: County Statistics, Table 5 shows the percentage under age 18, under age 5, and age 65 or older in each county.

Table 6. Population in Households with Children in 2017 Eligible Population vs. Not Eligible		
	Under 185% FPL	At or over 185% FPL
With children under 6 years only	9.5%	9.1%
With children 6 to 17 years only	28.7%	26.1%
With children under 6 years and 6 to 17 years	24.2%	9.6%
No children	37.6%	55.2%
Total	100.0%	100.0%

SNAP-eligible families are less likely to live in married-couple families (50.9 percent) compared to those at higher incomes (78.4 percent), and are far less likely to live in married-couple families where both husband and wife are in the labor force (14.0 percent of eligible families compared to 42.4 percent of those at higher incomes). See Table 7 for a breakdown of family status by husbands' and wives' labor force participation.

Table 7. Family Composition and Labor Force Participation in 2017 Eligible Population vs. Not Eligible		
	Under 185% FPL	At or over 185% FPL
Married-Couple Families	50.9%	78.4%
Husband and wife in labor force	14.0%	42.4%
Husband in labor force, wife not	22.4%	17.7%
Wife in labor force, husband not	3.6%	5.2%
Neither husband nor wife in labor force	10.9%	13.1%
Other Families	49.1%	21.6%
Male householder, no wife present, in labor force	8.9%	6.1%
Male householder, no wife present, not in labor force	3.7%	1.4%
Female householder, no husband present, in labor force	23.2%	10.7%
Female householder, no husband present, not in labor force	13.3%	3.4%
Total	100%	100%

Among the eligible population in 2017, 18.3 percent were in families where there were no workers in the last 12 months, 47.2 percent had one worker, 25.7 percent had two workers, and 8.7 percent had three or more workers in the family.

EDUCATIONAL ATTAINMENT

Among the eligible population in Arizona, 75 percent of adults age 25 and older had at least a high school diploma or an equivalent (compared to 92 percent of those with higher incomes, or 88 percent of the total population). Table 8 shows a breakdown of the highest level of educational attainment among adults age 25 and older in Arizona in 2017 for both the eligible population and those with higher incomes. See Appendix A: County Statistics, Table 6 for the percentage of population of adults age 25 and older in each county who have high school educations and who have college degrees.

Table 8. Educational Attainment of Adults Age 25 and Older in Arizona 2016 Eligible Population vs. Not Eligible				
Highest Level of Education Completed	Under 185% FPL		At or Over 185% FPL	
	Percent	Cumulative Percent	Percent	Cumulative Percent
Graduate or Professional Degree (Beyond Bachelor's Degree)	4.2%	4.2%	13.5%	13.5%
Bachelor's Degree	9.0%	13.2%	21.8%	35.3%
Some College or Associate Degree	30.8%	44.0%	35.0%	70.3%
High School Diploma or GED	31.0%	75.0%	21.6%	91.9%
Less Than High School Diploma	25.0%	100.0%	8.1%	100.0%
Total	100%		100%	

FINDINGS 2: NUTRITION-RELATED BEHAVIORS AND LIFESTYLE CHARACTERISTICS

AZ Health Zone aligns with the 2015-2020 Dietary Guidelines for Americans recommendations to follow eating and physical activity patterns that promote health and well-being.¹⁶ These recommendations focus on a need to increase specific foods, such as fruits and vegetables, fat-free or low-fat milk, whole grains and healthy proteins, as well as physical activity. Each of these health promoting behaviors has been shown to reduce the risk of many chronic diseases such as heart disease, type 2 diabetes, and certain types of cancer, and promote overall health. More specifically, fruits and vegetables are a rich source of many nutrients that are currently low in the typical American diet, including folate, magnesium, potassium, fiber, vitamin A, vitamin C and vitamin K. Milk and milk products are an excellent source of calcium and vitamin D, which are both important for the growth and maintenance of healthy bones. Whole grains provide nutrients such as iron, magnesium, selenium, B vitamins, and fiber.

In this section, findings will be presented from a variety of sources, including the BRFSS for adult behaviors, YRBSS for youth, and intercept survey data from program evaluations and social marketing assessments. Information from these will be presented to describe behaviors related to nutrition and lifestyle.

HEALTH OF THE SNAP-ELIGIBLE POPULATION AND ACCESS TO HEALTH CARE AND NUTRITIOUS FOODS

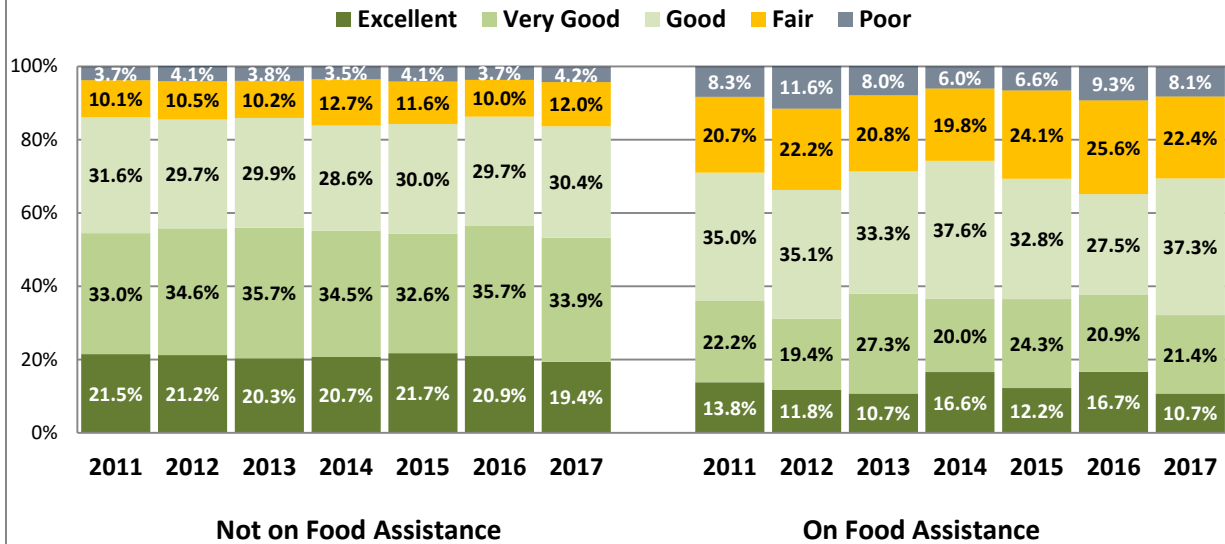
GENERAL HEALTH

The population of Arizona adults in households that received food assistance in 2017 tended to rate their overall lower than those not receiving food assistance.¹⁷ Of Arizona adults in households that received food assistance in 2017, 32.1 percent rated their health as either excellent (10.7 percent) or very good (21.4 percent), compared to 53.3 percent of adults who were not in households receiving food assistance, who rated their health as either excellent (19.4 percent) or very good (33.9 percent). Nearly one in three Arizona adults in households that received food assistance in 2017 rated their health as either fair (22.4 percent) or poor (8.1 percent), compared to 16.2 percent of adults not on food assistance who rated their health as either fair (12.0 percent) or poor (4.2 percent). Figure 4 shows the general health ratings for Arizona adults in households that received food assistance and those that didn't from 2011 to 2017.

¹⁶ United States Department of Agriculture and United States Department of Health and Human Services. (2010, December). *Dietary Guidelines for Americans, 2010*. 7th Edition, Washington, DC: United States Government Printing Office.

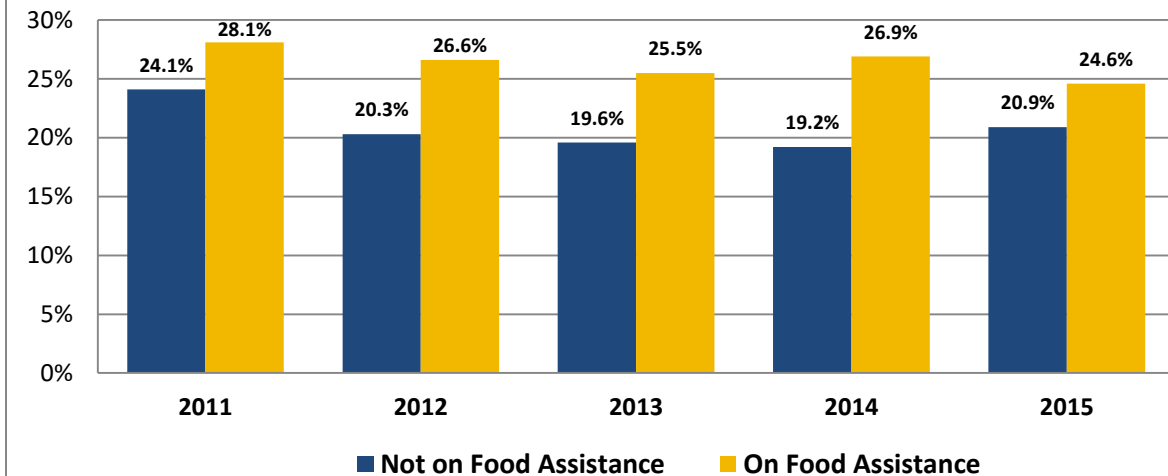
¹⁷ Behavioral Risk Factor Surveillance System, Arizona (2017), Arizona Department of Health Services.

Figure 4. General Health of All Arizona Adults and Adults in Households That Received Food Assistance



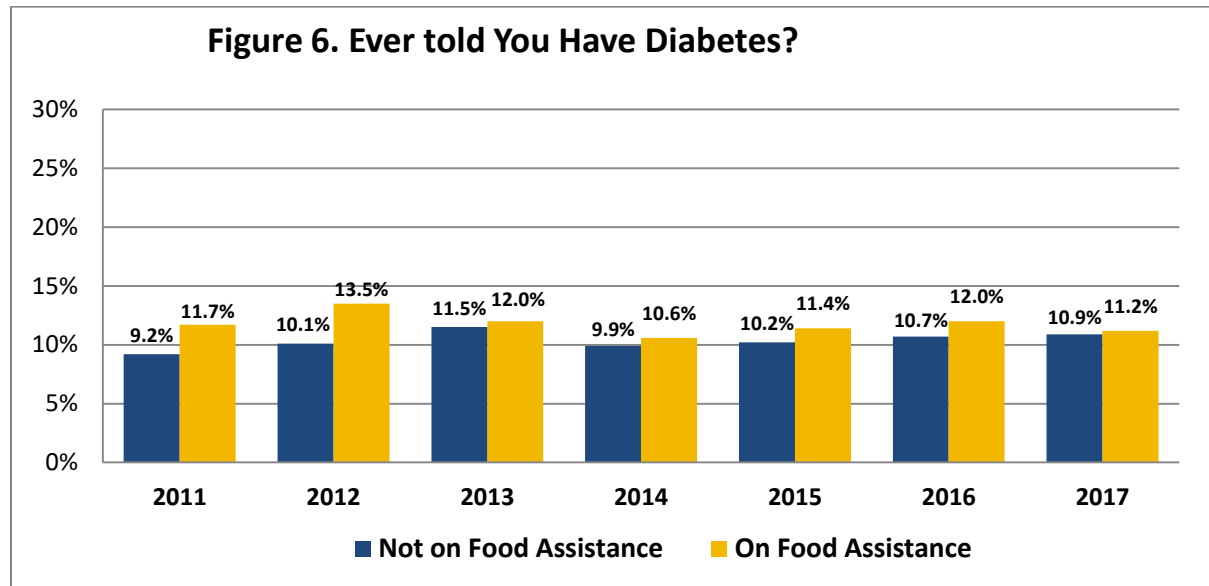
In 2015, approximately one in four adults in households that received food assistance reported that they had health problems that limited their physical activities, compared to one in five adults in households not on food assistance (see Figure 5). This question was not asked in the 2016 or 2017 BRFSS.

Figure 5. Limited Physical Activity due to a Health Problem



DIABETES

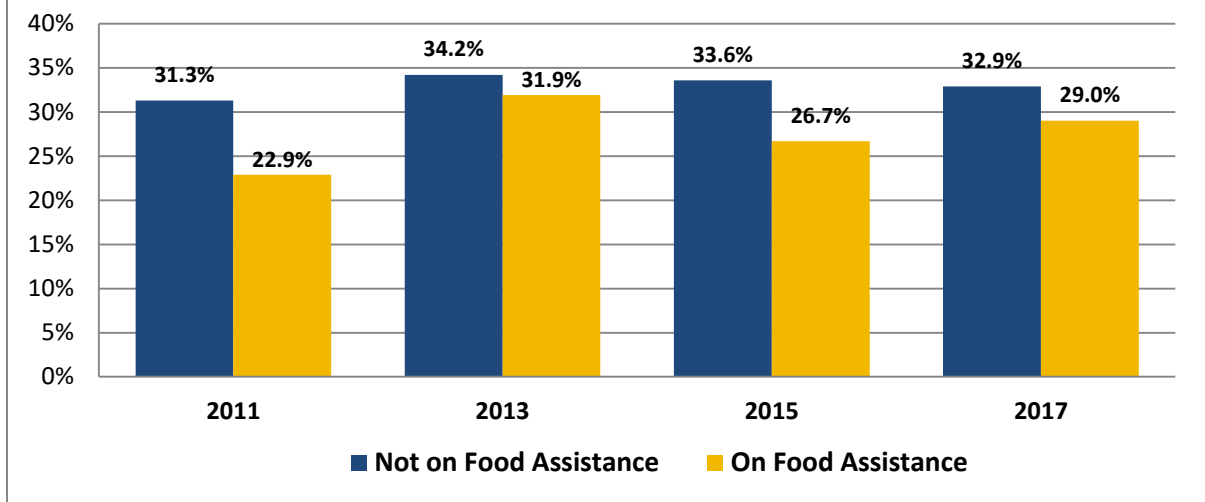
The BRFSS asks respondents if a doctor has ever told you that you have diabetes. In 2017, approximately one in ten said yes. Another one percent were females who were told that they had diabetes only during their pregnancies, and another one percent were told that they had prediabetes or borderline diabetes. Figure 6 shows the percent of those who have been told they have diabetes among adults in families not on food assistance compared to those on food assistance.



HYPERTENSION

Approximately 30 percent of adults in 2017 said they had been told that they have high blood pressure. Among adults in households on food assistance in 2017, 29 percent said they had been told they had high blood pressure, another 1.2 percent were women who were told they had high blood pressure only during pregnancy, 1.2 percent who were told they had borderline high blood pressure or had prehypertension, and 76.4 said they had never been told they had high blood pressure. Among those who had been told, 58.4 percent were on blood pressure medication. Figure 7 below indicates individuals on food assistance have lower blood pressure. This data is being explored further to interpret if age may be the cause of this variance.

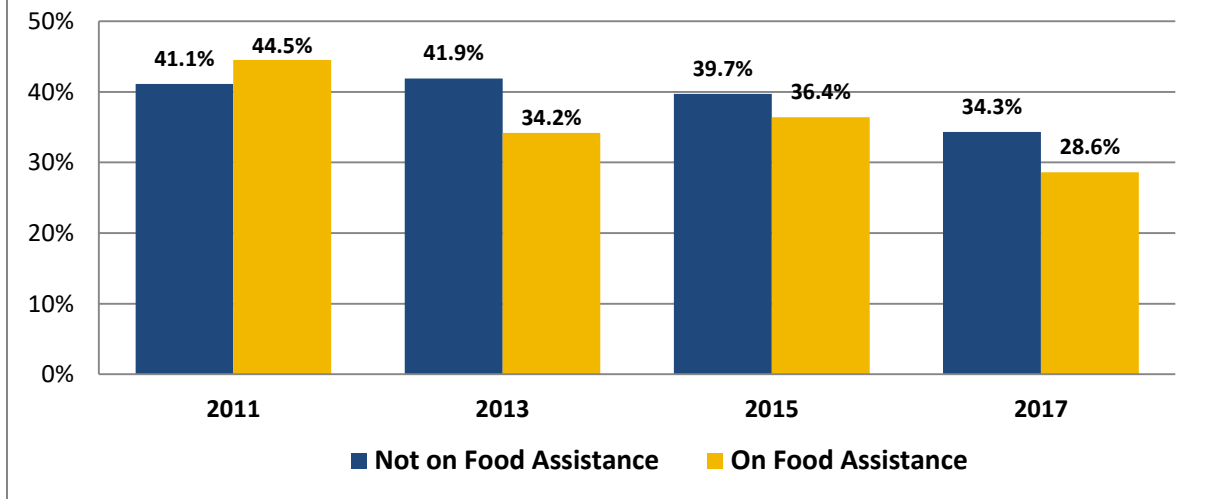
Figure 7. Ever told You Have High Blood Pressure?



HIGH CHOLESTEROL

Thirty-two percent of adults in 2017 said they had been told that they have high blood cholesterol. Among adults in households on food assistance in 2017, 28.6 percent said they had been told they had high blood pressure. Figure 8 below indicates individuals on food assistance have lower prevalence for high blood cholesterol. This data is being explored further to interpret if age may be the cause of this variance.

Figure 8. Ever Told Blood Cholesterol is High?

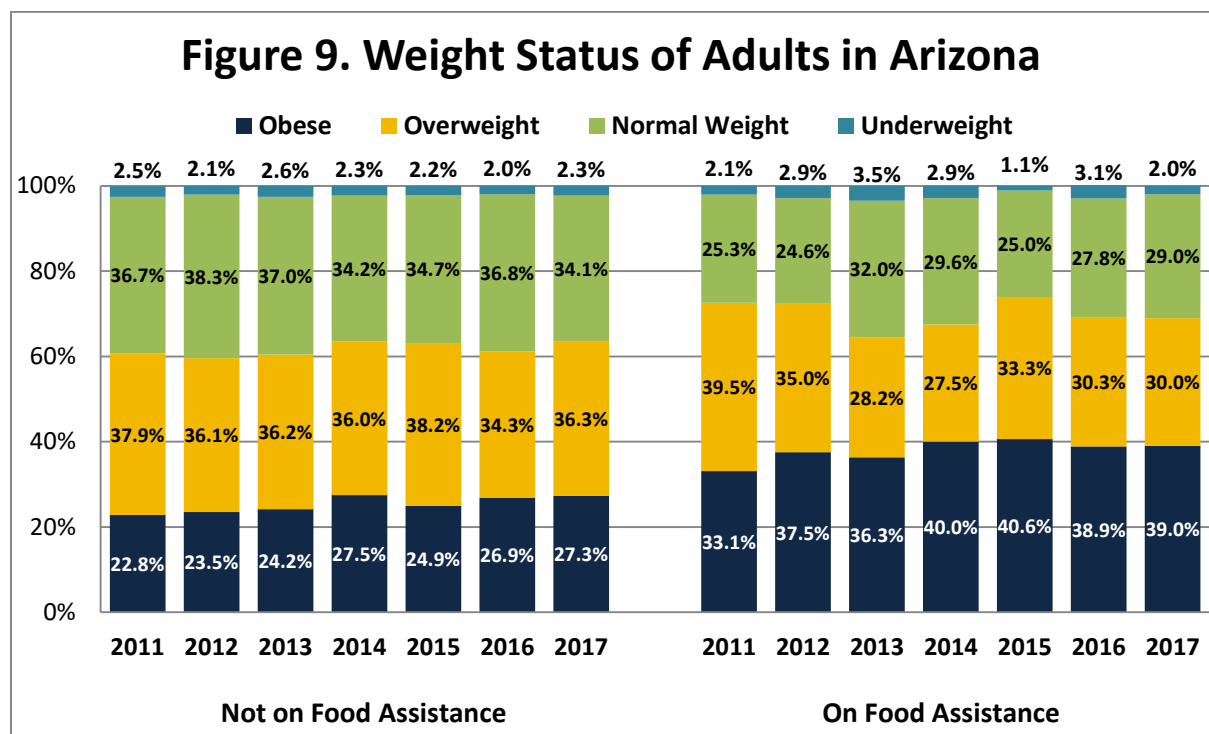


In 2017, people who said that they had been told they have high blood cholesterol were asked whether they were taking something for their cholesterol. Among those who were in households on food

assistance, 46.1 percent said they were taking something, compared to 57.8 percent in households not receiving food assistance.

ADULT OVERWEIGHT AND OBESITY

Over the last decade, there was a steady increase in the percentage of obese adults in the United States, as measured by the national-level BRFSS.¹⁸ Adults who reported having lower incomes and lower levels of education were more likely to report heights and weights that were classified as overweight¹⁹ or obese²⁰ when compared to those who reported higher income and a higher level of education. By 2017, two-thirds of adults in Arizona were either overweight or obese. Adults in households that receive food assistance are generally more likely to be either overweight or obese than adults in households not on food assistance (see Figure 9).²¹



ADOLESCENT OVERWEIGHT AND OBESITY

Among high school students who responded to the 2017 YRBSS in Arizona, 12.3 percent reported weights and heights that calculated to be obese, and another 15.9 percent were overweight. Figure 10

¹⁸ Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey, 2013 National-level Data*. Atlanta, Georgia: U.S. Dept of Health and Human Services, Centers for Disease Control and Prevention.

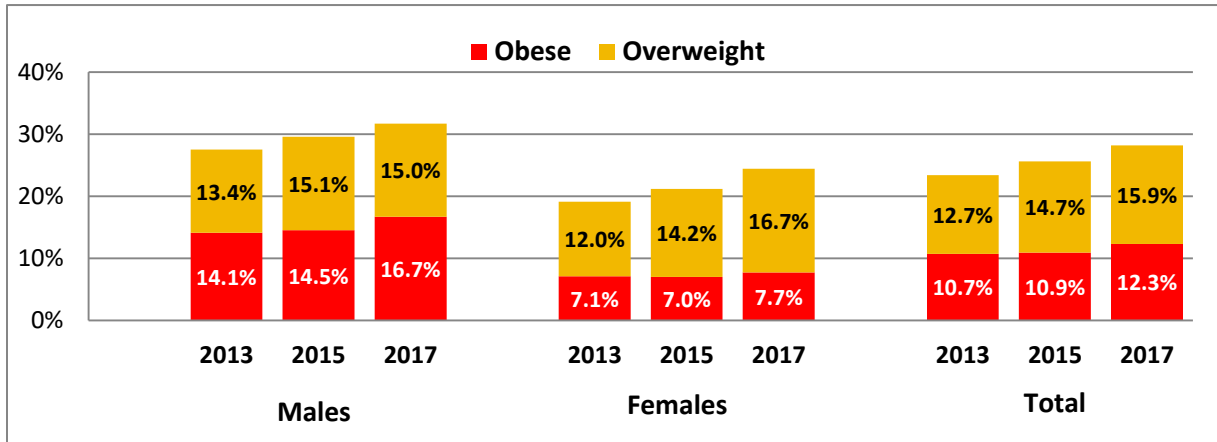
¹⁹ The term 'overweight' in adults is defined as: Respondents for whom BMI is greater than or equal to 25.

²⁰ The term 'obese' in adults is defined as: Respondents for whom BMI is greater than or equal to 30.

²¹ Behavioral Risk Factor Surveillance System, Arizona, 2011-2016, Arizona Department of Health Services.

shows the percentage of overweight and obese high school students by gender and state from 2013 to 2017.²²

Figure 10. Youth Overweight and Obesity in Arizona



Even though boys were more likely to be overweight, girls were more likely to describe themselves as overweight: 39.6 percent of girls compared to 24.3 percent of boys in 2017. Girls were also more likely to try to lose weight, with well over half of them (60.6 percent), compared to 33.7 percent of boys, reporting that they were trying to lose weight. Table 9 shows the percentage of high school students who described themselves as overweight, were trying to lose weight, and some of the ill-advised strategies they used to lose weight from 2007 through 2017.

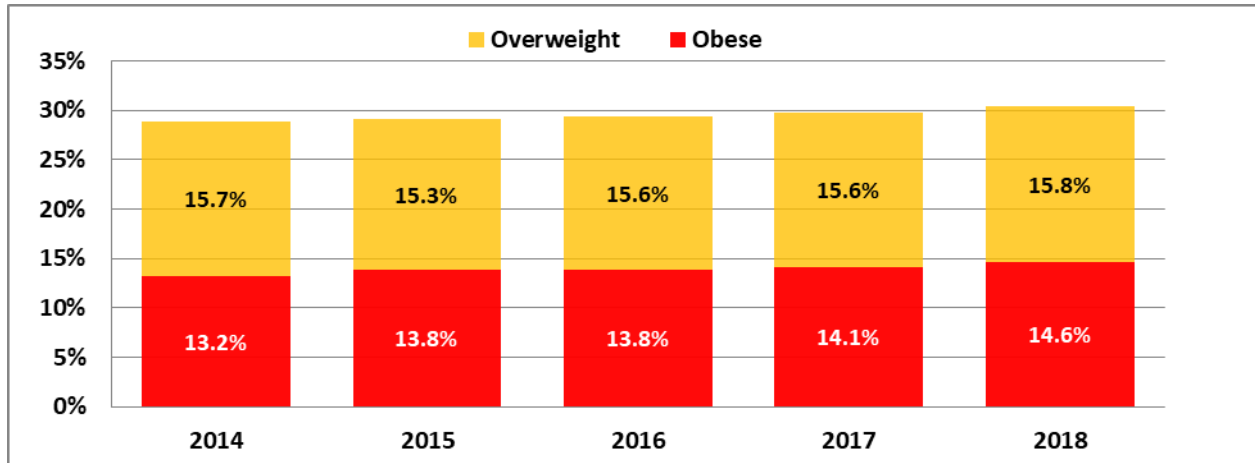
	2007	2009	2011	2013	2015	2017
Described themselves as slightly or very overweight	35.2%	33.5%	32.9%	29.9%	35.1%	36.8%
Trying to lose weight	*	*	52.2%	50.8%	53.6%	55.2%
Went without eating for 24 hours or more during the past 30 days	14.1%	15.1%	14.1%	16.2%	17.3%	13.3%
Vomited or took laxatives to lose weight or to keep from gaining weight during the past 30 days	8.2%	6.3%	6.2%	10.1%	7.1%	10.0%
Took diet pills, powders, or liquids without a doctor's advice during the past 30 days	6.2%	7.7%	9.5%	9.3%	8.1%	8.3%

²² Arizona Department of Education, Youth Risk Behavior Survey, 2017.

CHILDHOOD OVERWEIGHT AND OBESITY

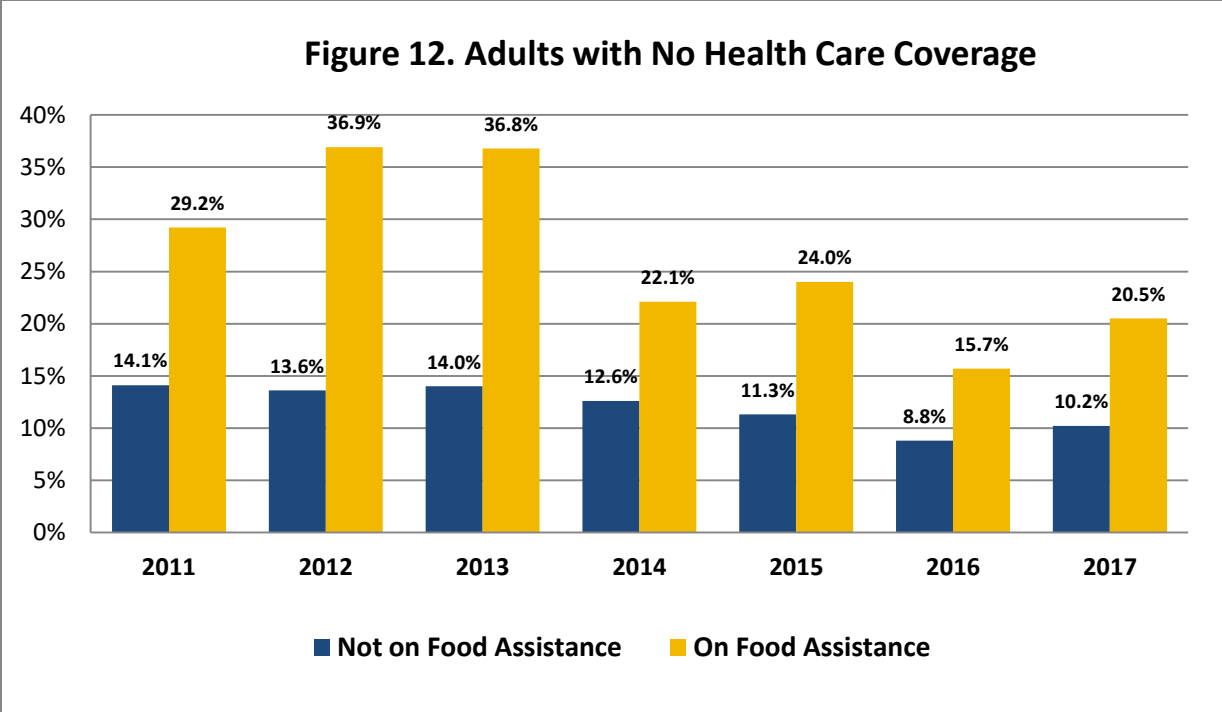
In 2018, 30 percent of children enrolled in Arizona WIC were either obese or overweight (see Figure 11). For WIC childhood overweight and obesity rates by county, see Appendix A. County Statistics, Table 7.

Figure 11. Overweight and Obesity Among Children Ages Two to Five in WIC

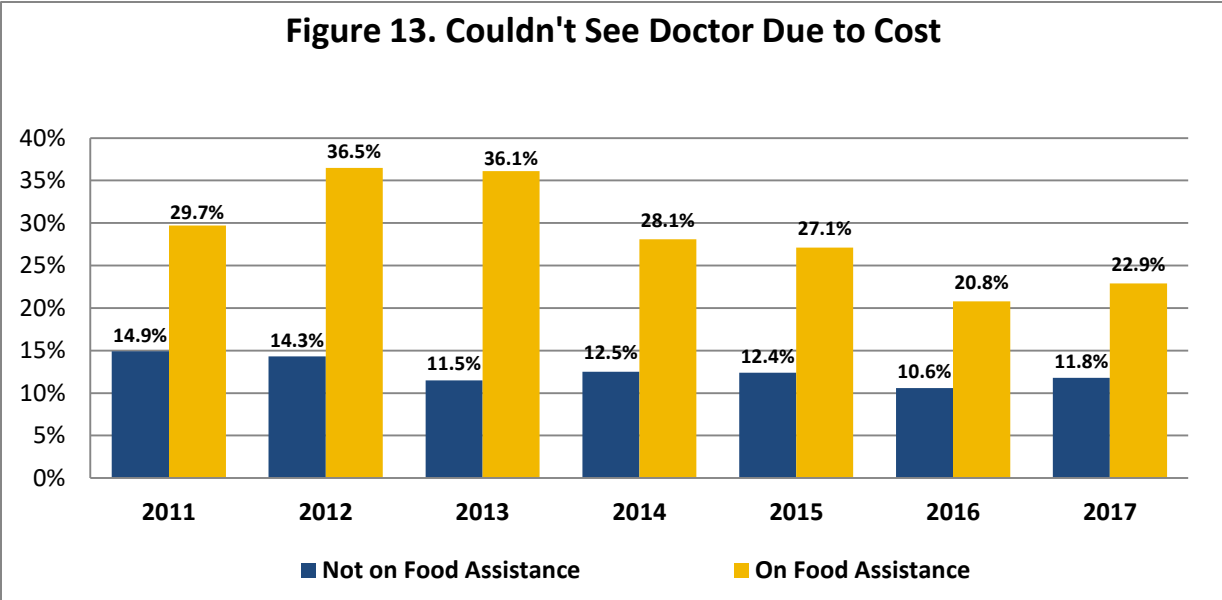


ACCESS TO HEALTH CARE

Since the needs assessment in 2013, there has been a marked decrease in the percentage of Arizona adults with no health care coverage, which is most pronounced among households on food assistance. In 2017, approximately one in five adults in households that received food assistance had no health insurance coverage, down from 36.8 percent in 2013, but still twice the proportion of adults in households not on food assistance (see Figure 12).



In 2017, one in five adults in households that received food assistance said that during the past year, they needed to see a doctor but could not afford to see one due to the cost, down considerably from 2012 and 2013, compared to approximately one in ten adults not in households on food assistance in 2017(see Figure 13).²³



²³ Behavioral Risk Factor Surveillance System, Arizona (2011-2017), Arizona Department of Health Services.

ACCESS TO NUTRITIOUS FOOD – FOOD HARDSHIP

Food security is defined as access by all people at all times to enough nutritious food for an active, healthy life. In order for a population to be considered healthy and well-nourished, it must have adequate food security.²⁴ Along with the risk of poor nutritional status associated with food insecurity, studies have shown that there may be a link between a lack of food security and obesity.

Although a causal relationship has not been consistently shown in research, there are certain risk factors for obesity that are associated with poverty, such as limited resources for food, limited access to healthy food choices, fewer opportunities for physical activity, high stress, less access to health care, cycles of food deprivation and overeating, as well as increased exposure to marketing for unhealthy foods.²⁵ Food and nutrition assistance programs, such as SNAP and SNAP-Ed, help to increase food security in Arizona by increasing access to food for low-income individuals and promoting a healthful diet through public health approaches, such as education, social marketing, and policy, systems, and environmental change.

Food hardship is measured by asking, “Have there been times in the past 12 months when you did not have enough money to buy food that you or your family needed?”²⁶ The Food Research and Action Center (FRAC) reported that nationally, the proportion of households who responded “yes” to this question increased in 2017 to 15.7 percent, after decreasing steadily each year from 18.9 percent in 2013 after the height of the recession. The previous decrease was attributed to an improved unemployment picture, an increase in the share of eligible families receiving SNAP, and to the impact on families of the Medicaid expansion and other health insurance affordability improvements under the Affordable Care Act. In 2017, although unemployment continued to fall, FRAC observed that “. . . wages were largely stagnant, and safety net supports (e.g., the Supplemental Nutrition Assistance Program (SNAP), Medicaid, Affordable Care Act premium subsidies) were under attack.” Arizona’s food hardship rate rose to 17.1 in 2017, and ranked number 11 on the list of states with the worst food hardship rates. For households with children, Arizona ranked sixth on the list of states with the worst food hardship, with a rate of 22.8 percent. Finally, Arizona ranked third on the list of states with the worst ratio of food hardship among households with children compared to households without children (22.8 percent/13.7 percent = 1.7).

A question on food hardship was also included in a survey targeting low-income mothers who were eligible for SNAP in 2015. Six in ten (62 percent) of them said that in the past 12 months, they often or sometimes worried about running out of food before they got money to buy more. Half (51 percent) of

²⁴ Coleman-Jensen, A., Nord, M., Andrews, M., and Carlson, S. (2011). “Household Food Security in the United States in 2010” United States *Department of Agriculture, Economic Research Report Number 125*.

²⁵ Hartline-Grafton, H. (2011). “Food Insecurity and Obesity: Understanding the Connection” *Food Research and Action Center*, Retrieved 06/05/2012. Retrieved from: http://frac.org/pdf/frac_brief_understanding_the_connections.pdf.

²⁶ Food Research and Action Center, How Hungry is America? FRAC’s National, State and Local Index Food Hardship, August 2018. Retrieved 03/16/2019 from: <http://frac.org/research/resource-library/hungry-america-fracs-national-state-local-index-food-hardship-july-2018>.

them said that in the past 12 months, the food they bought often or sometimes did not last and they did not have money to get more.²⁷ In this same survey, 40 percent said they did not participate in SNAP because they thought they were not eligible, and another 13 percent said they didn't know if they were eligible. Among women who were eligible for WIC (i.e., they had incomes below 185 percent of the federal poverty level and had a child under the age of 5), 64 percent had received WIC benefits during the previous year. Among WIC-eligible women who did not use WIC, 12 percent said they didn't think they were eligible, and another 12 percent said they didn't know if they were eligible. More than half of the women said that someone in their household received free/reduced lunch/breakfast (54 percent), and 20 percent used a food cooperative in the past 12 months.

Finally, in recent years, Arizona's birth certificate questionnaire began asking women whether they were enrolled in WIC. All of the women who gave birth with AHCCCS as the payer were eligible for WIC. However, among them, only 56.7 percent in 2017 and 54.9 percent in 2018 said they were receiving WIC benefits.

HABITS OF ADULTS, CHILDREN, YOUTH IN LOW-RESOURCED COMMUNITIES

In this section, data will be presented on individual health promoting behaviors. Breastfeeding and dietary trends on consumption of fruits and vegetables, milk, whole grains, and sugar-sweetened beverages will be followed by information about eating at home, food preparation, and grocery shopping habits, and finally, trends in physical activity and sedentary behaviors. For each topic, available data will be presented for both adults and youth whenever the data are available.

BREASTFEEDING

Breastfeeding provides advantages in the areas of health, cognitive, and psychological development to an infant, as well as health benefits to the mother. Breastfeeding supplies the newborn with protection against disease, which extends beyond infancy. Increasing the initiation and duration of breastfeeding is a low-cost, readily available strategy to help prevent childhood and adolescent illnesses.

Healthy People 2020 established baselines and goals for several key breastfeeding indicators in the Maternal, Infant, and Child Health (MICH) area. From the 2007-2009 National Immunization Survey (NIS), baselines were established which relate to increasing the proportion of infants who are ever breastfed and who are exclusively breastfed at three and six months. Table 10 shows select Healthy People 2020 Goals and Objectives related to breastfeeding, as well as the baseline data which informed setting the targets.

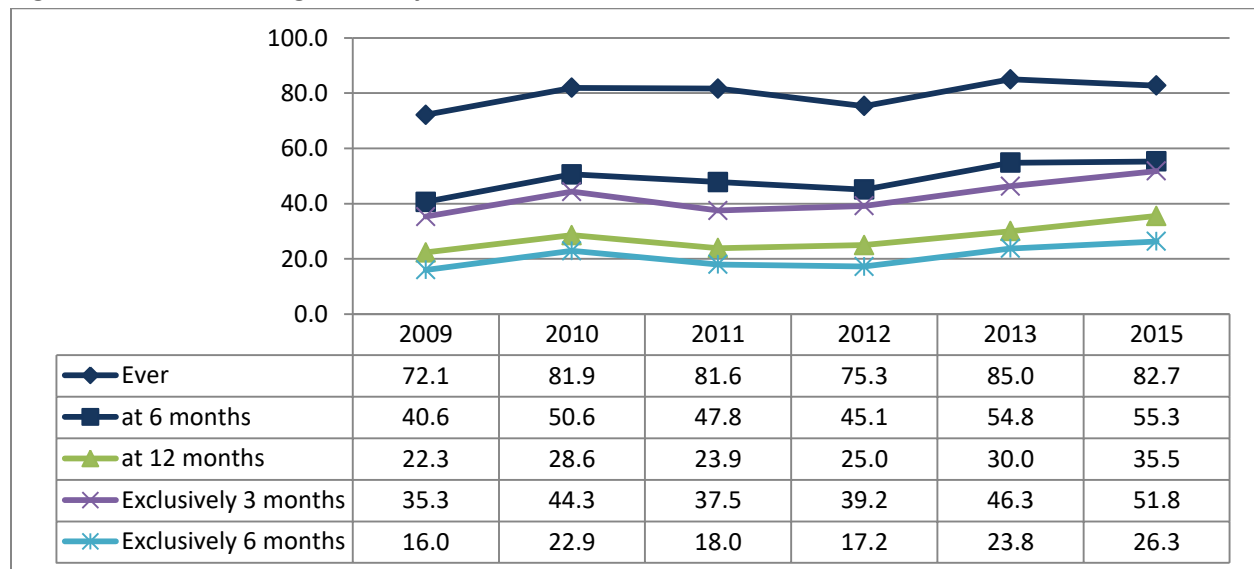
²⁷ WestGroup Research, Arizona Department of Health Services 2015 Target Population Research Report, Target Population Survey, 2015, Revised: November 10, 2015.

Table 10. Healthy People Goals and Objectives on Breastfeeding

MICH Area	Healthy People Objective	2010 Goal	2020 Goal	Baseline Measure (Source)
MICH-21.1	Increase the proportion of infants who are breastfed . . . Ever	75%	81.9%	74% of infants born in 2006 were ever breastfed (2007-2009 NIS)
MICH-21.2	At six months	50%	60.6%	43.5% of infants born in 2006 were breastfed at six months (2007-2009 NIS)
MICH-21.3	At one year	25%	34.1%	22.7% of infants born in 2006 were breastfed at one year (2007-2009 NIS)
MICH-21.4	Exclusively through three months	40%	46.2%	33.6% of infants born in 2006 were breastfed exclusively through three months (2007-2009 NIS)
MICH-21.5	Exclusively through six months	17%	25.5%	14.1% of infants born in 2006 were breastfed exclusively through six months (2007-2009 NIS)

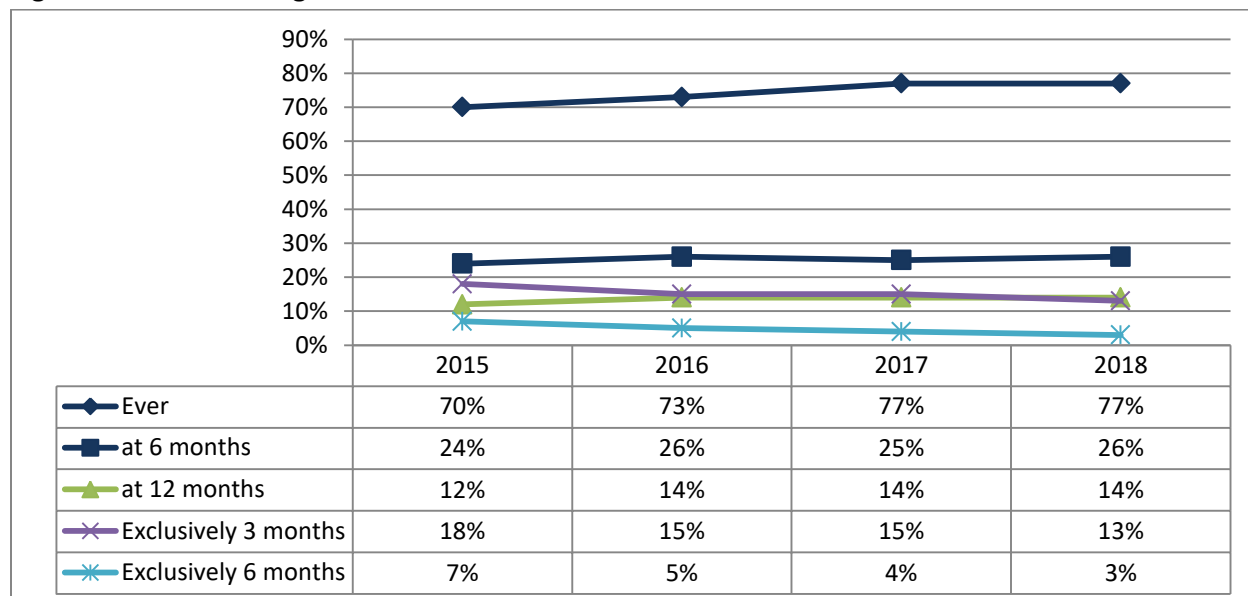
Arizona’s breastfeeding rates tend to be above national rates in terms of initiation and duration at 6 and 12 months. By 2007, Arizona met the Healthy People 2010 goal of 75 percent of mothers giving birth in Arizona initiating breastfeeding, although not all subpopulations had attained that level. Figure 14 shows the percentage of infants in Arizona who were ever breastfed, breastfed at 6 and 12 months, and exclusively breastfed at three and six months for births to all women in Arizona from 2011 through 2015, based on data collected in the years following the birth. For example, the 2015 data points are for infants born in 2015 with surveys conducted in 2016 and 2017.

Figure 14. Breastfeeding Status by Year of Birth for Infants in Arizona



In the Arizona WIC Program, the percentage of infants who were ever breastfed remained at 77 percent in 2018, the same as 2017. Figure 15 shows the percent of WIC infants who were ever breastfed, as well as measures for duration and exclusivity from 2015 through 2018.

Figure 15. Breastfeeding Status of Infants in Arizona WIC

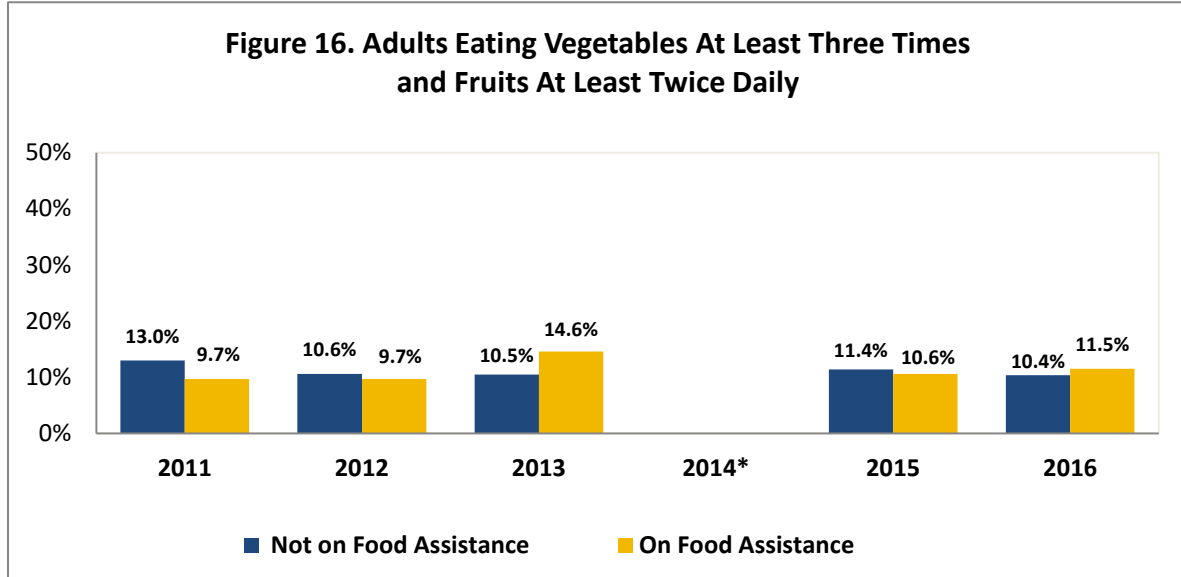


Working outside the home is related to a shorter duration of breastfeeding, and low-income women are more likely than their higher-income counterparts to return to work earlier and to be engaged in jobs that make it challenging for them to continue breastfeeding. Given the substantial presence of mothers in the labor force, there is a strong need to establish lactation support in the workplace. Barriers identified in the workplace include a lack of flexibility in the work schedule for milk expression, lack of accommodations to pump or store breastmilk, concerns about support from employers and colleagues, and real or perceived low milk supply.

VEGETABLE AND FRUIT CONSUMPTION - ADULTS

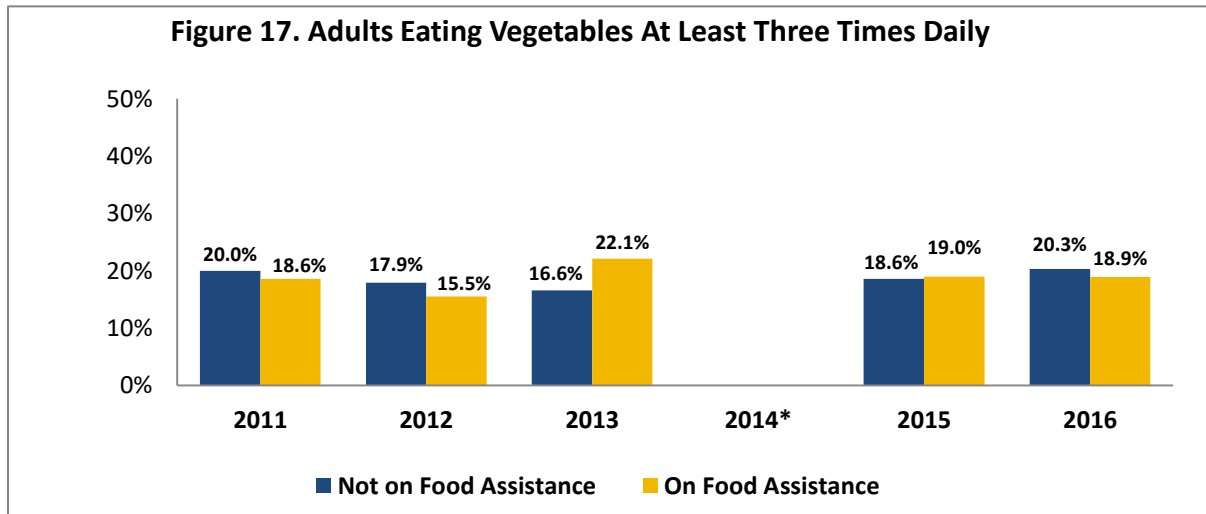
The BRFSS is useful to monitor outcomes related to vegetable and fruit consumption, which are part of the core CDC measures every other year. Arizona previously included the vegetables and fruits module every year, even though they are optional during the years in which the CDC does not include it in the core set of questions. Findings are presented in this section for all adults in Arizona, and for adults living in households in which someone is on food assistance, which is a subset of those who are eligible for food assistance. In 2016, the median vegetable consumption among Arizona adults was 1.7 times per day, and the median adult fruit intake was 1.0 time per day. These figures have remained relatively constant over the past several years (2011 through 2016), and there are no real disparities between adults in families on or not on food assistance. Data were not available for fruit and vegetable consumption in 2017 to calculate the indicators presented in this section.

The percentage of adults who consumed vegetables at least three times per day as well as fruits at least twice per day has remained low, with approximately one in ten meeting the recommended guideline, with little disparity between adults in households that receive versus those that do not receive food assistance in most years (see Figure 16).

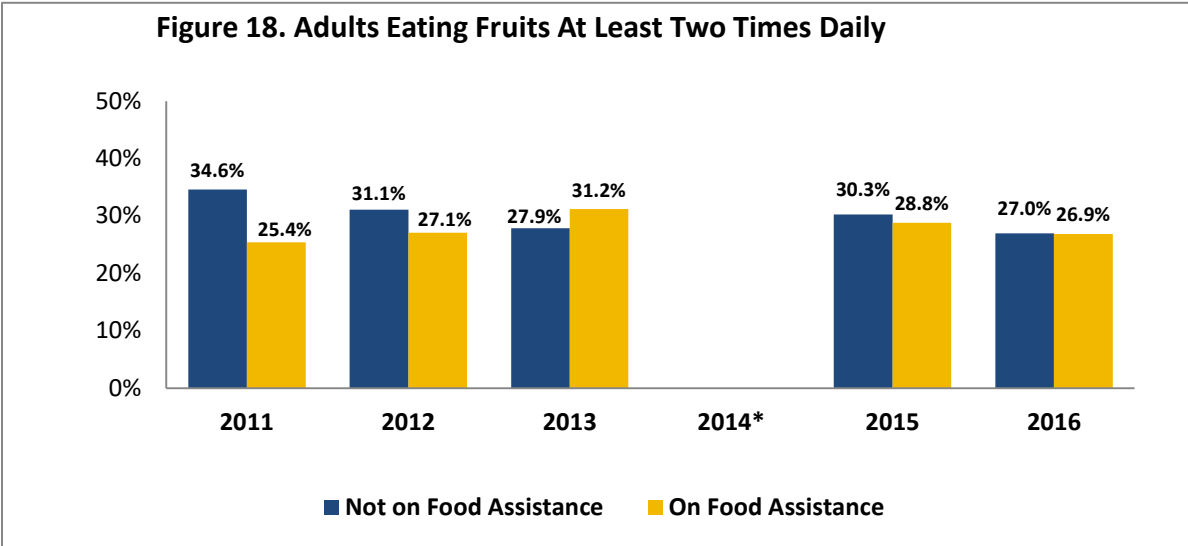


*2014 data unavailable for fruits and vegetables consumption by whether households receive food assistance

Looking at vegetable and fruit consumption separately, higher proportions report eating either vegetables at least three times per day or fruits at least twice per day (see Figures 17 and 18).

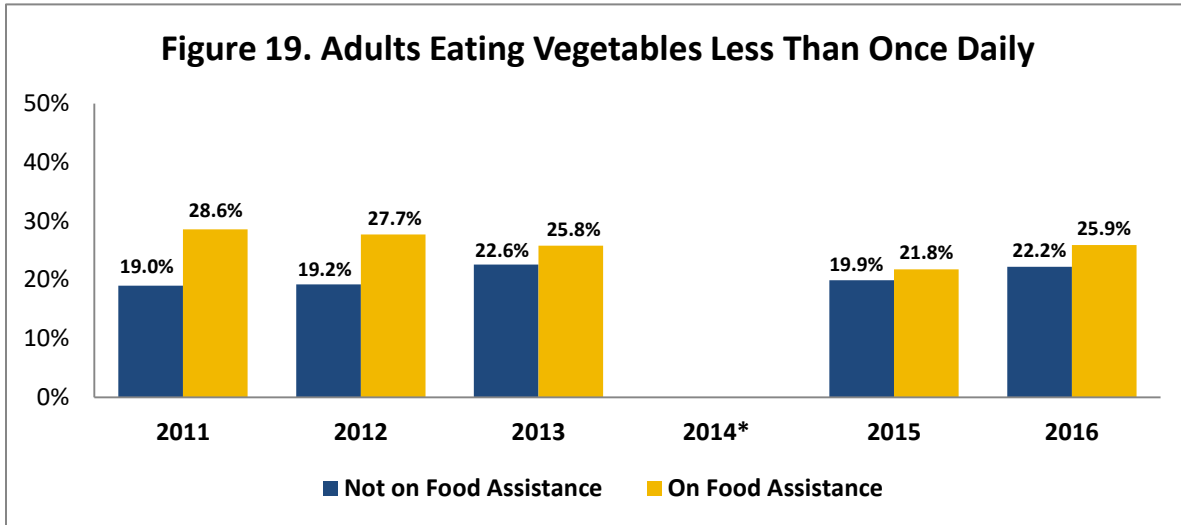


*2014 data unavailable for fruits and vegetables consumption by whether households receive food assistance

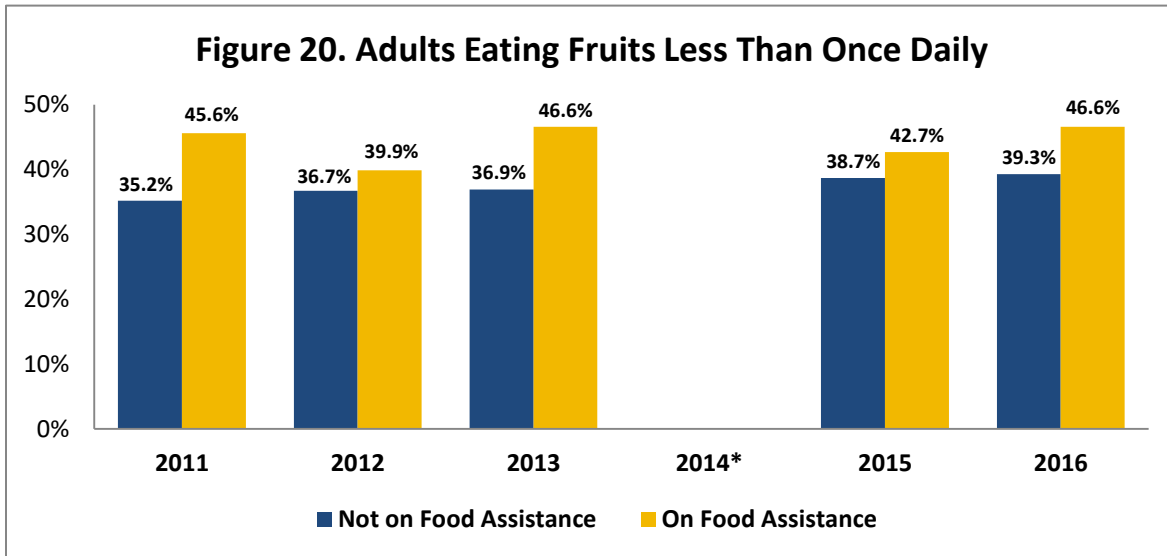


*2014 data unavailable for fruits and vegetables consumption by whether households receive food assistance

Relatively large proportions of adults do not consume vegetables and fruits even once per day, as shown in Figures 19 and 20.



*2014 data unavailable for fruits and vegetables consumption by whether households receive food assistance



*2014 data unavailable for fruits and vegetables consumption by whether households receive food assistance

VEGETABLE AND FRUIT CONSUMPTION - YOUTH

Students were asked on the YRBSS about the number of times in the past seven days that they consumed 100 percent fruit juice, such as orange, apple, or grape juice, as well as the number of times they ate fruit. Responses were combined to determine the percentage of youth who consumed no fruit juice or fruit during that period, and those who consumed them at least once per day, twice per day, or three times per day (see Table 11 – statistically significant changes between 2015 and 2017 are marked with an asterisk). Eight percent of students in 2017 consumed no fruit or fruit juices, and only one in four had fruit or fruit juices at least twice per day.

Table 11. High School Students' Consumption of 100% Fruit Juice and/or Fruit (YRBSS 2015 and 2017)				
	None	≥ 1 per day	≥ 2 per day	≥ 3 per day
2015	6.7%	60.5%	30.1%	18.5%
2017	8.3%	55.0%*	24.5%*	14.4%*

Students were also asked about their consumption of vegetables, including green salads, carrots, potatoes (excluding french fries, fried potatoes, or potato chips), and other vegetables. There were no statistically significant changes between 2015 and 2017 in the percentage of students who consumed no vegetables, those who consumed at least one vegetable per day, two per day, or three per day (see Table 12).

Table 12. High School Students' Consumption of Vegetables (YRBSS 2015 and 2017)				
	None	≥ 1 per day	≥ 2 per day	≥ 3 per day
2015	7.1%	59.1%	26.4%	14.7%
2017	6.9%	56.4%	22.4%	12.3%

MILK/CALCIUM CONSUMPTION - ADULTS

Building strong bones during adolescence and early adulthood is a key defense against the development of osteoporosis later in life. In a survey of women who were eligible to participate in SNAP in 2015, nine out of ten women (90 percent) reported consuming some form of dairy in the past week, with respondents reporting that they consumed a median of one glass of milk per day. Among women who drink milk, 31 percent drank non-fat or 1% milk.²⁸

MILK/CALCIUM CONSUMPTION - YOUTH

In 2017, one in four Arizona high school students reported drinking no milk in the seven days before they took the YRBSS. Approximately 27.4 percent of students reported drinking at least one glass of milk per day, 16.2 percent drank two or more glasses per day, and 7.0 percent drank three or more glasses per day.

WHOLE GRAINS - ADULTS

In the 2015 Target Population Research Report, questions were asked about consumption of grains. Sixty-two percent of women surveyed said that they eat half of their total grains as whole grains.

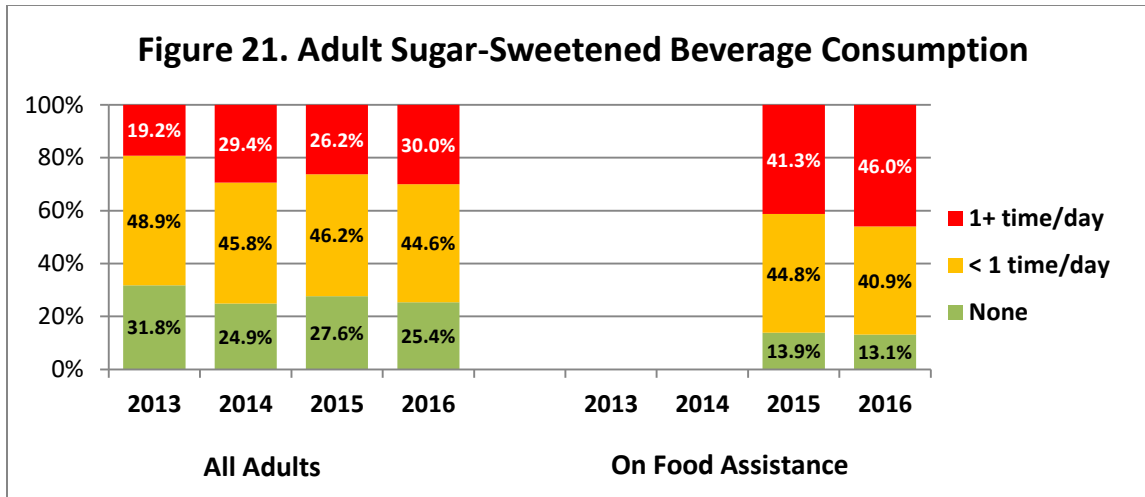
SUGAR-SWEETENED BEVERAGES – ADULTS

Sugar-sweetened beverages are significant sources of added sugars among adults in the United States.²⁹ Since 2013, a sugar-sweetened beverage module has been included in the BRFSS related to regular soda and other types of sugar-sweetened beverages (fruit drinks, sweet tea, and sports or energy drinks).³⁰ These questions were part of the core set of questions in 2013. Arizona began including the sugar-sweetened beverage module in 2013 for all adults, and data are available for 2015 and 2016 for the food assistance population. One in four of all Arizona adults reported drinking no sugar-sweetened beverages, and 30.0 percent drank one or more per day in 2016. Among the population on food assistance, only 13.1 percent said they drank no sugar-sweetened beverages, while 46 percent drank them one or more times per day (see Figure 21).

²⁸ WestGroup Research, Arizona Department of Health Services 2015 Target Population Research Report, Target Population Survey, 2015, Revised: November 10, 2015.

²⁹ Park S, Xu F, Town M, Blanck H. Prevalence of Sugar-Sweetened Beverage Intake Among Adults—23 States and the District of Columbia, 2013. MMWR Morb Mortal Wkly Rep 2016;65(7):169-174

³⁰ *Ibid.*



SUGAR-SWEETENED BEVERAGES - YOUTH

Among Arizona high school students who responded to the 2017 YRBSS, 17.3 percent reported drinking a can, bottle, or glass of soda or pop one or more times per day (not counting diet soda or diet pop) during the seven days before the survey, while 29 percent said they had not had any soda or pop. Table 13 below shows the percentage of all Arizona high school students over the past ten years who reported drinking a can, bottle, or glass of soda or pop at various frequency levels. In general, there has been an increase in the percentage of students who do not drink soda or pop as well as a decrease in those who drink it multiple times per day.

Table 13. High School Students Drinking Soda or Pop During the Seven Days Before the Survey

	None	≥ 1 per day	≥ 2 per day	≥ 3 per day
2007	20.5%	29.5%	20.1%	10.1%
2009	20.4%	28.1%	19.8%	10.9%
2011	24.2%	24.1%	15.9%	8.3%
2013	27.8%	19.7%	12.6%	5.9%
2015	27.8%	19.5%	10.8%	5.4%
2017	29.0%	17.3%	9.7%	4.0%

EATING AT HOME, FOOD PREPARATION, AND GROCERY SHOPPING

In the 2015 Target Population study, 55 percent of the women surveyed said they either always or often used a shopping list when they shopped for groceries, down from 64 percent in 2012, and 22 percent said they used coupons either always or often, down from 47 percent in 2012. The women interviewed reported eating a meal at home 13.6 times a week, averaging almost two meals a day at home, which is an increase over the 2012 figure of 8.3 times per week. The average number of times per week that

families eat together was reported as 9.5 times per week in 2015. When asked about health-related shopping behaviors, 54 percent of women said they chose foods with less added sugar, and four in ten women said they always or often read labels for nutrition facts (41 percent) or ingredient lists (40 percent).

A study was conducted in 2017 to learn more about meal planning, recipe usage and selection, available ingredients, available kitchen tools, appliances, gadgets and cookware, and cooking methods among the SNAP-eligible population. The report can be used to guide the selection and development of information provided during direct education and other interactions, where partners might reference the kinds of ingredients and tools that the target population is likely to have on hand, and possibly show different ways to use them. It can also be used by AZ Health Zone and its partners to evaluate potential recipes in terms of factors that matter to women when selecting recipes. Details are provided on what ingredients and supplies are typically available in the households of the target audience, and cooking methods that are found to be acceptable.

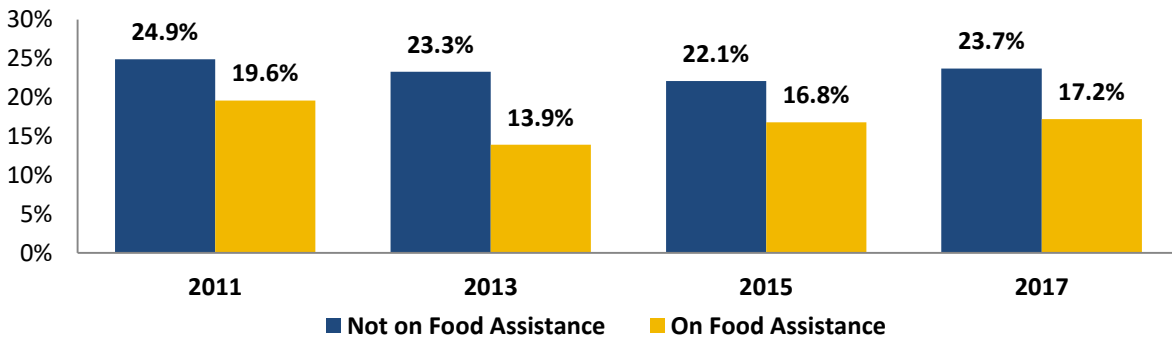
Fifty-nine percent of survey participants reported that they used recipes when cooking for their families, and 91 percent said they looked for new recipes. The most common source for finding new recipes was websites (61 percent), followed by social media (52 percent). When choosing new recipes, participants identified taste (69 percent), availability of ingredients (64 percent), and healthy ingredients (53 percent) as factors of highest importance. A variety of flavors, textures, and ingredients (48 percent), having the necessary utensils (48 percent), and the amount of time recipes required (47 percent) were also very important for almost half of the participants. Many participants commonly used all assessed cooking methods (i.e., baking/roasting, grilling, steaming, sautéing).

PHYSICAL ACTIVITY - ADULTS

Every other year, the national BRFSS contains questions about physical activity. The physical activity questions are designed to measure the proportion of adults meeting aerobic and strength physical activity recommendations. The recommendation for aerobic physical activity for adults is at least 150 minutes of moderate activity or 75 minutes of vigorous activity per week, and the muscle-strengthening recommendation is to participate in muscle strengthening activities at least twice per week.

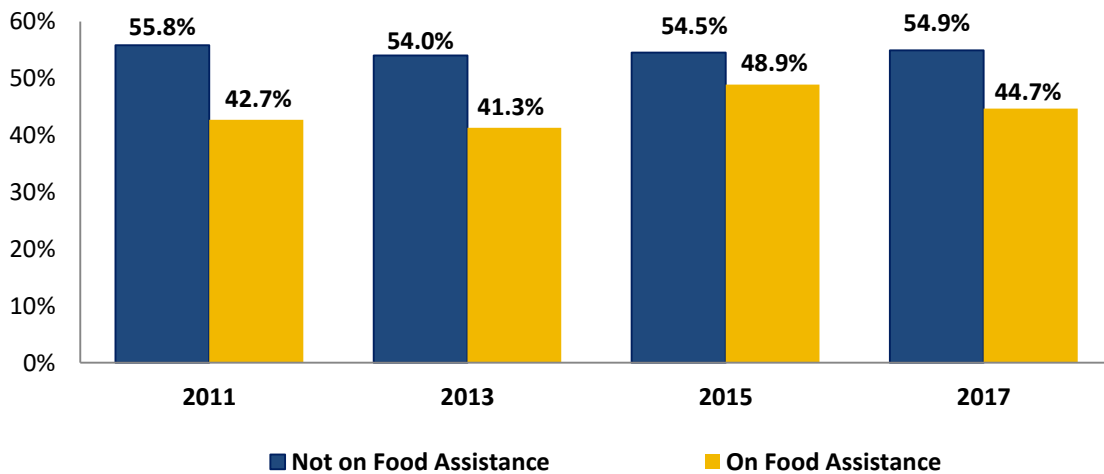
Figure 22 compares the percentage of Arizona adults who met both aerobic and strength recommendations from 2011 through 2017 for those that lived in households that did not versus those that did receive food assistance.

Figure 22. Met Both Aerobic and Strength Recommendations



Adults in households receiving food assistance are less likely to meet recommendations for physical activity compared to adults in households that do not for *either* aerobic *or* strength recommendations (see Figures 23 and 24).

Figure 23. Met Aerobic PA Recommendations



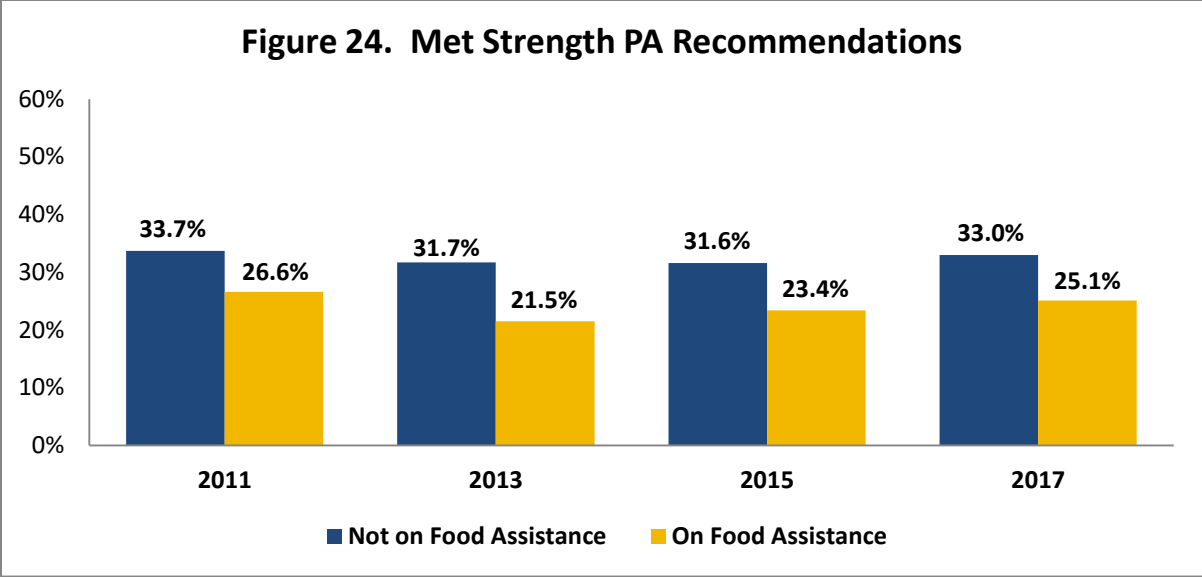
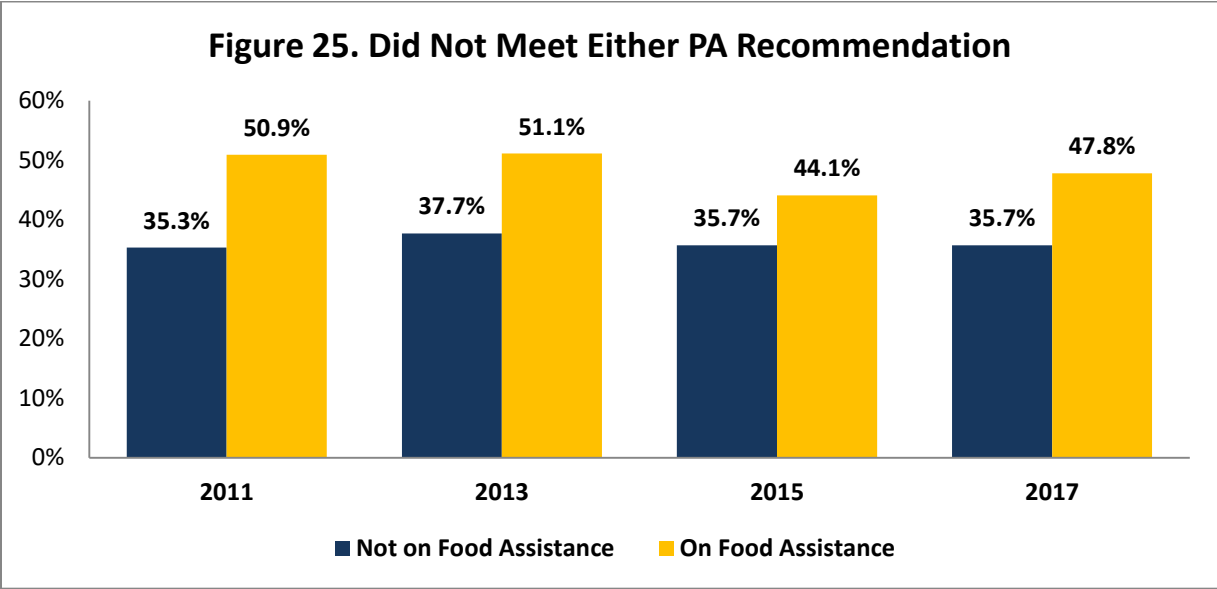
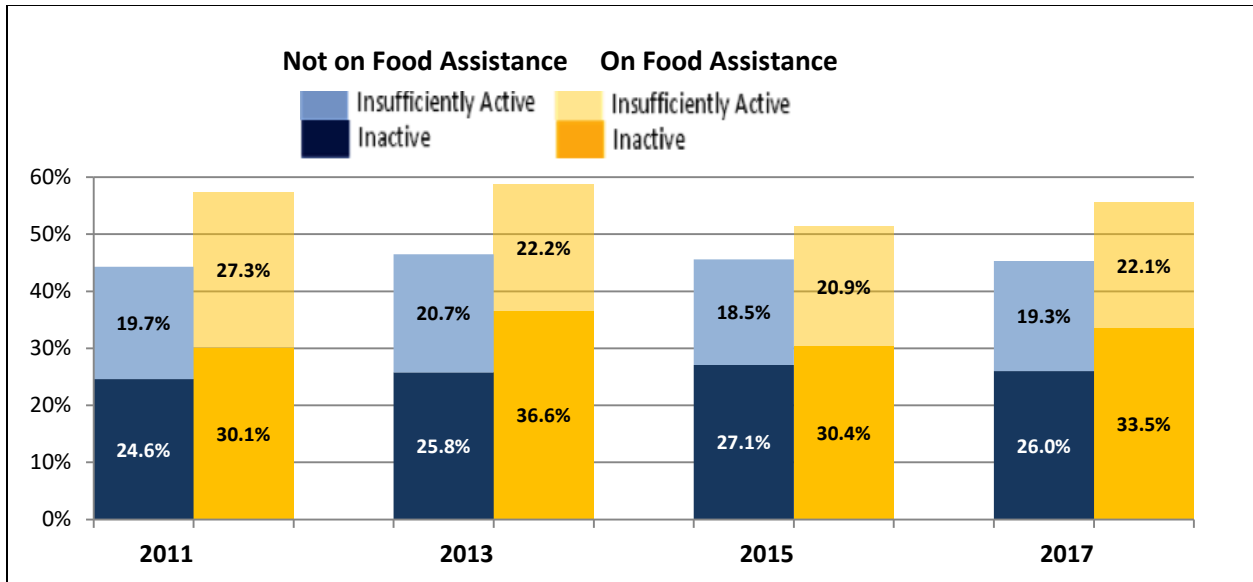


Figure 25 shows the proportion of Arizona adults who did not meet either physical activity recommendation among adults in households that are not versus those that are on food assistance.



Looking specifically at those who reported being either inactive or are insufficiently active, more than half of Arizona adults in households that receive food assistance consistently report activity levels that were either inactive or insufficiently active (see Figure 26).

FIGURE 26: ADULTS IN ARIZONA INSUFFICIENTLY ACTIVE AND INACTIVE



The YRBSS asked high school students about physical activity that increased their heart rate and made them breathe hard during the seven days before the survey. Table 14 shows the percentage of students from 2011 through 2017 who were not active during the past seven days, who were active for five or more days, and who were active for all seven days, for all students, girls and boys. While changes in the trends from year to year are not statistically significant, it should be noted that boys tend to have higher activity levels than girls.

Table 14. Students Who Were Physically Active in Past Seven Days									
Year	NOT Active			Active five or more days			Active all seven days		
	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
2011	15.4%	*	*	47.4%	*	*	25.0%	*	*
2013	17.3%	*	*	41.9%	50.4%	33.2%	21.7%	27.8%	15.5%
2015	15.9%	14.5%	17.3%	46.4%	52.8%	40.0%	26.0%	32.1%	19.3%
2017	16.7%	13.9%	19.4%	46.3%	54.1%	38.1%	24.5%	31.7%	17.1%

Approximately half of high school students reported playing on one or more sports teams during the past 12 months in 2017, which is similar to the percentages reported in 2011 through 2015. Table 15 shows the percentage of high school students who played on one or more sports teams during the past 12 months, by gender.

Table 15. Students Who Played on One or More Sports Teams in Past 12 Months			
Year	Total	Boys	Girls
2011	50.4%	54.8%	46.2%
2013	50.5%	53.7%	47.3%
2015	49.2%	52.4%	45.8%
2017	51.6%	54.7%	48.8%

In 2017, fewer than half (46.4 percent) of high school students reported that they attended physical education classes on one or more days in an average week when they were in school (53.9 percent of boys and 38.8 percent of girls), and only 36.5 percent attended daily physical education classes (40.7 percent of boys and 31.9 percent of girls). Table 16 shows the percentage of high school students who attended physical education classes on one or more days in an average week when they were in school and the percentage of students who attended physical education classes daily in an average week when they were in school, by gender from 2011 through 2017. The changes are not statistically significant.

Table 16. Students Reporting Attending Physical Education Classes Weekly or Daily						
	Attended one or more days in an average week when they were in school			Attended daily in an average week when they were in school		
Year	Total	Boys	Girls	Total	Boys	Girls
2011	41.7%	49.0%	34.4%	29.6%	36.3%	23.2%
2013	39.9%	48.1%	31.3%	23.0%	27.7%	18.5%
2015	40.9%	47.3%	34.0%	26.3%	30.6%	21.5%
2017	46.4%	53.9%	38.8%	36.5%	40.7%	31.9%

The YRBSS asks two questions designed to measure levels of sedentary behavior. One question asks about the amount of time they spend watching TV on average school days. In 2017, 19.4 percent of students said they watched TV for three or more hours per day, which represents a statistically significant decrease from 2007, when 28.2 percent reported watching that much TV on an average school day. Students were also asked about time they spent playing video or computer games or used a computer (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day). In 2017, 38.9 percent of Arizona high school students reported this type of activity for more than three hours per day, which is a statistically significant increase from

2007. Table 17 shows the percentage of high school students engaged in these sedentary behaviors from 2007 through 2017.

Table 17. Sedentary Behaviors Among High School Students						
	2007	2009	2011	2013	2015	2017
Watched TV 3 or more hours per day on an average school day	28.2%	33.3%	28.6%	27.1%	24.7%	19.4%
Played video or computer games or used computer 3 or more hours per day	21.4%	22.1%	27.7%	36.9%	40.5%	38.9%

SOCIAL MEDIA AND TECHNOLOGY

Three questions were added to the ACS in 2013 about computer and internet use as a requirement of the Broadband Data Improvement Act of 2008.³¹ The first question asked whether the respondent or any member of the household owned or used a desktop or laptop computer, smartphone, or tablet or other portable wireless computer. In the target population, 66.9 percent lived in a household where someone owned or used a desktop or laptop computer, 83.0 percent had a smartphone, and 52.7 percent had a tablet or other portable wireless computer in their household. Table 18 shows the percentage who responded yes for those in the target population, those not in the target population, and the percentage for all.

Table 18. Own or Use a Computer, Smartphone, or Tablet: 2017			
	Under 185% FPL	At or Over 185% FPL	All
Desktop or laptop computer	66.9%	89.2%	82.02
Smartphone	83.0%	90.5%	88.1%
Tablet or other portable wireless computer	52.7%	74.4%	67.6%
Other computer equipment	2.5%	3.5%	3.2%

The next question asked about whether anyone in the household had access to the internet, and, if so, whether it was by paying a cell phone company or internet service provider. Eighty-three percent of the target population lived in households in which there was internet access either by paying a provider (80.0 percent) or without paying a provider (2.8 percent). Table 19 shows the percentage who responded yes for those in the target population, those not in the target population, and the percentage for all.

³¹ U.S. Census, <https://www.census.gov/acs/www/about/why-we-ask-each-question/computer/>, accessed 3/8/2018.

Table 19. Access to the Internet, and Whether Paid Provider: 2017

	Under 185% FPL	At or Over 185% FPL	All
Yes, by paying a cell phone company or internet service provider	80.0%	92.9%	88.8%
Yes, without paying a cell phone company or internet service provider	2.8%	1.6%	2.0%
No access to the internet	17.2%	5.5%	9.2%

Finally, the ACS asked about the ways in which the respondent or other household members accessed the internet. Eighty-six percent of the target population said they had a cellular data plan for a smartphone or other mobile device, and 70.9 percent said they had broadband (high-speed) internet services, such as cable, fiber optic, or DSL service installed in the household. Table 20 shows the percentage who responded yes for those in the target population, those not in the target population, and the percentage for all.

Table 20. Ways Internet is Accessed: 2017

	Under 185% FPL	At or Over 185% FPL	All
Cellular data plan for a smartphone or other mobile device	86.1%	88.2%	87.6%
Broadband (high-speed) internet service such as cable, fiber optic, or DSL service installed in the household	70.9%	84.1%	80.3%
Satellite internet service installed in the household	8.5%	10.8%	10.2%
Dial-up internet service installed in the household	2.5%	2.2%	2.3%
Some other service	1.4%	0.9%	1.1%

See Table 10 in the appendix for a breakdown by county of the percent of households with a computer and the percent of households with a broadband internet subscription from 2013 to 2017.

A study was conducted in 2017 to obtain information about social media and technology access and use among the SNAP-Ed target population to inform communication strategies for both social marketing and program implementation.³² According to the study, the vast majority of moms (92 percent) in the target population owned a smartphone, an estimate that is higher than the 79 percent from the ACS reported on Table 18 above; however, the ACS estimate included all adults in households with incomes below 185 percent of the FPL, whereas the target population survey included only mothers between certain ages

³² WestGroup Research, Arizona Department of Health Services/Arizona Nutrition Network Social Media & Technology Research, October 31, 2017.

with children. In the target population survey, only one in ten had a landline, four in ten moms had a Samsung cell phone, and one-quarter owned an iPhone. Moms were most likely to access the internet using their cell phones, and once online, they were most likely to go to social media sites (83 percent). This was followed by emailing family and friends (63 percent) and getting recipes (54 percent).

Facebook was the most frequently visited website, with two-thirds of study participants naming this site. Google followed, with just over half naming this search engine. Facebook was also the most frequently downloaded app, with over eight in ten smartphone owners saying they have this app on their phone.

When asked about social media sites a second time, Facebook surfaced as the most popular, with two-thirds using this site on a daily basis. When asked about their favorite site for recipes, Google was named most often (17 percent). Food Network, the most frequently mentioned recipe website, was named by just 5 percent of moms. One in five moms indicated they have visited the Eat Well Be Well website.

Television led as the source of news and information, with nearly six in ten preferring this source. The Internet followed at 52 percent. Four in ten got their news and information from social media, with just one in ten saying they got their news and information from a newspaper. Communications preferences were mixed. Text and email were each mentioned by one-third of all respondents, with one-quarter naming telephone.

ENVIRONMENT – OPPORTUNITIES FOR HEALTHY CHOICES

Healthy choices relating to nutrition and diet may be facilitated or limited by the environment at workplaces, schools, early child care settings, and in the larger community. In order to choose healthy foods, they must be available and affordable. Likewise, an active lifestyle can be facilitated by access to resources such as parks and safe walking paths. This section focuses primarily on statewide data; however, a plethora of more detailed information relevant to community needs assessment is available in the AZ Health Zone FFY2017-FFY2019 Annual Evaluation Reports. Although the annual reports are not focused primarily on needs assessment, they describe data on a community level directed towards food systems and active living for those areas of the state in which local agencies have focused initiatives.³³

ACTIVE LIVING OPPORTUNITIES IN COMMUNITY

Researchers at the University of Arizona Norton School of Family and Consumer Sciences compiled secondary data from a variety of sources for AZ Health Zone. Their analysis found that only 23 percent of the population in lower-income rural towns lived within walking distance (one-half mile or less) to a park (ranged from 0 to 72 percent). In Maricopa and Pima counties, where the two biggest cities are located, 59 percent of the population lived within a ten-minute walk from a park.³⁴

Although no data were readily available to assess work environments in Arizona in terms of their physical activity policies and opportunities, the U. S. Census American Community Survey asks about

³³ AZ Health Zone FFY17 Annual Evaluation Report, January 2018.

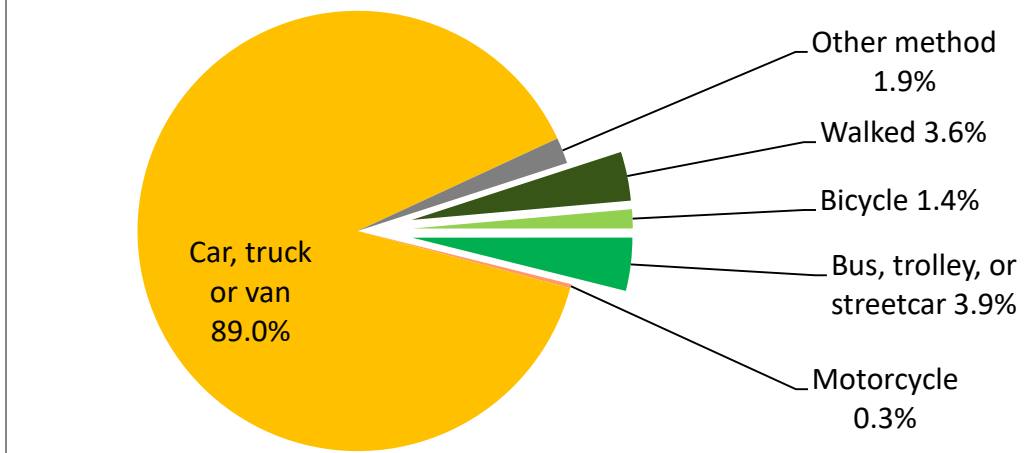
³⁴ AZ Health Zone, Rural Community Profiles, 2017, received by request, Phoenix, AZ, Accessed 11/30/2017.

transportation to work. The vast majority of adults in Arizona who work outside their homes drive cars, trucks, or vans to work. Walking, riding a bicycle, or riding a bus, trolley, or streetcar may be considered more active forms of transportation. Adults ages 16 and over in households with incomes that are SNAP- or WIC-eligible were more likely to take an active form of transportation. Looking only at those who worked outside of their homes, a measure was calculated combining those who used one of these active forms to get to work as a percent of all who worked outside their homes. Among the SNAP-Ed population, 8.8 percent took an active form of transportation, compared to 4.9 percent of workers in households with higher incomes. Table 21 shows the percentages of Arizona adults who traveled to work outside their homes by various means in the overall population and among those living in households with incomes that are eligible for WIC or SNAP from 2015 through 2017.

Table 21. Transportation to Work (2015-2017) among Adults Ages 16 and Over Working Outside Home						
	All Arizona Adults			WIC-/SNAP-Eligible Households		
	2015	2016	2017	2015	2016	2017
Walk	2.2	2.0	2.0	4.1	3.5	3.6
Bicycle	1.1	0.9	0.9	1.9	1.6	1.4
Bus, trolley, or streetcar	2.1	1.8	2.0	4.4	3.9	3.9
Subtotal: Active	5.4	4.7	4.9	10.3	9.0	8.8
Motorcycle	0.5	0.4	0.4	0.4	0.2	0.3
Car, truck, or van	92.8	93.4	93.4	87.3	88.3	89.0
Other method	1.3	1.5	1.3	2.0	2.5	1.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8 in Appendix A: County Statistics provides information on active transportation to work by PUMA

**Figure 24. Transportation to Work
Among Households with WIC/SNAP-Eligible Incomes
for Those Who Work Outside Their Homes: 2017**



ACCESS TO GROCERY STORES AND SUPERMARKETS

Households in lower-income neighborhoods often have less access to places that sell healthy foods at lower prices, such as large grocery stores and supermarkets. The majority of studies that have examined the relationship between store access and dietary intake find that better access to a supermarket or large grocery store is associated with healthier food intakes.³⁵

There are various ways to measure low food access. Measures take into account things such as: accessibility to sources of healthy food, as measured by distance to a store or by the number of stores in an area; individual-level resources that may affect accessibility, such as family income or vehicle availability; and neighborhood-level indicators of resources, such as the average income of the neighborhood and the availability of public transportation. One measure looks at low-income census tracts where a significant number (at least 500 people) or proportion (at least 33 percent) lives more than one mile from the nearest supermarket, supercenter, or large grocery store for an urban area or more than ten miles for a rural area. Low income is defined as tracts where the poverty rate is at least 20 percent or where the median family income is at or below 80 percent of the metropolitan area or the state median income. Using this definition, 17.0 percent of census tracts in Arizona qualified as low-income low-access tracts in 2015, compared to 12.7 percent of tracts in the US. Approximately 9.2 percent of Arizona residents live in low-income low access tracts, compared to approximately 6.5 percent in the US.³⁶ See Appendix A, Table 8: Census Tracts Identified as Low-Income Low Access Food Deserts.

³⁵ Larson, N.I., M.T. Story, and M.C. Nelson (2009). "Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S.," *American Journal of Preventive Medicine*, 36(1): 74-81.e10.

³⁶ United States Department of Agriculture, Economics Research Services, Data Products, Food Access Research Atlas, retrieved from <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/> accessed on 2/27/2018.

AZ Health Zone maintains a map of farmers' markets at www.azhealthzone.org/farmersmarkets, which also includes information on acceptance of electronic benefits transfer (EBT) for SNAP as well as FMNP and SNAP matching. For each \$10 spent on eligible foods, SNAP matching provides an additional \$10 for Arizona-grown fruits and vegetables.

HEALTHY FOODS AND PHYSICAL ACTIVITY AT SCHOOL

The School Health Profiles is a system of surveys assessing school health policies and practices in states, large urban school districts, and territories.³⁷ School Health Profiles provide information on healthy foods, physical education, and physical activity. One question on the survey asks principals whether the school has one or more groups that offer guidance on the development of policies or coordinate activities on health topics. Figure 28 shows the percentage of schools with such a group, as well as the upper and lower bounds of a 95 percent confidence limit.

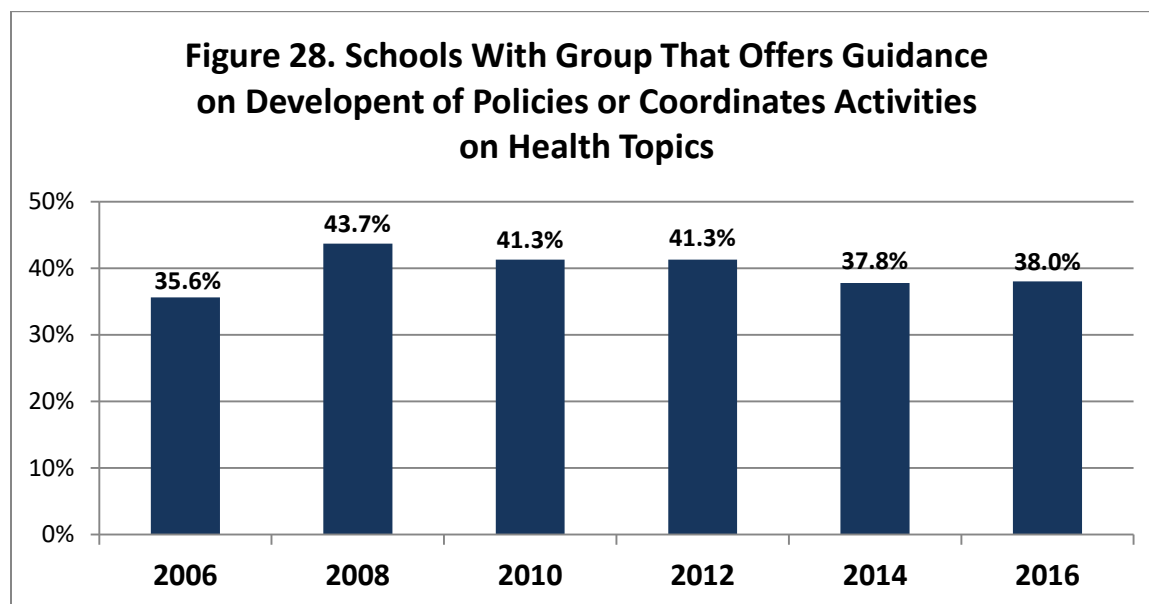


Table 22 shows highlights of the school environment presented in Arizona’s School Health Profiles from 2010 to 2016 related to nutrition.

Table 22. School Environment: Nutrition				
	2010	2012	2014	2016
Did not sell less nutritious food and beverages (salty snacks, candy, soda (pop), fruit drinks, and sports drinks) from vending machines or at school store, canteen, or snack bar.	56.2%	57.3%	56.3%	65.8%
Percentage that offered fruits or non-fried vegetables in vending machines, school stores, canteens or snack bars, and during	10.1%	6.9%	31.3%*	41.4%

³⁷ DC Adolescent and School health School Health Profiles, accessed on 03/23/2016. Retrieved from: www.cdc.gov/healthyyouth/data/profiles/index.htm.

celebrations when food and beverages are offered. *				
Percentage that prohibited all forms of advertising and promotion of candy, fast food restaurants, or soft drinks in all locations.	63.0%	55.7%	57.6%	59.2%
Percentage that used the School Health Index or a similar self-assessment tool to assess their policies, activities, and programs in nutrition.	24.9%	31.9%	36.1%	36.8%

*Only includes fruits or non-fried vegetables at school celebrations.

+Includes tobacco-use prevention.

° Includes HIV, STD, and teen pregnancy prevention.

Table 23 shows the percentage of schools requiring health education courses, and Table 24 shows the percentage of schools teaching required health education courses by grade from 2008 to 2016.

Table 23. School Health Profiles: Health Education Requirements					
	2008	2010	2012	2014	2016
Percentage of schools in which students are required to take two or more health education courses.	16.5%	18.5%	16.8%	15.3%	13.8%
Percentage of schools in which students take only one required health education course.	32.3%	35.9%	24.2%	29.7%	29.5%

Table 24. School Health Profiles: Percentage Teaching Required Health Education Course by Grade					
	2008	2010	2012	2014	2016
Grade 6	22.3%	26.8%	19.6%	13.4%	21.6%
Grade 7	28.5%	31.3%	21.7%	19.7%	22.6%
Grade 8	27.4%	30.8%	21.7%	19.0%	22.3%
Grade 9	23.2%	23.4%	16.9%	14.5%	23.4%
Grade 10	19.7%	17.0%	11.5%	10.5%	15.7%
Grade 11	12.9%	7.4%	6.9%	9.4%	14.1%
Grade 12	12.4%	7.9%	8.0%	8.8%	14.0%

Table 25 shows the percentage of schools that address various topics in their health education curricula.

Table 25. School Health Profiles: Topics Covered in Health Education Curriculum					
	2008	2010	2012	2014	2016
Comprehending concepts related to health promotion and disease prevention to enhance health.	66.4%	68.6%	54.3%	58.7%	52.4%

Analyzing the influence of family, peers, culture, media, technology, and other factors on health behaviors.	64.2%	64.1%	52.4%	55.9%	52.3%
Accessing valid information and products and services to enhance health.	56.1%	59.3%	48.5%	53.2%	43.7%
Using interpersonal communication skills to enhance health and avoid or reduce health risks.	64.3%	62.3%	52.2%	57.5%	51.8%
Using decision-making skills to enhance health.	70.5%	68.4%	56.8%	60.4%	56.3%
Using goal-setting skills to enhance health.	65.4%	64.1%	55.5%	58.6%	53.0%
Practicing health-enhancing behaviors to avoid or reduce risks.	70.6%	67.9%	57.1%	59.6%	56.1%
Advocating for personal, family, and community health.	59.1%	58.9%	53.2%	55.3%	48.8%

Table 26 shows some key indicators of the policies and practices of schools focused on opportunities offered to students, professional development, and self-assessment related to physical activity. There appears to be some improvement in 2016 over previous years for all three measures presented.

Table 26. School Policies and Practices on Physical Activity					
Percentage of schools that . . .	2008	2010	2012	2014	2016
Offered opportunities for all students to participate in intramural activities or physical activity clubs.	71.2%	72.1%	64.1%	65.8%	71.1%
Physical education teachers or specialists received professional development on physical education or physical activity during the past year.	*	*	*	58.4%	66.9%
Used the School Health Index or a similar self-assessment tool to assess their policies, activities, and programs in physical activity .	24.6%	25.8%	31.1%	32.4%	35.5%

*Data not available

There has been a general downward trend in Arizona schools requiring that students take physical education classes. Table 27 shows the percentage of schools with physical education requirements by grade level from 2008 to 2016.

Table 27. Schools Requiring Physical Education by Grade Level					
	2008	2010	2012	2014	2016
Grade 6	98.2%	96.5%	97.6%	81.5%	84.8%
Grade 7	94.7%	93.0%	91.7%	75.0%	80.4%
Grade 8	90.1%	89.1%	91.0%	73.8%	78.2%

Grade 9	89.7%	90.6%	88.5%	71.5%	64.0%
Grade 10	48.7%	57.0%	45.2%	27.4%	37.4%
Grade 11	42.3%	52.5%	41.0%	19.8%	34.9%
Grade 12	40.2%	51.3%	42.8%	20.3%	35.2%

Table 28 shows schools providing various resources to those who teach physical education.

Table 28. School Health Profiles: Percentage of Schools in Which Those Who Teach Physical Education Are Provided With Materials					
	2008	2010	2012	2014	2016
Goals, objectives, and expected outcomes for physical education.	80.9%	87.3%	77.5%	81.8%	86.3%
A chart describing the annual scope and sequence of instruction for physical education.	59.4%	64.5%	62.8%	64.2%	71.2%
Plans for how to assess student performance in physical education.	66.4%	69.5%	66.6%	70.3%	75.5%
A written physical education curriculum.	63.0%	69.2%	66.5%	68.1%	68.6%
Resources for fitness testing.	*	*	*	72.5%	78.5%
Physical activity monitoring devices, such as pedometers or heart rate monitors, for physical education.	*	*	*	45.9%	47.6%
Students participating in physical activity breaks in classrooms during the school day outside of physical education.	*	*	53.8%	59.1%	57.3%
Opportunities for all students to participate in intramural sports programs or physical activity clubs.	71.2%	72.1%	64.1%	65.8%	71.1%
Interscholastic sports available to students.	*	*	74.8%	77.5%	78.4%
Opportunities for students to participate in physical activity before the school day through organized physical activities or access to facilities or equipment for physical activity.	*	*	*	51.8%	50.3%
A joint use agreement for shared use of school or community physical activity facilities.	*	*	60.6%	56.1%	54.6%
Established, implemented, or evaluated comprehensive school physical activity program (CSPAP).	*	*	*	3.5%	2.3%

HEALTHY FOODS, BREASTFEEDING SUPPORT, AND PHYSICAL ACTIVITY IN EARLY CARE AND EDUCATION

The Arizona Department of Health Services developed the Empower Program to promote healthy environments and behaviors for children in Arizona’s licensed child care facilities.³⁸ The centers are given discounted annual licensing fees for agreeing to implement ten standards focusing on physical activity, sun safety, breastfeeding-friendly environments, Child and Adult Care Food Program, fruit juice, family-style meals, oral health, staff training, smokers’ helpline, and smoke-free campuses. Five of the standards relate directly to nutrition and physical activity:

1. Provide at least 60 minutes of daily physical activity (teacher-led and free play) and do not allow more than 60 minutes of sedentary activity at a time, or more than three hours of screen time per week.
2. Provide a breastfeeding-friendly environment.
3. Determine whether site is eligible for the United States Department of Agriculture (USDA) Child and Adult Care Food Program (CACFP), and participate if eligible.
4. Limit serving fruit juice to no more than two times per week.
5. Serve meals family style and do not use food as a reward.

Each Empower standard has specific components, and a standardized tool is used to ask facilities to rate their level of implementation of each of the components of each standard. A standard is rated as fully implemented when a facility reports that they have fully implemented each of the components of the standard. The standard is rated as partially implemented when a facility reports implementing some of the components at least partially. ADHS Bureau of Child Care Licensing staff collects surveys from child care facilities when they go out to do their licensing reviews, and also takes comments from and educates child care staff on the Empower standards.

Physical Activity

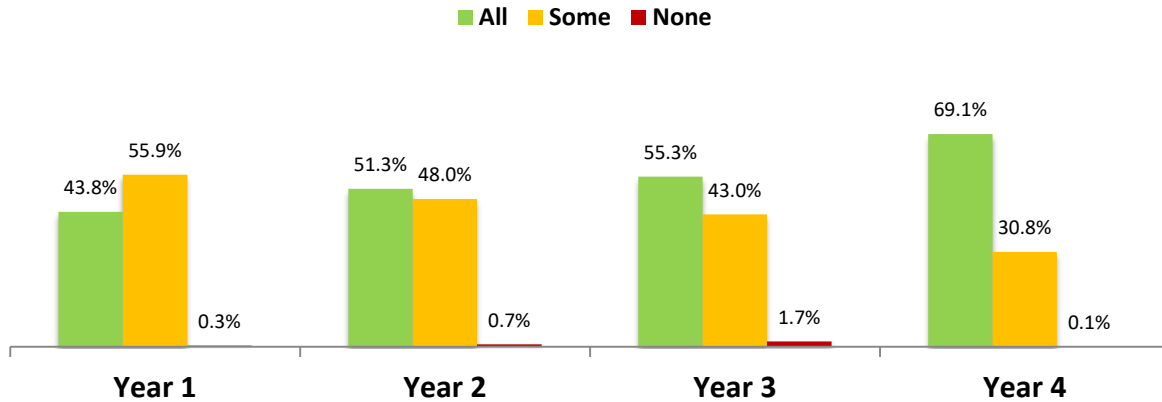
The physical activity standard requires planned daily physical activity in curricula for children one year and older with the following ten components:

1. Include at least 60 minutes per day for children one year and older.
2. Include teacher-led activities.
3. Include free play opportunities.
4. Include opportunity to participate in outdoor and indoor physical activity.
5. Include moderate levels of physical activity.
6. Include vigorous levels of physical activity.
7. Limit sedentary time to less than 60 minutes at a time, except when sleeping.
8. Limit screen time to three hours or less per week.
9. Prohibit using or withholding physical activity as punishment.

³⁸ To learn more about the program, please see the Empower Guidebook, Third Edition: Ten Ways to Empower Children to Live Healthy Lives, Standards for Empower Child Care Facilities in Arizona.

10. Make information on screen time available (in English and Spanish) to families at least once per year.

Figure 29. Percentage of Facilities Implementing All, Some, or None of the Components of the Physical Activity Standard



The percentage of facilities reporting full implementation of all ten physical activity components grew from 44 percent in year one to 69 percent in year 4, as shown in Figure 29. By the fourth year of evaluation, approximately nine in ten facilities reported fully implementing nine of the ten components. Component 6, which focuses on vigorous activity, increased significantly in year four, which may have been due, in part, to a wording change on the questionnaire to include examples of vigorous activity. The component focused on providing information on screen time to families also increased significantly, although it remained the component with the lowest levels of implementation among the physical activity components. Changes made to the survey tool addressing feedback from previous years may have accounted for some of the increases observed in implementation levels. Some words, such as moderate, vigorous, sedentary, and prohibits, were changed to language that is more familiar to providers, and screen time was clarified.

Breastfeeding

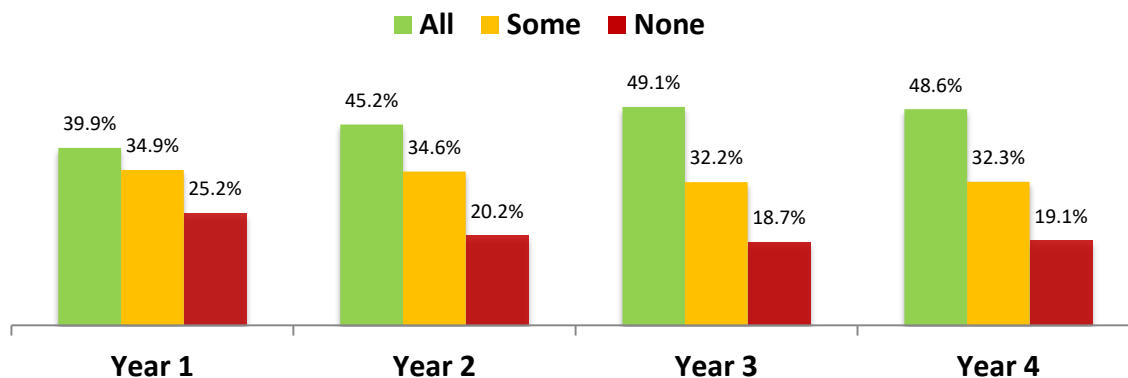
The breastfeeding standard requires provision of ongoing support to breastfeeding mothers with the following four components:

1. Breastfeeding mothers, including employees, shall be provided a private and sanitary place to breastfeed their babies or express milk. A bathroom is not acceptable.
2. Provide a designated space in a refrigerator or freezer for breastmilk storage.
3. Reassure nursing mothers that they are welcome by displaying breastfeeding promotion information.
4. Provide information on breastfeeding (in English and Spanish) to families at least once per year.

The percentage of facilities that reported full implementation of all four breastfeeding components grew from 40 percent in year one to 49 percent in year four (see Figure 30). However, a substantial

proportion of facilities say that they have not implemented any of the components. The component that was most often reported as fully implemented was to provide a place to breastfeed or express milk, followed by providing a place in the refrigerator to store milk. Displaying information promoting breastfeeding and providing information to families was less likely to be fully implemented. Comments given by child care center workers to licensing staff revealed the perception that many thought that if infants were not enrolled in their facility, then this standard did not apply to them. This is a common misunderstanding of the standard, and education has subsequently focused on explaining how the standard applies to all facilities and to staff, who may themselves be breastfeeding mothers, as well as mothers of breastfeeding infants whose older siblings may be enrolled at the facility.

Figure 30. Percentage of Facilities Implementing All, Some, or None of the Components of the Breastfeeding Standard



CACFP

In earlier years, the CACFP standard was evaluated solely by whether or not a facility had a written policy on determining eligibility status for CACFP. This standard was changed in the fourth year, when respondents began to be asked to report their level of implementation of determining eligibility status for CACFP. In the fourth annual evaluation, 61.7 percent reported full implementation of this standard, with another 2.4 percent reporting partial implementation. Classroom directors and staff are usually the ones filling out Empower questionnaires, and they may not be aware of CACFP policies, since determining eligibility is typically done by program administrators.

Fruit Juice

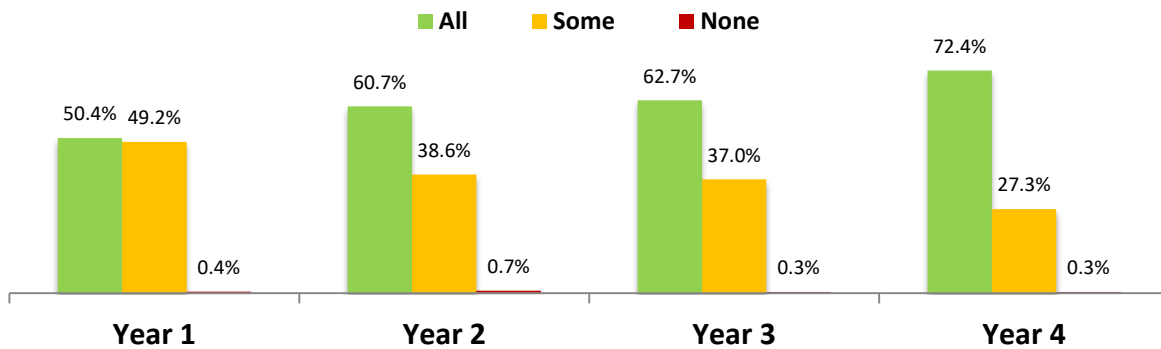
The fruit juice standard requires a commitment to supporting children in establishing lifelong healthy eating and drinking habits with the following seven components:

1. Offer water throughout the day.
2. Offer water as the first choice for thirst.
3. Prohibit serving fruit juice more than two times per week to children one year or older.

4. Prohibit serving more than a half cup (or four ounces) of fruit juice at one time for children less than six years of age.
5. Serve 100 percent fruit juice with no added sugar or never serve juice.
6. Serve fruit juice only during meal or snack time.
7. Provide information on fruit juice (in English and Spanish) to families at least once per year.

Approximately 50 percent of facilities reported full implementation of all seven fruit juice components in year one. By year four, that percent had grown to 72 percent (see Figure 31).

Figure 31. Percentage of Facilities Implementing All, Some, or None of the Components of the Fruit Juice Standard



Nearly all facilities reported full implementation of the first two components of the standard, offering water throughout the day and offering water as the first choice for thirst. Most facilities reported fully implementing the component related to serving 100 percent fruit juice or never serving fruit juice. The majority of comments from child care facility staff were that the facility does not serve juice at all, and many mentioned not serving juice because it was not allowed. Several noted that parents sometimes give the child juice for lunch or snack. A few respondents only provide milk or water at their facility.

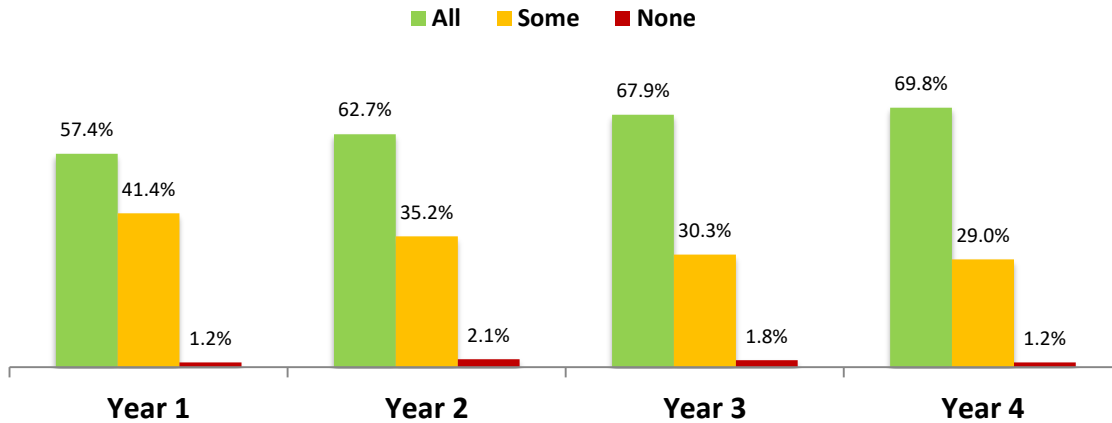
Family-Style Meals

The family-style meal standard requires a commitment to supporting children in establishing lifelong healthy eating and drinking habits with the following six components:

1. Serve meals family style whenever possible.
2. Utilize child-friendly serving utensils and containers.
3. Participate, sit, and interact with children at mealtime.
4. Allow children to serve themselves so they may choose what to put on their plates and how much to eat.
5. Prohibit using food as a reward or punishment.
6. Provide information on healthy eating (in English and Spanish) to families at least once per year.

Approximately 57 percent of facilities reported full implementation of all six family-style meals components in year one. By year four, 70 percent were reporting full implementation, as shown in Figure 32. The component with the highest level of full implementation is the component to prohibit using food as a punishment or reward, while the component with the lowest level of full implementation relates to serving meals family style.

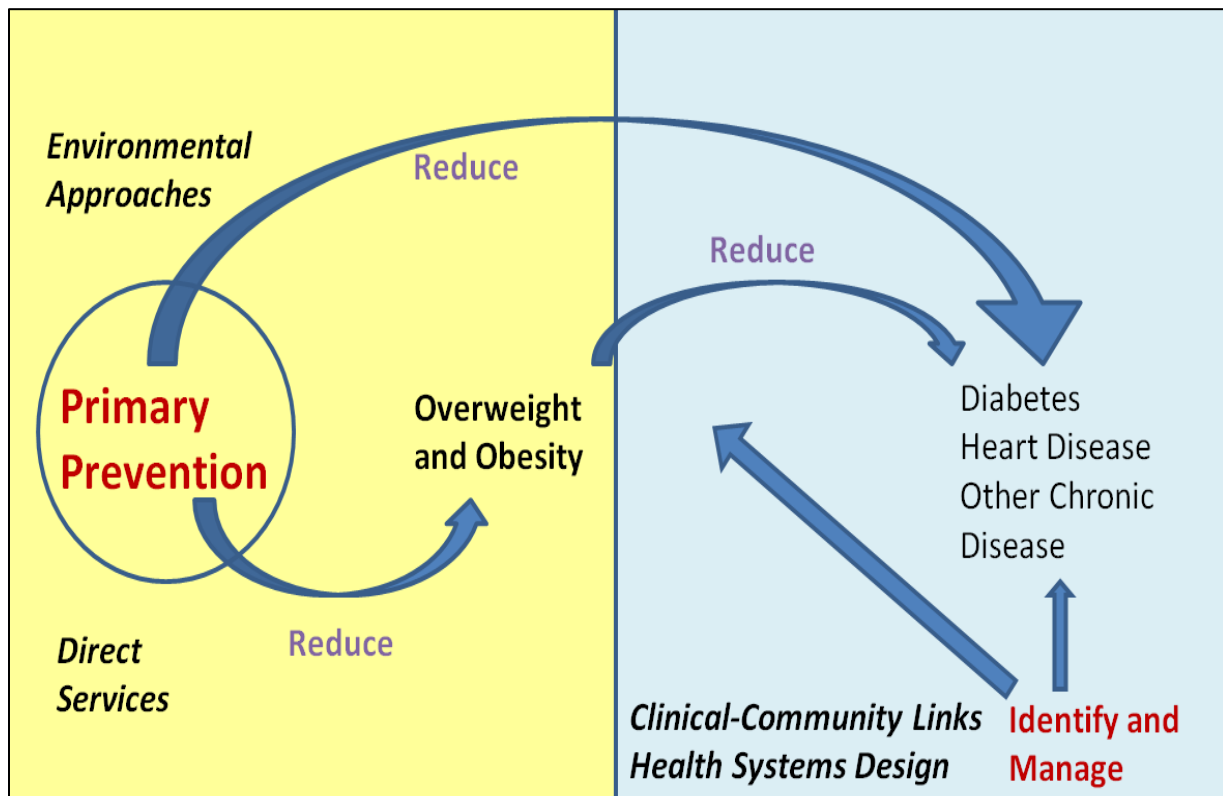
Figure 32. Percentage of Facilities Implementing All, Some, or None of the Components of the Family-Style Meals Standard



FINDINGS 3: OTHER NUTRITION-RELATED PROGRAMS AND SERVICES

Arizona has many collaborative opportunities with nutrition and physical activity-related programs and services. The AZ Health Zone resides within the Bureau of Nutrition and Physical Activity (BNPA), which is situated in the Division of Public Health Prevention Services within the Arizona Department of Health Services. There are two other bureaus within Prevention Services that collaborate to promote healthy lifestyles and reduce chronic disease using a variety of strategies, including direct services, social marketing, and other public health approaches. Figure 33 below shows the context from which BNPA operates within the agency.

Figure 33. BNPA Within the Context of Public Health Prevention Services



BNPA has the following broad goals:

1. Increase the initiation, duration, and exclusivity of breastfeeding
2. Improve nutrition and decrease hunger
3. Increase physical activity and reduce sedentary behaviors
4. Reduce obesity and overweight

An array of programs and services are administered and coordinated through BNPA, including direct services, such as provision of supplemental foods, nutrition education, and peer support, as well as an increasing emphasis on policy, systems, and environmental change. Two large United States Department

of Agriculture (USDA) programs – the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and SNAP-Ed- drive many of the Bureau’s strategies, but there are also other activities that are pursued through grant activities and coordination with other prevention service programs and community partners. A synergy between all programs is sought in order to leverage resources towards collective impact. The Bureau has adopted strategies that intervene on individual, community, and institutional levels, targeting different segments of the population. In this section, programmatic activity that complements and coordinates with the activities of the AZ Health Zone is described.

BREASTFEEDING STRATEGIES

The Bureau has adopted strategies that intervene on individual, community, and institutional levels, and that target different segments of the population. Together, over the long term, these strategies are expected to lead to a higher proportion of babies being born to mothers in Arizona who breastfeed, who continue to breastfeed at 6 months and 12 months, and who exclusively breastfeed at 3 months and 6 months. In other words, the Bureau will increase the state’s performance on Healthy People MICH 21.1 through 21.5 by implementing strategies in four major areas: A. Training B. Technical Assistance C. Policies and Procedures and D. Direct Support Services. Table 29 shows how funding from various programs will contribute to a collective impact to promote breastfeeding.

Table 29. Breastfeeding Strategies by Program/Funding Source				
	WIC	WIC Peer Counseling Grant	AZ Health Zone	Multifunded Sources
A. Training	●	●	●	●
B. Technical Assistance	●	●	●	●
C. Policy and Procedure Development and Implementation	●	●		●
D. Direct Support	●	●		●

NUTRITION STRATEGIES

The Bureau has adopted strategies that intervene on many levels, ranging from distributing healthy foods to at-risk populations to changing the food environment to make healthy foods more accessible, and promoting policy change. Together, over the long term, these strategies are expected to lead to greater accessibility of healthy foods and the knowledge to choose them. Table 30 shows how various Bureau strategies work to collectively impact nutrition in Arizona.

Table 30. Nutrition Strategies by Program/Funding Source			
	WIC	AZ Health Zone	Empower
A. Distribute Food	●		

B. Nutrition Education	•	•	
C. Workforce Development/Training	•		•
D. Policy, Systems, and Environmental (PSE) Change	•	•	•

PHYSICAL ACTIVITY STRATEGIES

The Bureau has adopted strategies that intervene on many levels and target different segments of the population. Table 31 shows how various Bureau strategies work together to collectively impact the goal of increasing physical activity.

Table 31. Physical Activity Strategies by Program/Funding Source			
	WIC	AZ Health Zone	Empower
A. Workforce Development	•	•	•
B. Direct Education		•	
C. Policy, Systems, and Environmental (PSE) Change		•	•

STATE NUTRITION ACTION COMMITTEE

The AZ Health Zone officially launched the State Nutrition Action Committee (SNAC) in June 2017. The SNAC has elected to use the *collective impact* model so as to engage multisector partners in improving health outcomes in Arizona. The steering committee is comprised of staff from multiple programs within the Arizona Department of Economic Security, Arizona Department of Education, Arizona Department of Health Services, and the Arizona Dairy Council.

Mission: Strategically align nutrition and physical activity efforts across programs to ensure that all Arizonans have equal access to knowledge, as well as the ability to make choices to live a healthy lifestyle.

Work Groups:

1. Physical Activity
2. Healthy Eating
3. Breastfeeding
4. Maximize Reach and Utilization of Resources by Eligible Persons
5. Consistency of Messaging Across Partners
6. Summer Food Assistance Program

FINDINGS 4: UNDERSERVED AREAS AND NEEDIEST AUDIENCE

On August 22, 1996, President Clinton signed into law "The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193)," which requires work in exchange for time-limited assistance.³⁹ To be eligible for SNAP, work requirements include registering for work, not voluntarily quitting a job or reducing hours, taking a job if offered, and participating in employment and training programs, if assigned by the State. Able-bodied adults without dependents are required to work or participate in a work program for at least 20 hours per week for more than three months in a 36-month period, although some special groups may not be subject to these requirements, including children, seniors, pregnant women, and people who are exempt for physical or mental health reasons.⁴⁰ States are able to apply for waivers from these work requirements in areas with high unemployment rates.

An estimated 1,517,872 people in 2016 lived in households with incomes below 130 percent of the federal poverty level. In 2016, three counties in Arizona – Maricopa, Pima, and Yavapai – lost waivers that had been in place due to high unemployment rates. Consequently, 4,902 adults between the ages of 18 and 50 who were unemployed, worked less than 20 hours per week, or had no children living in their homes were removed from the estimate, leaving 1,512,970 who were eligible for SNAP. Less than half of them (44.8 percent, n=677,872) actually received benefits, leaving 55.2 percent unserved, including 404,167 males, 430,931 females, and 129,172 disabled. Data were not available to determine whether some of the people excluded from this analysis could have been pregnant or otherwise exempt from the work requirement.

EXTREME POVERTY

Thirty-five percent of the SNAP-eligible population lived in extreme poverty in 2016, characterized by household incomes below 50 percent of the federal poverty level. Only half (50.4 percent) of them received SNAP benefits, leaving 263,030 people, or 49.6 percent, who did not. People in extreme poverty represent 31.5 percent of all who are eligible for SNAP but do not receive benefits. Table 32 shows this population by PUMA, showing those in extreme poverty and whether or not they were served by SNAP in 2016.

³⁹ <https://aspe.hhs.gov/report/personal-responsibility-and-work-opportunity-reconciliation-act-1996>, accessed on 4/4/2018.

⁴⁰ <https://www.fns.usda.gov/snap/eligibility#Who is in a SNAP household?>, accessed on 4/4/2018.

Table 32. Population in Extreme Poverty Unserved by SNAP

		Total	Not on SNAP	Percent Unserved
00100	Maricopa County--Gilbert (South) & Queen Creek Towns	3,478	2,666	76.7%
00101	Maricopa County--Mesa City (East)	8,560	6,545	76.5%
00102	Maricopa County--Mesa City (North Central)	9,362	5,502	58.8%
00103	Maricopa County--Mesa City (West)	13,317	8,743	65.7%
00104	Maricopa County--Mesa City (South Central)	11,451	5,823	50.9%
00105	Maricopa County--Gilbert Town (North)	5,753	5,160	89.7%
00106	Maricopa County--Chandler City (Northeast)	4,799	1,556	32.4%
00107	Maricopa County--Chandler City (South)	2,217	2,217	100.0%
00108	Maricopa County--Tempe (South) & Chandler (Northwest) Cities	6,646	2,707	40.7%
00109	Maricopa County--Tempe City (North)	21,982	19,089	86.8%
00110	Maricopa County--Scottsdale City (Southwest) & Paradise Valley Town	6,561	5,635	85.9%
00111	Maricopa County (Northeast)--Scottsdale City (Southeast) & Fountain Hills Town	4,526	3,957	87.4%
00112	Maricopa County--Scottsdale (North), Phoenix (Far Northeast) Cities & Cave Creek	3,843	3,843	100.0%
00113	Phoenix City (Northeast)	4,253	1,907	44.8%
00114	Phoenix City (Northeast Central)	8,376	3,411	40.7%
00115	Phoenix City (Northwest Central)	10,605	4,804	45.3%
00116	Phoenix City (Uptown)	15,633	8,093	51.8%
00117	Phoenix City (East)	7,009	3,738	53.3%
00118	Phoenix City--Downtown & Sky Harbor International Airport	16,722	5,625	33.6%
00119	Phoenix City (South)	19,530	5,862	30.0%
00120	Phoenix City--Ahwatukee & South Mountain	4,836	1,868	38.6%
00121	Phoenix (Southwest) & Tolleson Cities	8,233	4,193	50.9%
00122	Phoenix City--Maryvale (East)	15,507	4,024	25.9%
00123	Phoenix City--Maryvale (West)	14,584	4,916	33.7%
00124	Maricopa County--Glendale City (South)	15,637	7,038	45.0%
00125	Phoenix City (West)	9,388	3,103	33.1%
00126	Maricopa County--Glendale City (North)	10,963	4,185	38.2%
00127	Maricopa County--Peoria City (South & Central)	5,831	3,314	56.8%
00128	Phoenix City (North)	4,419	3,441	77.9%
00129	Phoenix (Far North) & Peoria (Northwest) Cities	3,762	2,804	74.5%
00130	Maricopa County--El Mirage City & Sun City	6,130	4,376	71.4%
00131	Maricopa County--Surprise City (Central)	8,080	5,802	71.8%
00132	Maricopa County--Goodyear, Glendale (West) & Litchfield Park (Northwest) Cities	2,368	2,116	89.4%

Table 32. Population in Extreme Poverty Unserved by SNAP

		Total	Not on SNAP	Percent Unserved
00133	Maricopa County--Avondale (Central) & Litchfield Park (Central) Cities	6,975	3,019	43.3%
00134	Maricopa County (West) & Gila River Indian Community (Northwest)	8,250	5,699	69.1%
00201	Pima County (West)	8,406	2,864	34.1%
00202	Tucson (West) & Marana Cities	7,969	4,225	53.0%
00203	Pima County (North Central)--Oro Valley Town	3,593	2,474	68.9%
00204	Pima County (Northeast)	5,083	4,716	92.8%
00205	Pima County (Southeast)--Tucson City (Far Southeast) & Sahuarita Town	4,344	3,582	82.5%
00206	Tucson City (Northeast)	11,051	4,578	41.4%
00207	Tucson City (Northwest)	13,047	8,587	65.8%
00208	Tucson City (South)	11,629	3,998	34.4%
00209	Tucson City (Southeast)	11,275	4,232	37.5%
00300	Navajo & Apache Counties	32,042	8,259	25.8%
00400	Coconino County--Flagstaff City	13,036	8,208	63.0%
00500	Yavapai County	14,187	9,107	64.2%
00600	Mohave & La Paz Counties--Lake Havasu City	14,542	6,547	45.0%
00700	Yuma County--Yuma City	11,524	4,187	36.3%
00800	Gila, Graham, Greenlee & Pinal (East) Counties	11,335	5,101	45.0%
00803	Pinal County (North)--Apache Junction City	6,380	4,002	62.7%
00805	Pinal County (Central)--Florence Town, Eloy (Northeast) & Coolidge Cities	7,913	3,210	40.6%
00807	Pinal County (West)--Maricopa, Casa Grande & Eloy (Southeast) Cities	16,611	4,996	30.1%
00900	Cochise & Santa Cruz Counties--Sierra Vista City	16,911	3,376	20.0%
	Arizona	530,464	263,030	49.6%

CHARACTERISTICS OF THE UNDERSERVED BY SNAP

The remainder of this section focuses on the entire population of people who are eligible for SNAP and the characteristics of those who do not receive SNAP benefits by age, race, Hispanic ethnicity, English language ability, education, and geographic area. For each topic, both underserved rates and the distribution of the underserved are presented. Rates show the percent of each subgroup that does not receive SNAP benefits, which helps in understanding the relative risk that is borne by each subgroup. However, because some subgroups are bigger than others, a higher rate of risk does not necessarily translate into a larger population of underserved people. The distribution of the underserved by

subgroup puts into perspective the overall numbers of people that are represented by each subgroup among the underserved.

AGE GROUP

Children below the age of 18 are more likely than adults to receive SNAP benefits for which they are eligible, while adults, especially young adults between the ages of 18 and 26 and older adults are most likely to be among the underserved by SNAP (see Figure 34).

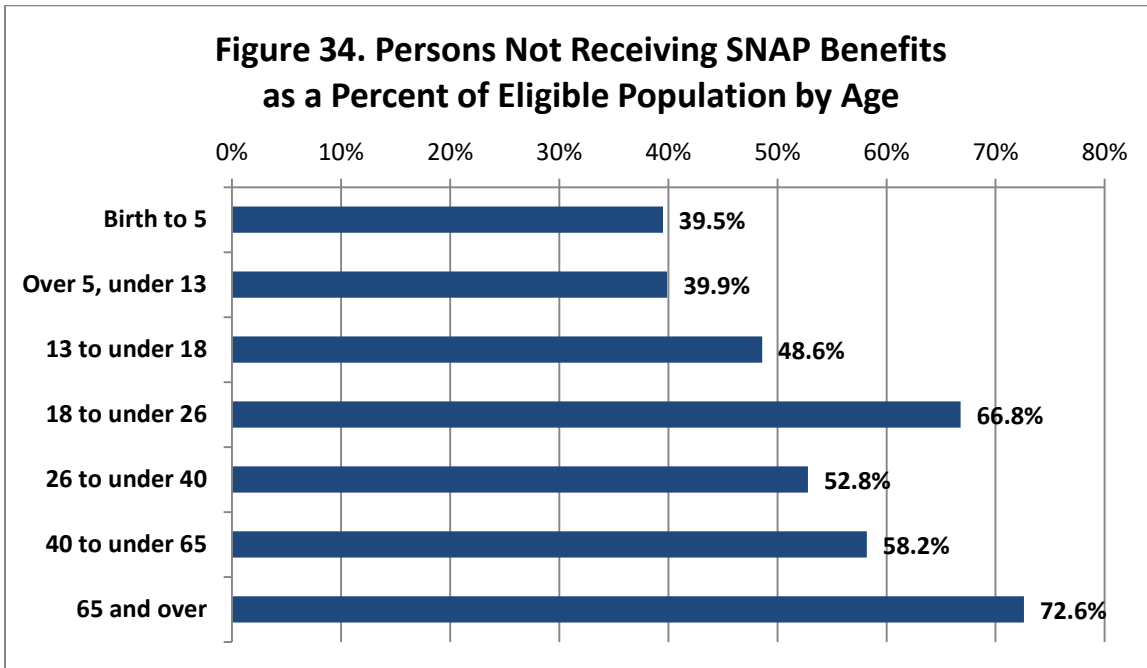
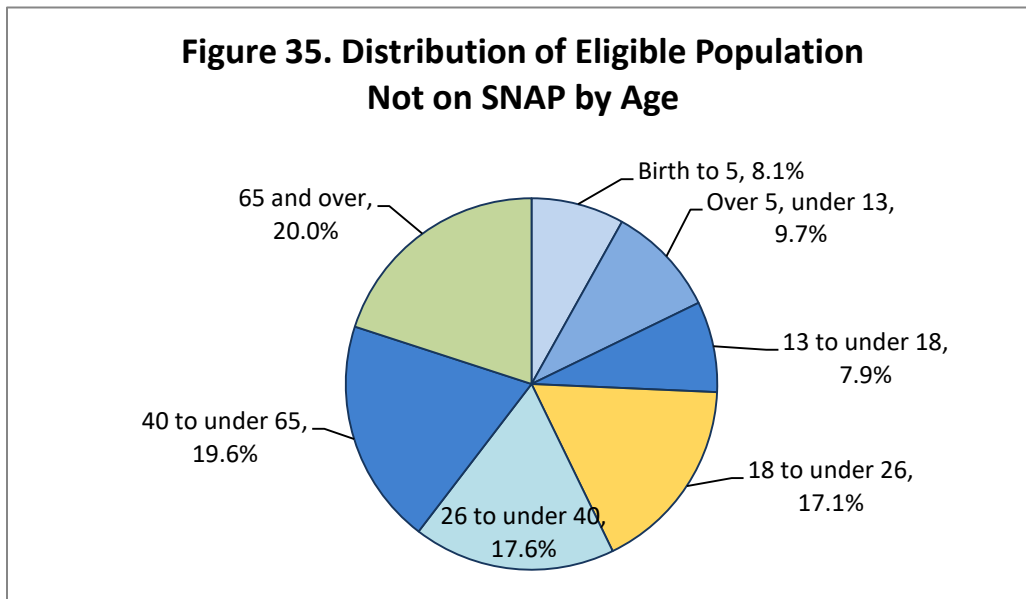


Figure 35 shows the distribution of all people who are eligible but do not receive SNAP benefits by age.



RACE AND HISPANIC ETHNICITY

Within racial groups, Asians, Native Hawaiian and other Pacific Islanders, and Whites are less likely to be receiving SNAP benefits for which they are eligible than other racial groups (see Figure 36).

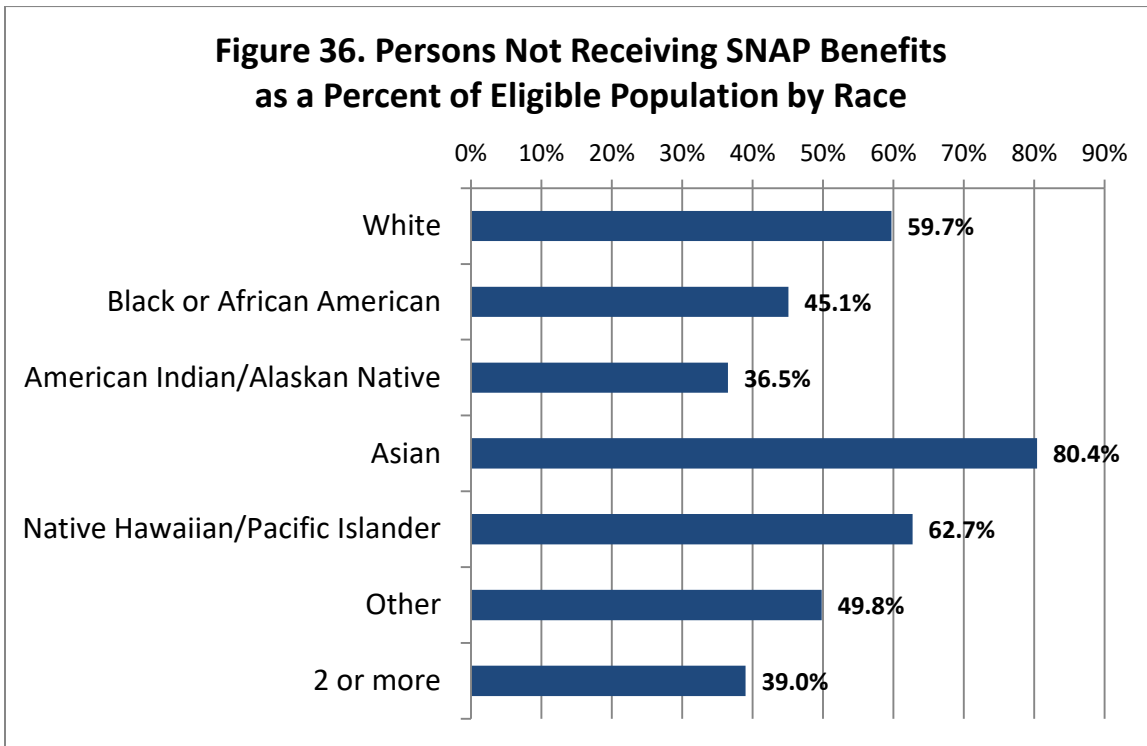
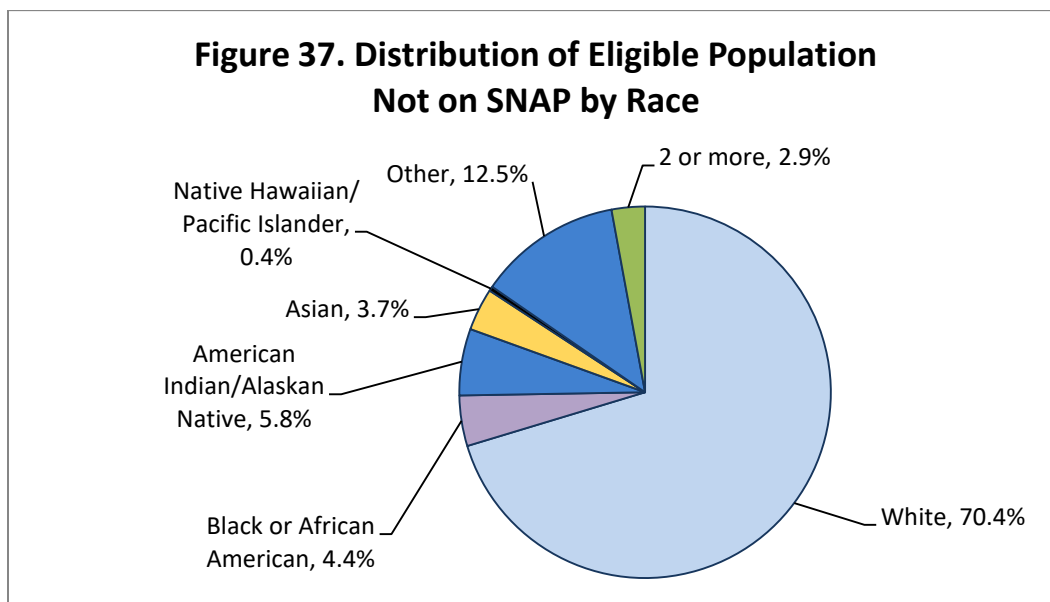


Figure 37 shows the distribution by race of the population who is eligible but does not receive SNAP benefits.



Eligible Hispanics were more likely to be on SNAP (50.1 percent), compared to 40.5 percent of non-Hispanics. Of all those who were eligible but not on SNAP, 40.6 percent were Hispanic and 59.4 percent were not.

ENGLISH ABILITY

It is not clear how English-speaking ability may affect receiving SNAP benefits. Approximately half of the eligible population who reported being able to speak English very well and 52.6 percent of those who reported speaking English not at all did not receive SNAP benefits for which they were eligible, while those who reported speaking English either well or not well were underserved (see Figure 38).

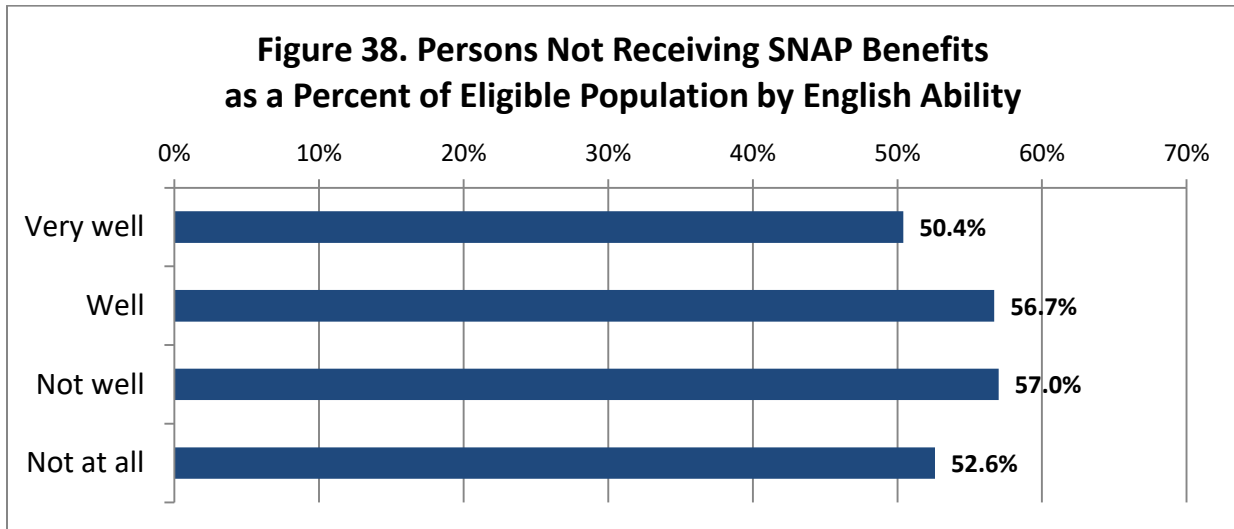
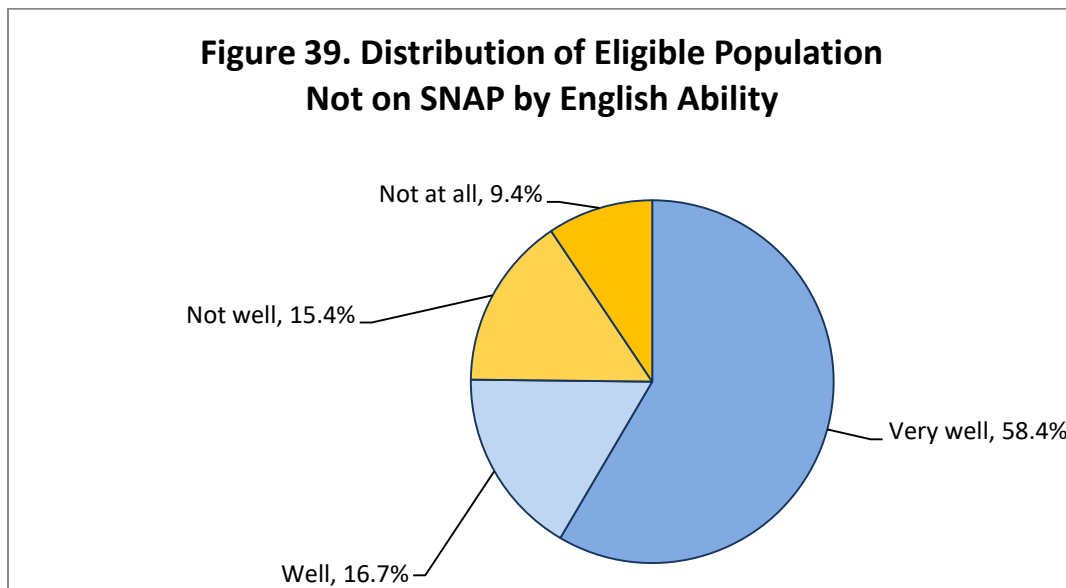


Figure 39 shows that among those who are eligible for SNAP but do not receive benefits, most speak English either very well or well, with one in four saying they speak English either not well or not at all.



EDUCATIONAL ATTAINMENT

There was an inverse relationship between educational attainment and receipt of SNAP benefits among the SNAP-eligible population. The likelihood of receiving benefits decreased with each higher level of educational attainment (see Figure 40).

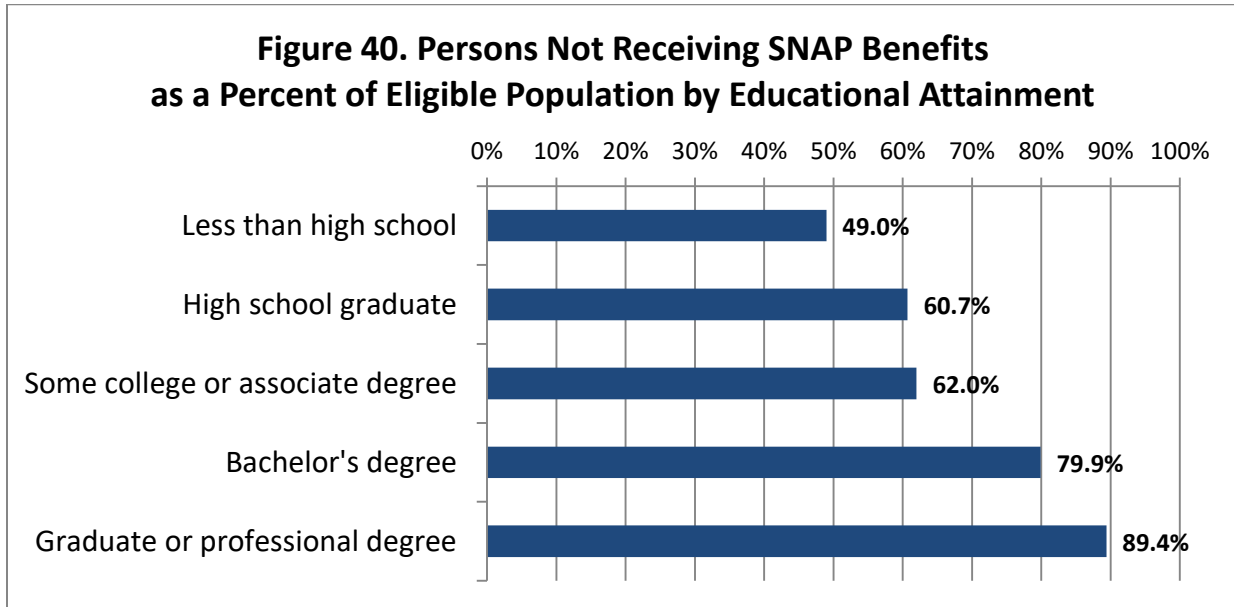
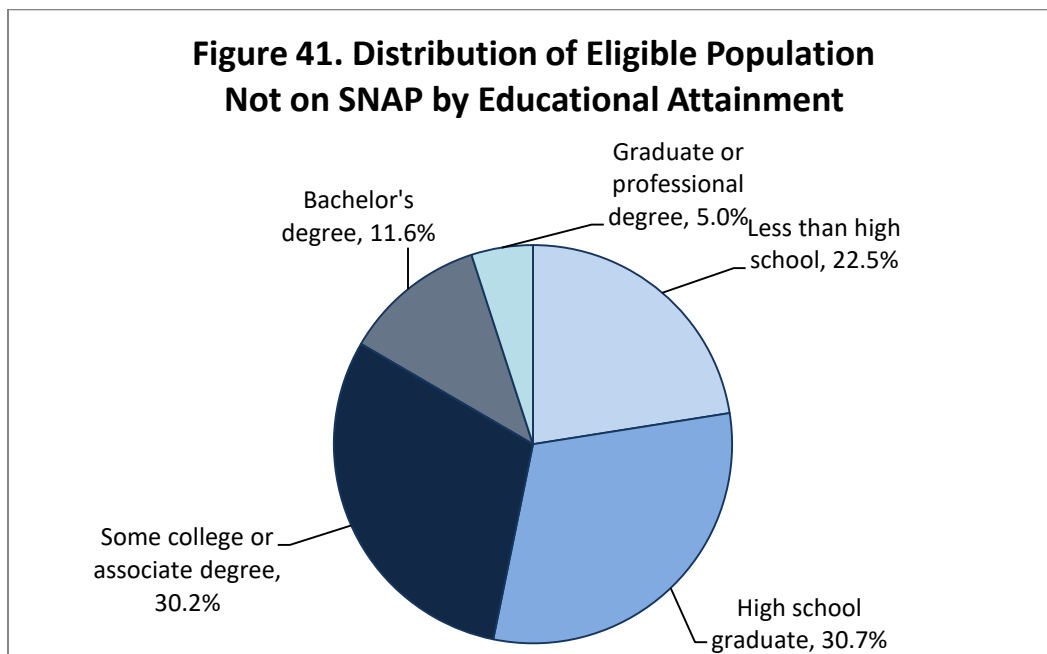


Figure 41 shows that most of those who are eligible for SNAP benefits but do not receive them are high school graduates and many have some college. Only 22.5 percent have less than a high school diploma.



GEOGRAPHICAL AREA

In some areas of the state, people who are eligible for SNAP benefits are less likely to receive them, leaving pockets of unserved in various geographical areas. Table 33 shows the number of people who are eligible for SNAP within each PUMA, the number of them who are not on SNAP, and the percentage of the eligible population who does not receive benefits for which they are eligible.

Table 33. Percent of SNAP-Eligible Population Receiving SNAP Benefits by PUMA

PUMA	PUMA NAME	SNAP-Eligible	Not on SNAP	Percent Unserved
00100	Maricopa County--Gilbert (South) & Queen Creek Towns	7,568	6,324	83.6%
00101	Maricopa County--Mesa City (East)	24,076	17,755	73.7%
00102	Maricopa County--Mesa City (North Central)	27,251	18,013	66.1%
00103	Maricopa County--Mesa City (West)	36,445	23,876	65.5%
00104	Maricopa County--Mesa City (South Central)	27,366	15,258	55.8%
00105	Maricopa County--Gilbert Town (North)	16,947	15,433	91.1%
00106	Maricopa County--Chandler City (Northeast)	20,636	13,185	63.9%
00107	Maricopa County--Chandler City (South)	7,158	6,949	97.1%
00108	Maricopa County--Tempe (South) & Chandler (Northwest) Cities	12,901	6,284	48.7%
00109	Maricopa County--Tempe City (North)	36,225	31,206	86.1%
00110	Maricopa County--Scottsdale City (Southwest) & Paradise Valley Town	17,644	13,578	77.0%
00111	Maricopa County (Northeast)--Scottsdale City (Southeast) & Fountain Hills Town	13,842	10,566	76.3%
00112	Maricopa County--Scottsdale (North), Phoenix (Far Northeast) Cities & Cave Creek	7,069	7,004	99.1%
00113	Phoenix City (Northeast)	12,476	6,663	53.4%
00114	Phoenix City (Northeast Central)	30,354	15,615	51.4%
00115	Phoenix City (Northwest Central)	28,249	14,093	49.9%
00116	Phoenix City (Uptown)	36,990	17,041	46.1%
00117	Phoenix City (East)	20,034	11,807	58.9%
00118	Phoenix City--Downtown & Sky Harbor International Airport	44,950	19,876	44.2%
00119	Phoenix City (South)	43,698	21,242	48.6%
00120	Phoenix City--Ahwatukee & South Mountain	11,978	7,518	62.8%
00121	Phoenix (Southwest) & Tolleson Cities	34,929	19,461	55.7%
00122	Phoenix City--Maryvale (East)	53,225	17,965	33.8%
00123	Phoenix City--Maryvale (West)	56,155	28,723	51.1%
00124	Maricopa County--Glendale City (South)	35,652	18,096	50.8%
00125	Phoenix City (West)	38,786	15,017	38.7%

Table 33. Percent of SNAP-Eligible Population Receiving SNAP Benefits by PUMA

PUMA	PUMA NAME	SNAP-Eligible	Not on SNAP	Percent Unserved
00126	Maricopa County--Glendale City (North)	20,781	11,524	55.5%
00127	Maricopa County--Peoria City (South & Central)	16,967	11,157	65.8%
00128	Phoenix City (North)	12,779	8,401	65.7%
00129	Phoenix (Far North) & Peoria (Northwest) Cities	8,533	7,070	82.9%
00130	Maricopa County--El Mirage City & Sun City	22,225	16,008	72.0%
00131	Maricopa County--Surprise City (Central)	16,748	13,446	80.3%
00132	Maricopa County--Goodyear, Glendale (West) & Litchfield Park (Northwest) Cities	10,243	8,971	87.6%
00133	Maricopa County--Avondale (Central) & Litchfield Park (Central) Cities	22,546	11,838	52.5%
00134	Maricopa County (West) & Gila River Indian Community (Northwest)	21,809	14,187	65.1%
00201	Pima County (West)	31,945	14,676	45.9%
00202	Tucson (West) & Marana Cities	26,218	17,627	67.2%
00203	Pima County (North Central)--Oro Valley Town	14,649	10,493	71.6%
00204	Pima County (Northeast)	12,286	11,207	91.2%
00205	Pima County (Southeast)--Tucson City (Far Southeast) & Sahuarita Town	12,943	9,849	76.1%
00206	Tucson City (Northeast)	27,975	13,553	48.4%
00207	Tucson City (Northwest)	40,560	21,143	52.1%
00208	Tucson City (South)	47,258	20,157	42.7%
00209	Tucson City (Southeast)	23,720	11,586	48.8%
00300	Navajo & Apache Counties	69,621	26,280	37.7%
00400	Coconino County--Flagstaff City	33,463	19,844	59.3%
00500	Yavapai County	43,881	31,273	71.3%
00600	Mohave & La Paz Counties--Lake Havasu City	54,204	22,790	42.0%
00700	Yuma County--Yuma City	52,803	23,916	45.3%
00800	Gila, Graham, Greenlee & Pinal (East) Counties	31,265	18,302	58.5%
00803	Pinal County (North)--Apache Junction City	21,331	15,865	74.4%
00805	Pinal County (Central)--Florence Town, Eloy (Northeast) & Coolidge Cities	19,407	9,931	51.2%
00807	Pinal County (West)--Maricopa, Casa Grande & Eloy (Southeast) Cities	42,879	20,145	47.0%
00900	Cochise & Santa Cruz Counties--Sierra Vista City	51,327	15,311	29.8%
	Arizona	1,512,970	835,098	55.2%

FINDINGS 5: IMPLICATIONS

The AZ Health Zone is entering a new five year grant cycle. In the FFY2016-FFY2020 grant cycle, the primary focus was shifting program implementation to include policy, systems, and environmental (PSE) change strategies. The program now has multiple years of evaluation data demonstrating effectiveness of programming. Population-level changes to behavioral outcomes cannot be expected at this point, but evaluation data is showing promising areas of progress.

In order to continue to enhance program implementation, the State Implementation Team will focus efforts over the next five years on the following areas:

Multi-level interventions - The AZ Health Zone will utilize the Prevention Institute's *Spectrum of Prevention* to serve as a guide in identifying layered activities and audiences that move toward a more comprehensive approach to increase the likelihood of impacting individuals and communities in a holistic manner. The levels are complementary and should be utilized together to produce deeper, more impactful behavior change results than what may be achieved by any single activity or initiative.

Community engagement - The AZ Health Zone seeks to strengthen and support efforts to engage individuals with low access to resources to have meaningful and sustainable projects in each community that address resident/ stakeholder-identified SNAP-Ed goals. The *Spectrum of Public Participation* will be used to help define community engagement activities

Trauma-Informed Approaches - The AZ Health Zone will work to be trauma aware and sensitive by engaging around the Substance Abuse and Mental Health Services Administration's (SAMHSA) six principles of a trauma informed approach: (1) Safety: creating spaces where people feel culturally, emotionally, and physically safe, the physical setting is safe and interpersonal interactions promote a sense of safety, (2) Trustworthiness & Transparency: provide full and accurate information with the goal of building and maintaining trust, (3) Peer Support: establishing safety and hope, building trust, enhancing collaboration, and utilizing their stories and lived experience to promote recovery and healing, (4) Collaboration and Mutuality: recognition that healing happens in relationships and partnerships with shared power and decision-making, (5) Empowerment Voice & Choice: individual's strength and experiences are recognized and built upon, and (6) Cultural, Historical, Gender Issues: moves past cultural stereotypes and biases and leverages healing values of traditional cultural connections (Figure 5).

The AZ Health Zone will continue the next grant cycle with many of the same evidence based strategies and activities to build on existing momentum. Training and technical assistance will continue to cover general implementation, but will also look to support the principles of multi-level interventions, community engagement, and trauma-informed approaches. AZ Health Zone as adopted equity as a foundational principle for all

When considering funding distribution models for the new grant cycle, AZ Health Zone prioritized data related to the social determinants of health. In addition to a base award to ensure minimal operations, funding factors included: rural vs. urban, poverty, educational attainment, race/ethnicity, and total population distribution. The new formula increased available funding to counties experiencing health disparities without decimating Maricopa and Pima counties, the main population centers in Arizona.

The FFY2016-FFY2020 funding formula included dollars designated to support program implementation targeted to Native Americans. Unfortunately, Arizona was unsuccessful in awarding a contract to a tribe and all efforts occurred through Local Implementing Agencies. In sticking with the newly adopted principles above, Arizona would like to award one or more contracts directly to tribe(s) in the new grant cycle. AZ Health Zone conducted an initial tribal consultation to explore other ways to support nutrition and physical activity efforts in tribal communities. FFY2021-2025 efforts will include additional tribal consultations with an end goal of Intergovernmental Agreement(s) with customized scopes of work between AZ Health Zone and one or more tribes. Tribes remain eligible to apply for funds through the primary request for grant application.

APPENDIX A: COUNTY STATISTICS

Table 1: Population, Density, Persons per Household, Mobility by County

Table 2: Total Births, AHCCCS Births, and AHCCCS Births as a Percent of All Births by County

Table 3: Income and Poverty, Disability, and No Health Insurance by County

Table 4: Race and Hispanic Origin by County

Table 5: Age and Sex by County

Table 6: Education by County

Table 7: Overweight and Obesity among Children Age 2-4 in WIC by County

Table 8: Active Transportation to Work by Public Use Microdata Area

Table 9: Census Tracts Identified as Low-Income Low Access Food Deserts

Table 10: Households with a Computer and Households with Broadband Internet Subscription

Table 1. Population, Density, Persons per Household, Mobility					
County	Total Population (July 2017)	Change Since April 2010	Per Square Mile in 2010	Persons per household (2013-2017)	Living in Same House 1 Year Ago (2013-2017)
Apache	71,818	0.4%	6.4	3.59	93.6%
Cochise	126,770	-3.5%	21.3	2.36	81.9%
Coconino	142,854	6.3%	7.2	2.65	77.4%
Gila	53,889	0.6%	11.3	2.42	84.6%
Graham	38,072	2.3%	8.1	3.04	82.4%
Greenlee	9,483	12.4%	4.6	2.76	83.3%
LaPaz	21,098	3.0%	4.6	2.30	90.0%
Maricopa	4,410,824	15.5%	414.9	2.75	82.4%
Mohave	209,550	4.7%	15.0	2.39	80.1%
Navajo	110,445	2.8%	10.8	3.07	85.9%
Pima	1,039,073	6.0%	106.7	2.45	79.1%
Pinal	447,138	19.0%	70.0	2.85	80.6%
Santa Cruz	46,511	-1.9%	38.3	2.95	88.1%
Yavapai	231,993	9.9%	26.0	2.29	82.9%
Yuma	212,128	8.4%	35.5	2.77	82.1%
Arizona	7,171,646 (2018)	12.2%	56.3	2.68	81.9%

Source: U. S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/fact/table>, on 8/30/2019.

Table 2. Total Births, AHCCCS Births, and AHCCCS Births As a Percent of All Births by County: 2018			
	Births	AHCCCS	% AHCCCS Births
Apache	910	650	71.4%
Cochise	1,349	684	50.7%
Coconino	1,501	786	52.4%
Gila	497	257	51.7%
Graham	513	239	46.6%
Greenlee	130	44	33.8%
LaPaz	187	133	71.7%
Maricopa	51,727	24,860	48.1%
Mohave	1,791	1,187	66.3%
Navajo	1,379	991	71.9%
Pima	10,660	5,248	49.2%
Pinal	4,494	2,124	47.3%
Santa Cruz	617	409	66.3%
Yavapai	1,771	1,005	56.7%
Yuma	3,030	1,872	61.8%
Arizona	80,562	40,494	50.3%

Source: Preliminary Arizona birth certificates data for 2018. Note: 6 births, 5 of which had AHCCCS as a payer, did not have a county of residence identified. Consequently, the sum of all counties is not equal to the statewide statistics.

Table 3. Income and Poverty, Disability, and No Health Insurance					
County	Median Household Income (in 2017 dollars), 2013-2017	Per Capita Income in Past 12 Months (in 2017 dollars), 2013-2017	Persons in Poverty, Percent (2017)	With a Disability Under Age 65 2017	No Health Insurance 2013-2017 Under Age 65
Apache	32,360	13,865	33.1%	9.5%	19.2%
Cochise	47,847	24,8962	16.1%	11.0%	10.5%
Coconino	53,523	25,722	18.4%	9.0%	13.1%
Gila	41,179	22,433	24.1%	14.6%	13.5%
Graham	48,173	17,874	20.9%	9.2%	10.0%
Greenlee	56,298	24,935	10.1%	8.3%	8.6%
LaPaz	36,479	21,707	20.9%	14.3%	19.8%
Maricopa	41,567	23,527	17.3%	14.8%	13.4%
Mohave	41,567	23,527	17.3%	14.8%	13.4%
Navajo	38,798	17,685	26.4%	12.4%	15.1%
Pima	48,676	27,323	16.6%	10.3%	10.9%
Pinal	52,628	22,944	13.0%	10.5%	11.0%
Santa Cruz	39,630	19,482	23.6%	6.9%	14.0%
Yavapai	48,259	27,504	13.9%	12.7%	12.9%
Yuma	43,253	10,600	19.0%	6.5%	14.2%
Arizona	53,510	27,964	14.9%	8.5%	12.0%

Source: U. S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/fact/table>, on 8/30/2019.

Table 4. Race and Hispanic Origin: 2017

County	White alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Two or More Races	Hispanic or Latino**	White alone, not Hispanic or Latino	Language other than English Spoken in Home***
Apache	22.4%	0.6%	74.9%	0.4%	*	1.6%	6.4%	18.1%	54.6%
Cochise	87.7%	4.6%	1.8%	2.3%	0.4%	3.2%	35.6%	54.9%	29.5%
Coconino	65.7%	1.5%	27.6%	2.1%	0.2%	3.0%	14.3%	54.0%	23.9%
Gila	78.5%	0.8%	17.8%	0.9%	0.2%	1.7%	18.7%	62.0%	16.2%
Graham	81.7%	1.8%	13.6%	0.7%	0.2%	1.9%	33.1%	51.0%	21.3%
Greenlee	90.2%	2.1%	4.1%	0.9%	0.1%	2.6%	47.3%	45.8%	22.9%
LaPaz	76.5%	1.2%	18.2%	1.0%	0.1%	3.0%	18.1%	56.7%	18.9%
Maricopa	83.1%	6.3%	2.8%	4.6%	0.3%	3.0%	31.3%	54.9%	26.6%
Mohave	91.8%	1.3%	3.0%	1.2%	0.3%	2.4%	16.8%	76.9%	11.2%
Navajo	50.4%	1.0%	45.6%	0.7%	0.1%	2.2%	11.5%	41.7%	36.5%
Pima	84.9%	4.2%	4.3%	3.4%	0.2%	3.0%	37.6%	51.4%	28.4%
Pinal	82.8%	5.2%	6.7%	1.9%	0.4%	3.0%	30.4%	56.6%	20.5%
Santa Cruz	95.7%	0.9%	1.4%	0.8%	0.1%	1.0%	83.4%	14.9%	78.6%
Yavapai	93.4%	0.9%	2.1%	1.2%	0.1%	2.2%	14.7%	80.4%	10.8%
Yuma	91.2%	2.7%	2.3%	1.6%	0.3%	2.0%	64.3%	30.4%	53.8%
Arizona	82.8%	5.1%	5.3%	3.7%	0.3%	2.9%	31.6%	54.4%	27.0%

Source: U. S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/fact/table>, on 8/30/2019.

*More than 0, but less than .05 percent

**Hispanics may be of any race, so also are included in applicable race categories.

***2013-2017 for persons age 5 years and over

Table 5. Age and Sex: July 2017				
County	Under 5 Years	Under 18 Years	Persons 65 and Older	Female Persons
Apache	6.7%	27.2%	15.3%	50.8%
Cochise	5.8%	21.5%	22.3%	49.2%
Coconino	5.5%	20.6%	12.5%	50.6%
Gila	5.6%	20.1%	28.8%	50.6%
Graham	7.2%	27.0%	13.9%	46.7%
Greenlee	8.0%	27.3%	13.2%	48.6%
LaPaz	4.7%	16.8%	39.3%	48.7%
Maricopa	6.3%	23.9%	15.2%	50.5%
Mohave	4.4%	17.1%	30.3%	49.4%
Navajo	6.9%	26.7%	18.1%	49.9%
Pima	5.6%	20.9%	19.8%	50.8%
Pinal	5.6%	22.5%	20.4%	47.9%
Santa Cruz	6.9%	26.7%	18.1%	51.7%
Yavapai	4.2%	16.2%	31.6%	51.2%
Yuma	7.2%	25.2%	18.8%	48.5%
Arizona	2.9%	31.6%	54.4%	27.0%

Source: U. S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/fact/table>, on 8/30/2019.

Table 6. Education (2013-2017)		
County	High School or More	Bachelor's Degree or More
Apache	78.6%	11.5%
Cochise	87.1%	23.6%
Coconino	89.7%	35.4%
Gila	85.0%	19.0%
Graham	85.8%	14.1%
Greenlee	89.7%	12.1%
LaPaz	77.2%	11.2%
Maricopa	87.1%	31.4%
Mohave	84.7%	12.3%
Navajo	82.6%	15.5%
Pima	88.2%	31.6%
Pinal	85.2%	18.6%
Santa Cruz	75.4%	22.1%
Yavapai	90.2%	25.0%
Yuma	71.6%	14.3%
Arizona	86.5%	28.4%

Source: U. S. Census Bureau QuickFacts, accessed at <https://www.census.gov/quickfacts/fact/table>, on 8/30/2019.

**Table 7. Overweight and Obesity
Among Children Age 2-4 in WIC by County: 2018**

	Obese	Overweight	Total Children
Apache	11.3%	8.9%	247
Cochise	13.1%	13.7%	1,795
Coconino	12.6%	15.0%	882
Gila	14.9%	12.6%	470
Graham	18.1%	15.9%	498
Greenlee	15.2%	15.2%	138
Maricopa	14.7%	16.1%	42,711
Mohave	11.4%	15.6%	1,624
Navajo	11.4%	17.1%	884
Pima	14.5%	15.5%	9,231
Pinal	15.4%	15.9%	4,697
Santa Cruz	14.9%	14.8%	1,339
Yavapai	11.5%	15.7%	1,673
Yuma	16.2%	14.4%	4,256
La Paz	*	*	*
Arizona	14.6%	15.8%	71,775

* Too few cases to report

Source: Arizona WIC Program Data

Table 8. Active Transportation to Work by PUMA: 2017

PUMA	PUMANAME	Active (Walk, Bus, or Bicycle)	Work Outside Home	Percent Active
00900	Cochise & Santa Cruz Counties--Sierra Vista City	641	15,854	4.0%
00400	Coconino County--Flagstaff City	2,245	14,355	15.6%
00800	Gila, Graham, Greenlee & Pinal (East) Counties	312	10,616	2.9%
00111	Maricopa County (Northeast)--Scottsdale City (Southeast) & Fountain Hills Town	44	2,641	1.7%
00134	Maricopa County (West) & Gila River Indian Community (Northwest)	540	8,363	6.5%
00133	Maricopa County--Avondale (Central) & Litchfield Park (Central) Cities	1,131	12,346	9.2%
00106	Maricopa County--Chandler City (Northeast)	496	10,373	4.8%
00107	Maricopa County--Chandler City (South)	13	2,416	0.5%
00130	Maricopa County--El Mirage City & Sun City	0	5,992	0.0%
00100	Maricopa County--Gilbert (South) & Queen Creek Towns	350	4,801	7.3%
00105	Maricopa County--Gilbert Town (North)	1,054	7,569	13.9%
00126	Maricopa County--Glendale City (North)	977	9,650	10.1%
00124	Maricopa County--Glendale City (South)	1,238	16,052	7.7%
00132	Maricopa County--Goodyear, Glendale (West) & Litchfield Park (Northwest) Cities	273	4,013	6.8%
00101	Maricopa County--Mesa City (East)	262	10,194	2.6%
00102	Maricopa County--Mesa City (North Central)	1,327	12,254	10.8%
00104	Maricopa County--Mesa City (South Central)	1,375	11,867	11.6%
00103	Maricopa County--Mesa City (West)	1,000	18,471	5.4%
00127	Maricopa County--Peoria City (South & Central)	304	7,032	4.3%
00112	Maricopa County--Scottsdale (North), Phoenix (Far Northeast) Cities & Cave Creek	34	1,690	2.0%
00110	Maricopa County--Scottsdale City (Southwest) & Paradise Valley Town	1,135	8,307	13.7%
00131	Maricopa County--Surprise City (Central)	207	4,719	4.4%
00108	Maricopa County--Tempe (South) & Chandler (Northwest) Cities	452	6,952	6.5%
00109	Maricopa County--Tempe City (North)	3,886	18,363	21.2%
00600	Mohave & La Paz Counties--Lake Havasu City	1,382	23,187	6.0%
00300	Navajo & Apache Counties	1,420	15,610	9.1%
00129	Phoenix (Far North) & Peoria (Northwest) Cities	172	3,734	4.6%
00121	Phoenix (Southwest) & Tolleson Cities	926	18,913	4.9%

Table 8. Active Transportation to Work by PUMA: 2017

PUMA	PUMANAME	Active (Walk, Bus, or Bicycle)	Work Outside Home	Percent Active
00117	Phoenix City (East)	576	10,715	5.4%
00128	Phoenix City (North)	790	8,185	9.7%
00114	Phoenix City (Northeast Central)	163	9,636	1.7%
00113	Phoenix City (Northeast)	193	4,981	3.9%
00115	Phoenix City (Northwest Central)	621	9,500	6.5%
00119	Phoenix City (South)	2,287	13,374	17.1%
00116	Phoenix City (Uptown)	2,169	11,688	18.6%
00125	Phoenix City (West)	1,576	15,873	9.9%
00120	Phoenix City--Ahwatukee & South Mountain	321	4,148	7.7%
00118	Phoenix City--Downtown & Sky Harbor International Airport	2,250	15,399	14.6%
00122	Phoenix City--Maryvale (East)	2,787	25,433	11.0%
00123	Phoenix City--Maryvale (West)	556	21,513	2.6%
00203	Pima County (North Central)--Oro Valley Town	717	5,856	12.2%
00204	Pima County (Northeast)	413	4,710	8.8%
00205	Pima County (Southeast)--Tucson City (Far Southeast) & Sahuarita Town	197	5,437	3.6%
00201	Pima County (West)	408	11,384	3.6%
00805	Pinal County (Central)--Florence Town, Eloy (Northeast) & Coolidge Cities	164	9,034	1.8%
00803	Pinal County (North)--Apache Junction City	0	6,497	0.0%
00807	Pinal County (West)--Maricopa, Casa Grande & Eloy (Southeast) Cities	272	8,351	3.3%
00202	Tucson (West) & Marana Cities	785	9,659	8.1%
00206	Tucson City (Northeast)	2,355	10,796	21.8%
00207	Tucson City (Northwest)	3,189	17,641	18.1%
00208	Tucson City (South)	2,503	18,919	13.2%
00209	Tucson City (Southeast)	1,579	14,765	10.7%
00500	Yavapai County	1,420	16,140	8.8%
00700	Yuma County--Yuma City	1,338	21,131	6.3%
	Arizona	52,825	597,099	8.8%

Source: Source: U. S. Census Bureau American Community Survey PUMS data for 2017.

Table 9. Census Tracts Identified as Low-Income Low Access Food Deserts 2010-2015				
County	Low-Income Low Access Census Tracts	Total Number of Census Tracts	Percent of Tracts identified as Low Income Low Access	Percent of Population Living in Food Deserts
Apache	12	16	75.0%	41.7%
Cochise	12	32	37.5%	15.4%
Coconino	10	28	35.7%	14.0%
Gila	8	16	50.0%	17.8%
Graham	1	9	11.1%	22.8%
Greenlee	1	3	33.3%	28.8%
La Paz	2	8	25.0%	18.0%
Maricopa	98	913	10.7%	5.7%
Mohave	20	43	46.5%	20.1%
Navajo	17	31	54.8%	26.4%
Pima	28	241	11.6%	9.0%
Pinal	18	75	24.0%	16.1%
Santa Cruz	4	10	40.0%	20.4%
Yavapai	13	42	31.0%	13.5%
Yuma	14	53	26.4%	10.4%
Arizona	258	1520	17.0%	9.2%

Source: United States Department of Agriculture, Economics Research Services, Data Products, Food Access Research Atlas, accessed at <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/> on 2/27/2018.

Table 10. Households with a Computer and Households with Broadband Internet Subscription (2013-2017)		
County	Computer	Broadband Internet
Apache	54.8%	38.6%
Cochise	85.4%	76.2%
Coconino	87.5%	75.3%
Gila	79.1%	61.6%
Graham	83.9%	69.8%
Greenlee	88.2%	75.7%
LaPaz	73.7%	57.7%
Maricopa	89.8%	81.7%
Mohave	84.8%	75.9%
Navajo	73.4%	59.5%
Pima	89.5%	80.6%
Pinal	86.4%	77.3%
Santa Cruz	79.8%	68.2%
Yavapai	88.4%	81.0%
Yuma	81.0%	73.1%
Arizona	88.2%	79.4%