Arizona Behavioral Risk Factor Surveillance System Survey

2014

ARIZONA DEPARTMENT OF HEALTH SERVICES

Health and Wellness for all Arizonans

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Front Cover Photograph

A **special thank you** to Arizona residents for participating in the survey and cooperating with the interviewers.

Notice

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Executive Summary

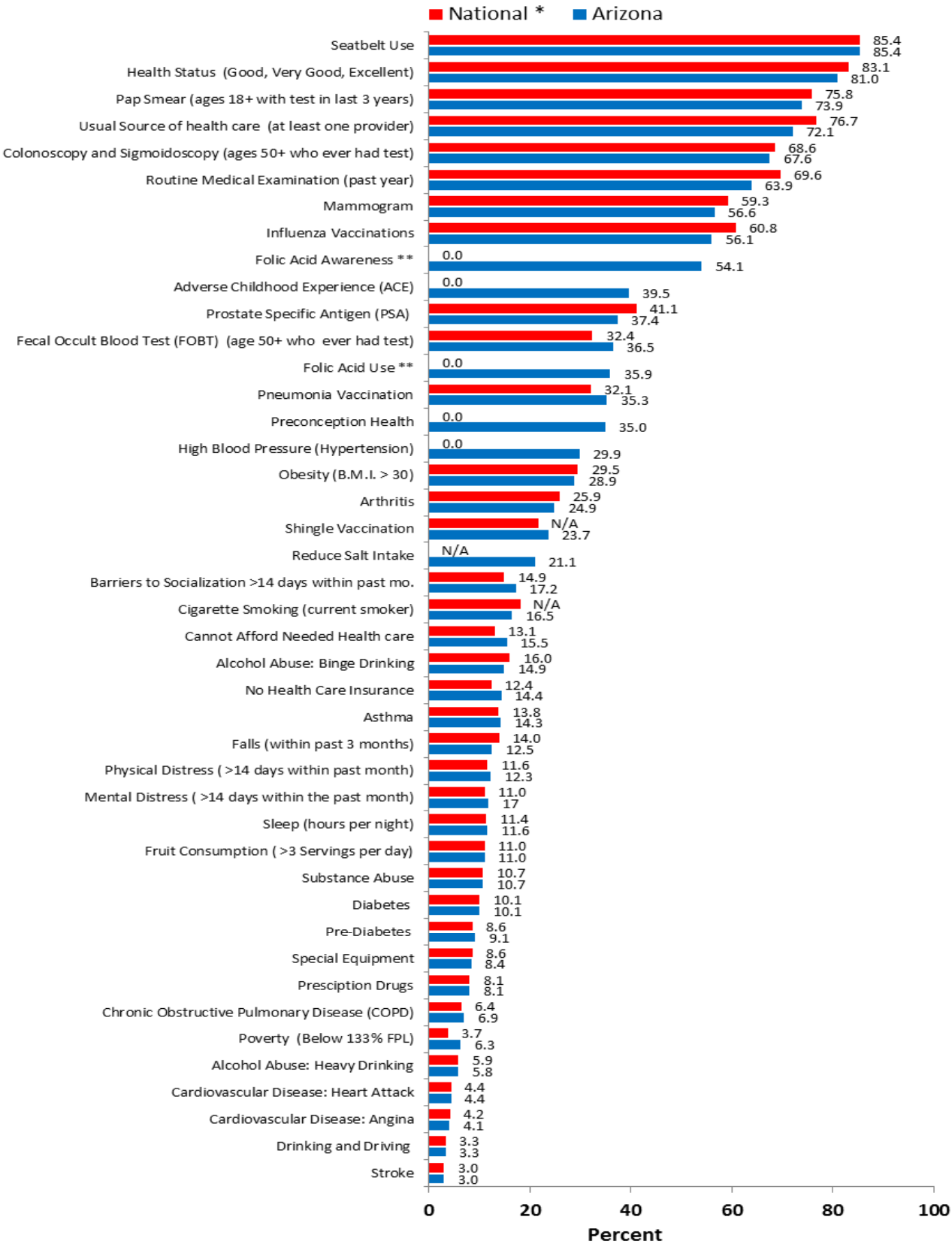
The Arizona Behavioral Risk Factor Surveillance System (BRFSS) survey is an annual state-wide survey consisting of combined cellular phone and telephone survey of adults aged 18 years and older. The Arizona survey is a collaborative effort between the Population Health Surveillance Branch (PHSB) of the Centers for Disease Control and Prevention (CDC) and Health Promotion; other CDC centers; and federal agencies, such as the Health Resources and Services Administration, Administration on Aging, Department of Veterans Affairs, and Substance Abuse and Mental Health Services Administration and the Arizona Department of Health Services (ADHS). The landline telephone sample design is a random digit dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. The sample of cell phone numbers was randomly selected from dedicated cellular telephone banks sorted on the basis of area code and exchange. This report summarizes data on health-related quality of life, preventive practices, barriers to healthcare, health risk behaviors, beneficial health practices, and health conditions and limitations as reported by Arizonans. It compiles data from the 2014 Arizona Behavioral Risk Factor Surveillance System (BRFSS) a state-wide landline and cellular telephone survey. Arizona response variables in the 2014 report should be understood to be the weight-adjusted percentage of survey participants asked the question, who provided an informative response (excluding non-respondents, those who refused to respond, and those who indicated that they did not know how to respond). Because of this, results for the Arizona BRFSS survey in this report will differ slightly from the CDC-provided Arizona response tables in the appendix, which include some of these response categories. Additionally, the variable names used by Arizona could vary between CDCs' and Arizona's data results. This report contains information from respondents from the combined landline and cell phone surveys. Any inference drawn from these results about the Arizona general population should be made in consideration of the confidence intervals provided within the report. In 2014, an increase sample size was collected, up from 4,252 to 14,869 units of combined cell phone and landline (completes and partial) interviews. The BRFSS survey provides a rich source of state-level public health data. These data have become integral to health promotion, disease prevention and intervention planning throughout Arizona. Highlights from the 2014 BRFSS are presented in Table 1 below.

Risk Factors	Arizona	National *
Seatbelt Use	85.4	85.4
Health Status (Good, Very Good, Excellent)	81.0	83.1
Pap Smear (ages 18+ with test in last 3 years)	73.9	75.8
Usual Source of health care (at least one provider)	72.1	76.7
Colonoscopy and Sigmoidoscopy (ages 50+ who ever had test)	67.6	68.6
Routine Medical Examination (past year)	63.9	69.6
Mammogram	56.6	59.3
Influenza Vaccinations	56.1	60.8
Folic Acid Awareness **	54.1	Not Asked
Adverse Childhood Experience (ACE)	39.5	Not Asked
Prostate Specific Antigen (PSA)	37.4	41.1
Fecal Occult Blood Test (FOBT) (age 50+ who ever had test)	36.5	32.4
Folic Acid Use **	35.9	Not Asked
Pneumonia Vaccination	35.3	32.1
Preconception Health	35.0	Not Asked
High Blood Pressure (Hypertension)	29.9	Not Asked
Obesity (B.M.I. > 30)	28.9	29.5
Arthritis	24.9	25.9
Shingle Vaccination	23.7	21.7
Reduce Salt Intake	21.1	Not Asked
Barriers to Socialization >14 days within past mo.	17.2	14.9
Cigarette Smoking (current smoker)	16.5	18.1
Cannot Afford Needed Health care	15.5	13.1
Alcohol Abuse: Binge Drinking	14.9	16.0
No Health Care Insurance	14.4	12.4
Asthma	14.3	13.8
Falls (within past 3 months)	12.5	14.0
Physical Distress (>14 days within past month)	12.3	11.6
Mental Distress (>14 days within the past month)	11.8	11.0
Sleep (hours per night)	11.6	11.4

Table 1: Highlights from the 2014 Arizona and National Behavioral Risk Factor Surveillance System (BRFSS) survey are weighted to population characteristics. *The BRFSS 2014 "Nationwide" estimates included in the "BRFSS Executive Summary" chart are median values.** Arizona's BRFSS specific modules and State-Added questions.

Risk Factors	Arizona	National *
Fruit Consumption (>3 Servings per day)	11.0	Not Asked
Substance Abuse	10.7	Not Asked
Diabetes	10.1	10.1
Pre-Diabetes	9.1	8.6
Special Equipment	8.4	8.6
Prescription Drugs	8.1	Not Asked
Chronic Obstructive Pulmonary Disease (COPD)	6.9	6.4
Poverty (Below 133% FPL)	6.3	3.7
Alcohol Abuse: Heavy Drinking	5.8	5.9
Cardiovascular Disease: Heart Attack	4.4	4.4
Cardiovascular Disease: Angina	4.1	4.2
Drinking and Driving	3.3	3.3
Stroke	3.0	3.0

Table 1 (cont.): Highlights from the 2014 Arizona and National Behavioral Risk Factor Surveillance System (BRFSS) survey are weighted to population characteristics. *The BRFSS 2014 "Nationwide" estimates included in the "BRFSS Executive Summary" chart are median values.** Arizona's BRFSS specific modules and State-Added questions.



*The BRFSS 2014 "Nationwide" estimates included in the "BRFSS Executive Summary" chart are median values not means. CDC does not generate a "National" estimate by using the mean because the survey is a combination of separate state surveys. * *Arizona's State-Added questions

Introduction

Background

The Arizona BRFSS has collected an annual average of 6,700 combined landlines and cell phones since 2011. However, in 2013 the BRFSS survey was affected by the federal sequestration and faced a drastic budget shortfall. The Arizona's BRFSS data users group met on December 12, 2012. This meeting was also available by teleconference allowing the collaboration of state-wide stakeholders to participate in mitigating Arizona's BRFSS immediate budget crisis. The decision was made unanimously by those who participated in the December 12, 2012 meeting to collapse the counties (a.k.a. regions/strata) from 15 to 5 regions in order to reduce the cost to administer the survey. In addition, during this meeting there was a discussion on shifting the primary funding responsibility from CDC to ADHS programs and outside stakeholders by increasing the cost for each State-Added question from $3,100 in 2013 to $4,100 in the 2014 survey year, with an additional increase of $1,000 per question for each subsequent year, if necessary. Combining the counties allowed us to remain within Arizona's projected budgets for BRFSS 2013. In 2014, the BRFSS Program reached out to outside stakeholders to supplement the survey cost in order to increase the sample size and number of strata from 5 to 6 survey regions. See Arizona Strata Map on page 9 (Arizona six regions/strata) questionnaires, the use of address-based sampling, and landline geographic stratification. Interest in collecting data on additional State-Added questions in BRFSS 2014 survey exceeded the program's expectations, and caused the survey to exceed the recommended time frame of 25 minutes. So in 2014 the Arizona BRFSS used a split survey design to remain within the 25 minute survey limit. The split survey allowed Arizona BRFSS to include more questions requested by health programs which expanded survey funding. This also allowed substantially more completed interviews to be conducted.

The BRFSS is comprised of CDC's Core, Modules, and State-added questions.

Core component consists of three areas:

The fixed core is made up of standard questions that are asked by every state.
The rotating core is a set of biennial questions.
The emerging core questions are experimental questions (up to 5 a year) that are asked to determine their potential use.

Modules included in the 2014 survey

Health Care Access
Pre-Diabetes
Diabetes

Optional CDC modules are sets of questions that focus on specific topics such as:

Sodium or Salt-Related Behavior (Survey split 2)
Reactions to Race (Survey split 2)

State added questions are generated by potential stakeholders.

Sugar Drinks (Survey Split 1)
Fruits and Vegetables (Survey Split 1)
Exercise (physical Activity) (Survey Split 1)
Food Assistance (Survey Split 2)
Preconception Health/ Family Planning (Survey Split 2)
Folic Acid (Survey Split 2)
Hypertension Awareness (Survey Split 2)
Cognitive Impairment (Survey Split 1)
Access to Care (Survey Split 1 and 2)
Substance Abuse (Survey Split 1 and 2)
Prescription Drug Abuse (Survey Split 1 and 2)
Adverse Childhood Experience (Survey Split 2)
Nearest Intersection (Survey Split 1 and 2)
Pedometer Questions * Included in May 2014 - (Survey Split 1 and 2)

The questions must be validated and approved by CDC's and Arizona's Human Subjects Review Board.

Weighting Methodology

In 2011, CDC implemented a methodological change in how BRFSS data are weighted; specifically, the weighting method changed from post-stratification to iterative proportional fitting (refer to the 2011 Annual Arizona BRFSS Report for more details). The iterative proportional fitting (or "raking,") replacement was needed in order to include analysis for imperfections in the sample that might lead to bias. In addition, this method included the selection of units with unequal probabilities, non-coverage of the population, and non-response. The "raking" adjusts the data so that groups which are underrepresented in the sample can be more accurately represented in the final dataset. The raking incorporates additional demographic characteristics and it accurately matches sample distributions to known demographics. Furthermore, the use of raking reduces non-response bias and has been shown to reduce within-error estimates. BRFSS raking integrates a multitude of categories such as age by gender; marital status, education attainment, employment status, income, age groups, race and ethnicity, telephone source, and renter/owner status. Thus, BRFSS 2013 annual report included the respondents contacted by landline and cellular phones. In 2013, according to the Pew Research Center's Internet and American Life Project, 56% of American adults have and 37% of youth ages 12-17 have cell phones. Cell phone-only households are especially prevalent among younger families and among certain racial/ethnic groups. Moreover, it was evident that people were using their cell phones…"[1] The Arizona's BRFSS' sample design increased the number of cell phone participants by changing the screening process. BRFSS would be unable to fully capture disease and prevalence trends by continuing to rely solely upon landlines, which excluded a large number of willing cell phone respondents.

Beginning with the 2012 survey, the CDC also applied a fully overlapping sample. Under this approach, some of the counties will **not** be able to achieve the minimum of 50 participants. This might affect the ability to analyze the data for those counties with the required minimum number of participants. Therefore, the analyses will have to be done within each of the 5 different strata. CDC contracts with Marketing System Group (MSG) who developed a methodology for constructing cellular sampling frames using rate centers. A rate center delineates the local call boundaries set by service providers for billing purposes. MSG can identify subsets of cellular blocks for all wireless service providers that correspond to the area of interest. Geographic stratification is available for the cell phone sample for 2014. To make the best use of this method, geo-strata should consist of contiguous counties. Weights will be produced for the combined landline and cell phone data as well as weights for each split-questionnaire version of the combined landline and cell phone data which meets the effective sample size. As a reminder for weighting purposes, the minimum number of completed interviews for weighting a region is 500 and for split sample, 2500. The Arizona BRFSS previously followed CDC's guidelines regarding the rule of not reporting or interpreting percentages based upon a denominator of fewer than 50 respondents, as well as regions with adult populations less than or equal to 500 residents.. In this year's report the confidence interval limits for Arizona measures as upper and lower brackets connected by a single line at the top of chart columns. BRFSS 2014 marked the largest survey sample size - 14,869 completed interviews. This has generally resulted in tighter upper and lower confidence interval bounds, and yielded a greater degree of confidence than in prior years.

Alignment with the Arizona Department of Health Services Mission and Strategic Map

The Arizona Department of Health Services (ADHS) operates numerous programs dedicated to the improvement of public health outcomes for all of Arizona. The Department's vision is to promote "Health and Wellness for all Arizonans." To accomplish this vision, ADHS has developed a strategic map (see page 5) with five strategic priorities:

- Impact Arizona's Winnable Battles (Section A)
- Integrate of Physical and Behavioral Health Services (Section B)
- Promote and Protect Public Health and Safety (Section C)
- Strengthen Statewide Public Health System (Section D)
- Maximize ADHS Effectiveness (Section E)

Within these broad strategic priorities, there are key elements that accentuate "winnable public health battles." BRFSS data provide Arizona with a tool to monitor health status and to assess public health interventions and programs. At the beginning of each section of the 2014 BRFSS Annual Report, there are call-out boxes that illustrate potential linkages between the data collected and ADHS' strategic map.

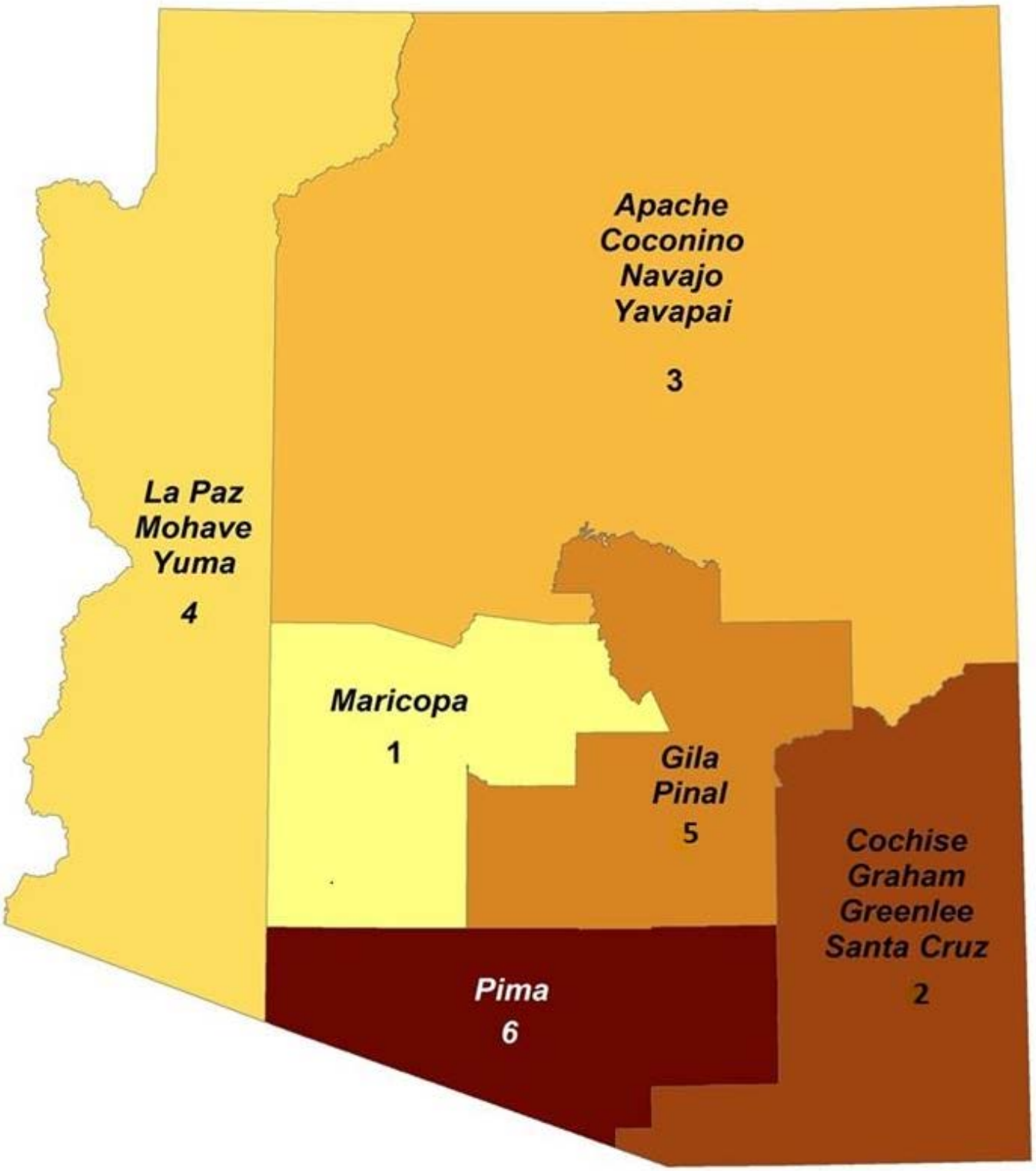
[1] (Rainie, Lee, Pew Research Center's Internet & American Life Project) Washington, D.C., June 6, 2013, Web accessed: 6/7/2014 http://www.pewresearch.org/fact-tank/2013/06/06/cell-phone-ownership-hits-91-of-adults/

Changes to the 2014 AZ BRFSS Annual Report

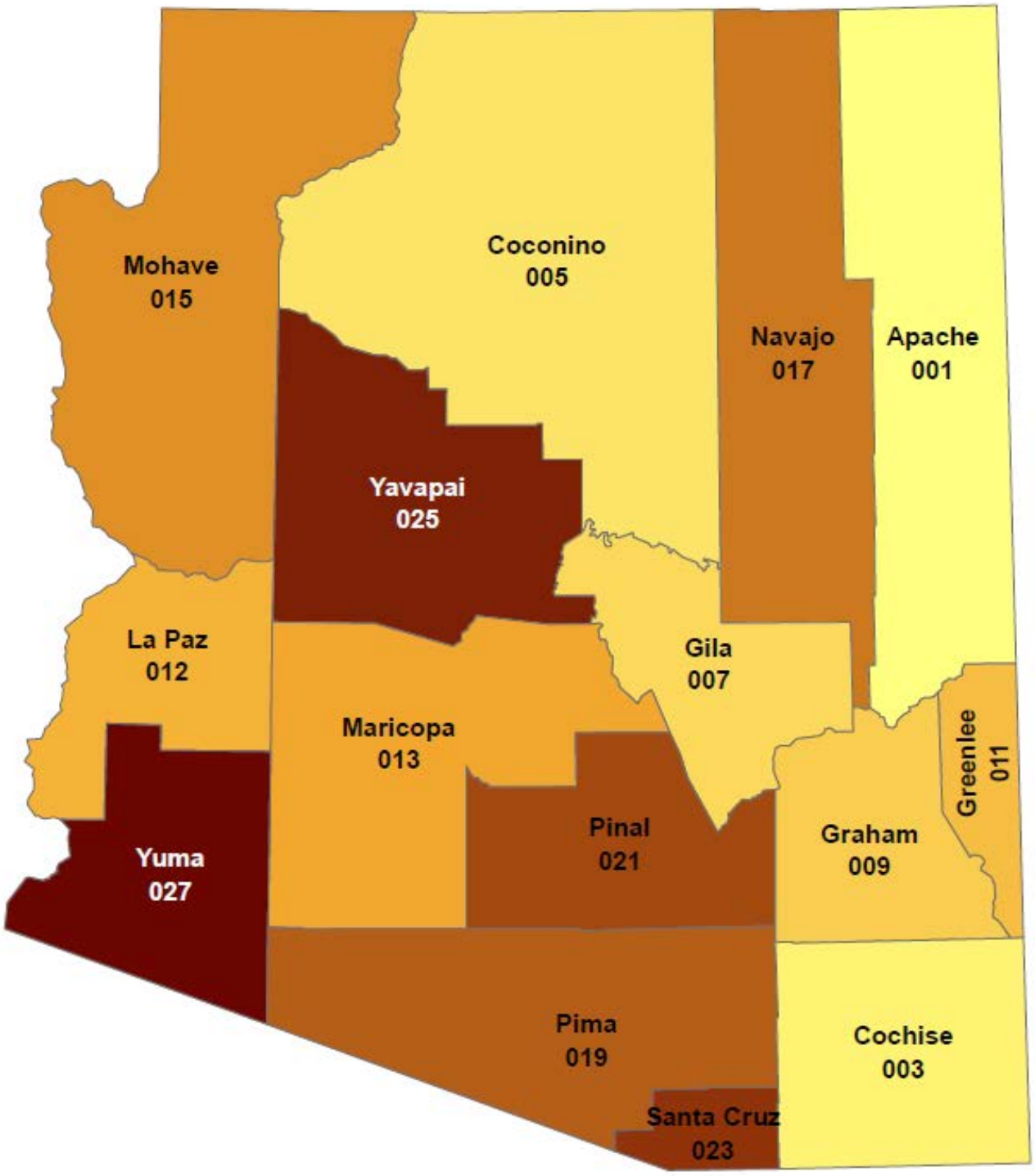
The 2014 BRFSS Annual Report has a layout that provides the reader a different prospective with regard to death, birth, and number of patients discharged from the hospital. At the beginning of each section a description of the data elements is presented. Each subsection includes trend data, national, regional and county information data (presented as a map); and a table of respondent demographics. The table contains the percent and its confidence interval. Tables containing frequencies, weighted frequencies and percentages are located in Appendix, in the order presented in this report. Throughout the text, there are tables generated from the Arizona Hospital Discharge Database. The International Classification of Diseases (ICD-9) is the World Health Organization's 9th revision of the International Classification of Diseases. The ICD-CM, the Clinical Modification, is the official system of assigning codes to diagnoses and procedures associated with hospital utilization in the United States.[2] The term "clinical" is used to emphasize the modifications intent: to serve as a useful tool to classify morbidity data for indexing medical records, medical care review, and ambulatory and other medical care programs, as well as for basic statistics. To describe the clinical picture of the patient, the codes must be more precise than those needed only for statistical groupings and trend analysis. The ICD-9 CM disease classification has been expanded to include health-related conditions and to provide greater specificity at the fifth-digit of details. [3]

[2] International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).(2013). Retrieved May 16, 2016 from http://www.cdc.gov/nchs/icd/icd9cm.htm
[3] Hart, A. C. (2013). ICD-9-CM for hospitals and payers, volumes 1, 2, 3: 2014 expert: International classification of diseases, 9th revision; clinical modification, sixth edition. Eden Prairie, MN: OptumInsight..

Arizona Behavioral Risk Factor Surveillance
2014 Survey Strata by Region



Arizona Behavioral Risk Factor Surveillance
2014 Survey Stratum by County Code



BRFSS Survey in Comparisons

The BRFSS is the largest telephone survey conducted in the United States and its territories. As the survey grows and improves its methodology, the number of requests for localized health analysis increases. In response to the growing demand, CDC analyzes BRFSS data for metropolitan and micropolitan statistical areas (MMSA). The analysis of Arizona MMSAs includes Nogales, Phoenix-Mesa-Scottsdale, Sierra Vista-Douglas, Tucson and Yuma. Any further analysis will require combining BRFSS data across multiple years, and/or harmonizing across surveys. There are many other surveys currently sponsored by the U.S. government and its agencies, many of which have questions that overlap with the BRFSS. The structure of the questions found within commonly merged datasets is displayed in Table 2 (below).

Comparison of Surveys

	Census	**BRFSS**	**NHANES**	**HINTS**
Participant Selection	All U.S. households are required to participate	Random Digital Dial	Participants are selected based off Census information	Stratified sample of addresses were selected from the Marketing Systems Group.
Data Collection Techniques	Questionnaire sent in the mail and direct interviews from Census workers	Telephone survey, with Computer Assisted Telephone Interviewing (CATI) system, and mail	Anthropometric measurements, blood and urine samples are gathered by health professionals. Interviews are done in person at the participant's home.	Random digit dials and address-based sampling
Data Gathered	• Number of people living in a housing unit • Housing unit type • Telephone number • Name • Gender • Date of birth • Race and ethnicity • Other residences	Demographic data asked annually: • Race and ethnicity • Gender • Income • Martial status • Educational achievement • Working status • Household size ***Other Health Indicator Questions are developed by the CDC. Each state has the ability to generate questions to assess its specific needs.***	• Anemia • Cardiovascular disease • Diabetes • Environmental exposures • Eye diseases • Hearing loss • Infectious diseases • Kidney disease • Nutrition • Obesity • Oral health • Osteoporosis • Physical fitness and physical functioning • Reproductive history and sexual behavior • Respiratory disease (asthma, chronic bronchitis, emphysema) • Sexually transmitted diseases • Vision • Anthropometrics	• Breast cancer • Cancer communication • Cancer perceptions and knowledge • Cervical cancer • Colon cancer • Demographics • Food and medical • Products information • Health communication • Health services • Health status • Internet use • Lung cancer • Medical research • Medical records • Numeracy • Nutrition and physical activity • Patient-provider communication • Prostate Cancer • Risk Perceptions • Skin Cancer • Skin Protection • Social Networks • Tobacco Use
Sample Size	Current U.S. housing Units = 132,312,404	2014 National=464,664 2014 Arizona=14,869	2009-2010 Survey=9,338	2008 Survey=7,674 2011-2012 Survey =3,959 2012-2013 Survey =3,630 2013 Survey =3,185
Collection Interval	Every 10 years	Annual	Starting in 1999 NHANES began gathering data annually. However, data are only presented in two- year intervals.	The HINTS includes five data collection cycles over the course of 3 years: from October 2011 through November of 2014.

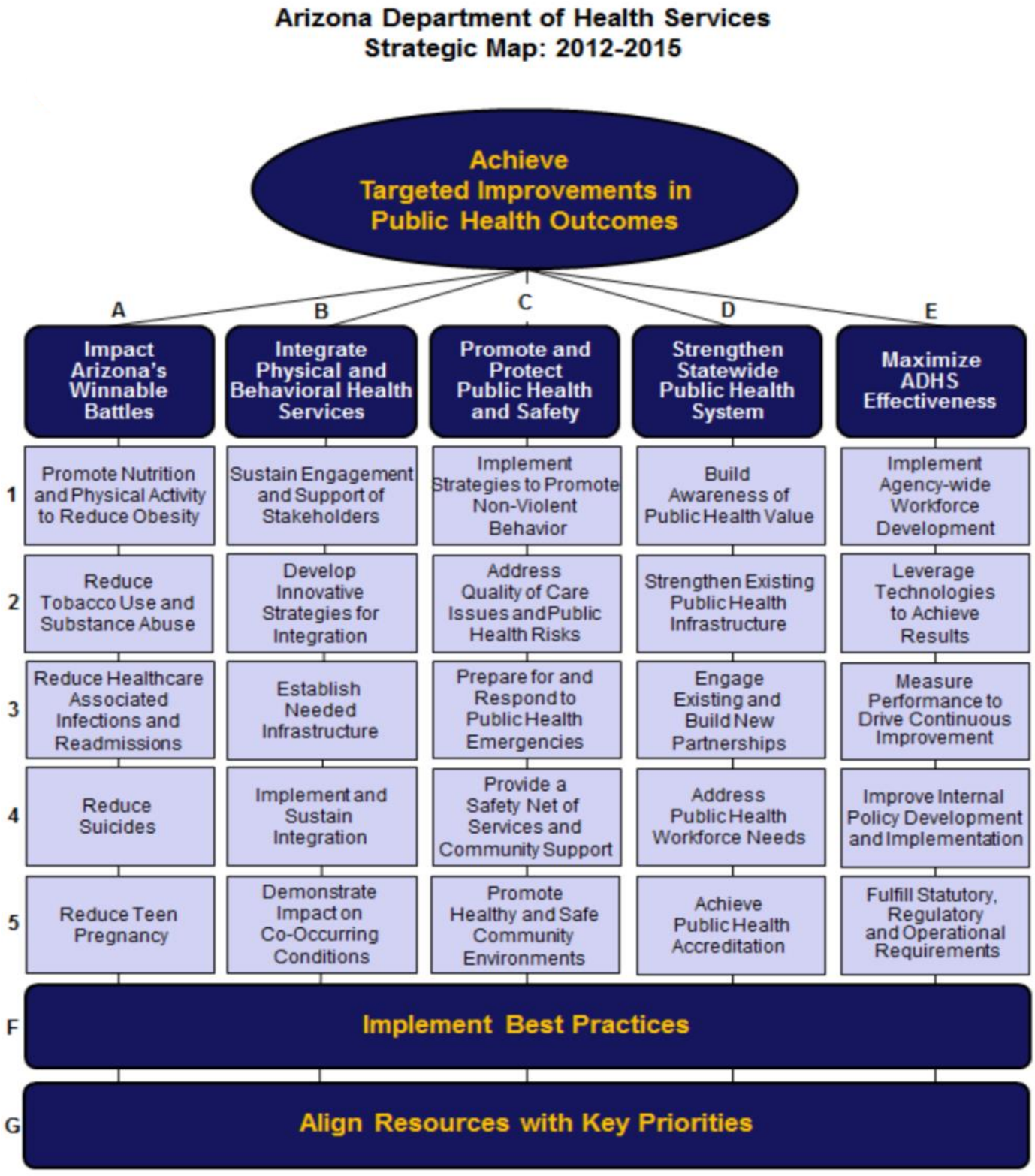
Table 2. The BRFSS Survey in comparison to other surveys

ADHS Mission

To promote, protect, and improve the health and wellness of individuals and communities in Arizona

ADHS Vision

Health and Wellness for all Arizonans



Health-Related Quality of Life

Health-related quality of life (HRQoL) has a broad definition. HRQoL research potentially can incorporate physical activity, amount of time spent at work, physical health, mental health, emotional health and personality questions.[4] The CDC has created a manual on using the BRFSS to assess HRQoL. The methodology utilizes self-reported health status, mental health, physical health and inhibited socialization due to poor health. The assessment of HRQoL using BRFSS data is as follows[5]:

Self-reported health status (variables – GENHLTH)
Convert into a binary variable where good to excellent health is a positive outcome; poor and fair health is a negative outcome

Frequent Mental Distress (variable – MENTHLTH)
Generate a binary variable where reporting 14 or more days of poor mental health is a negative outcome

Frequent Physical Distress (variable – PHYSHLTH)
Generate a binary variable where reporting 14 or more days of poor physical health is a negative outcome

Barriers to Socialization (variable – POORHLTH)
Generate a binary variable where reporting 14 or more days of poor physical or mental health prevented daily activities are a negative outcome.

Number of Unhealthy Days
The majority of Arizonans report zero unhealthy days; however, the second largest category is reporting 30 unhealthy days (see Figure 1) Unhealthy days are an estimate of the overall number of days during the previous 30 days when the respondent felt that his or her physical or mental health was not good. To obtain an estimate of a person's overall *unhealthy days,* respondents are asked, "Now, thinking about your physical health, which includes physical illness and how many days during the past 30 days was your physical health not good? And, now thinking about your mental health, which includes stress, depression and emotions, for how many days during the past 30 days was your mental health not good?" These are added together, with a logical maximum of 30 *unhealthy days*.

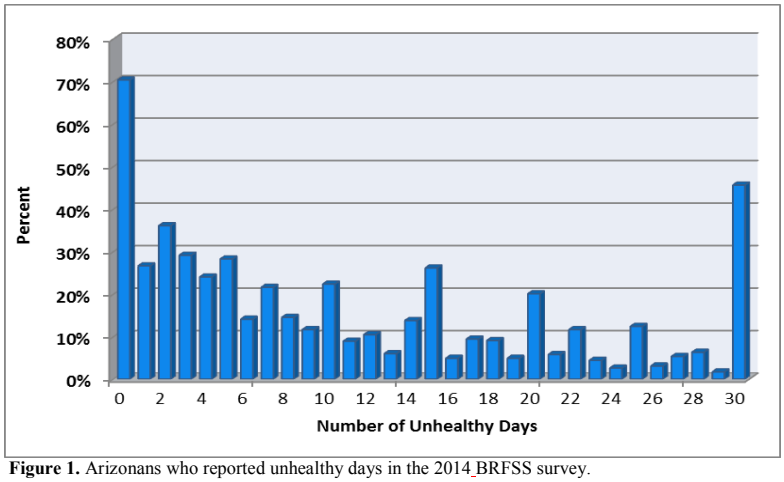


Figure 1. Arizonans who reported unhealthy days in the 2014 BRFSS survey.

Strategic Map Link
Health Related Quality of Life is an umbrella term. By collecting data on self-reported health status, mental distress, physical distress, and barriers to socialization the BRFSS is providing Arizona with a tool to evaluate nutrition, physical activity, numerous chronic and infectious diseases, and hospital readmissions.
The aforementioned indicators are all part of Arizona's Winnable Battles as outlined in A1 and A3 of the ADHS Strategic Map.
(See Page 9)

How is the Summary Index of Unhealthy Days Calculated?
Unhealthy days are an estimate of the overall number of days during the previous 30 days when the respondent felt that his or her physical or mental health was not good. To obtain this estimate, responses to questions regarding Physical and Mental health are combined to calculate a summary index of overall unhealthy days, with a logical maximum of 30 unhealthy days. For example, a person who reports 4 physically unhealthy days and 2 mentally unhealthy days is assigned a value of 6 unhealthy days, and someone who reports 30 physically unhealthy days and 30 mentally unhealthy days is assigned the maximum of 30 unhealthy days. Healthy days are the positive complementary form of unhealthy days. A healthy day estimates the number of recent days when a person's physical and mental health was good (or better) and is calculated by subtracting the number of unhealthy days from 30 days.

4 Ware, J.E., & Sherbourne, C.D. (1992). "Medical Outcomes Study: 36-Item Short Form Survey Instrument." Conceptual Framework and Item Selection Medical Care, 30(6), 473-483. Retrieved Web.12 Sept. 2013. http://www.jstor.org/stable/3765916
5 Centers for Disease Control and Prevention. Measuring Healthy Days. Atlanta, Georgia: CDC, November 2000. (http://www.cdc.gov/hrqol/methods.htm)

Health-Related Quality of Life
Self-Reported Health Status

Self-reported health status is one of the most frequently assessed health perceptions in epidemiological research.[6] As a health-related quality of life indicator, it is a multi-dimensional concept that is related to physical, mental, emotional and social health.[7] It has proven to be a more dominant predictor of mortality and morbidity than many objective measures of health.[8] Self-rated health status also has been shown to be a significant predictor for the onset of coronary heart disease, diabetes, stroke, lung disease, and arthritis. The charges for these types of acute care in Arizona totaled more than $14.5 billion dollars, in 2014 (See Table 3).[9]

2014 Arizona Disease Burden Inpatient & Emergency Department Discharges	
Disease	**Charges**
Coronary Heart Disease	$1,652,315,698
Diabetes	$7,887,188,974
Lung Disease	$3,810,191,045
Stroke	$1,231,308,356
Total	**$14,581,004,073**

Table 3. In 2014, the hospital encounters, both emergency department and admission contained the following ICD-9 codes for Coronary Heart Disease: 412-414; Diabetes: 250-250.9; COPD / Allied conditions (Lung Disease): 466, 490, 491, 492, and 496; Stroke: 430-434, 434.90, 434.91, and 436-438.

In the 2014, BRFSS surveys 81% of Arizonans reported that they had good, very good or excellent health - close to the national figure of 83.1% (See Figure 2A).

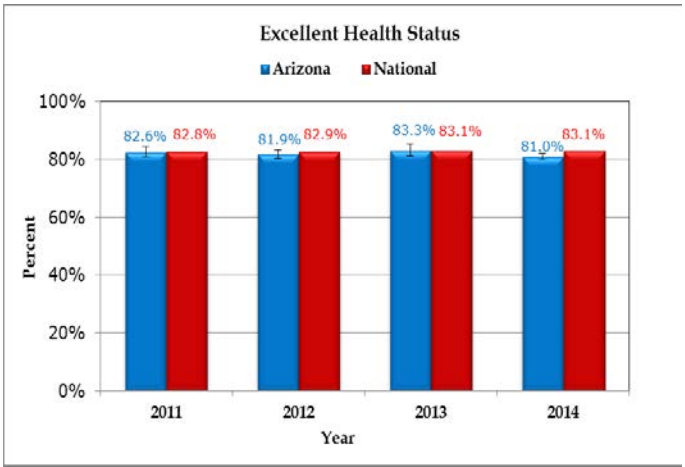


Figure 2A. Arizona and National 2011-2014 BRFSS respondents self-reported health status reported being good, very good or excellent.

When looking at the other states in the nation, Arizona falls in the second-highest category for the percent of respondents reporting good, very good or excellent health (see Figure 2B).

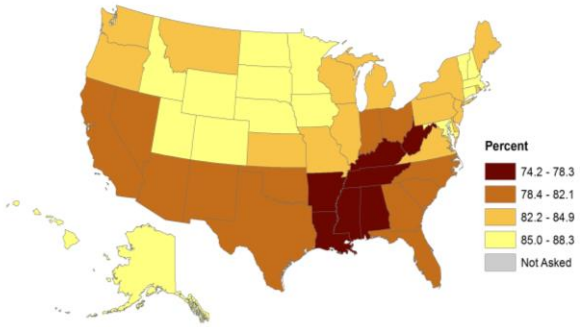


Figure 2B. BRFSS respondents reporting good, very good, or excellent health by state (natural breaks).

The distribution of surveyed Arizonans' self-reported health status was very similar to the nation as a whole (see Figure 2C).

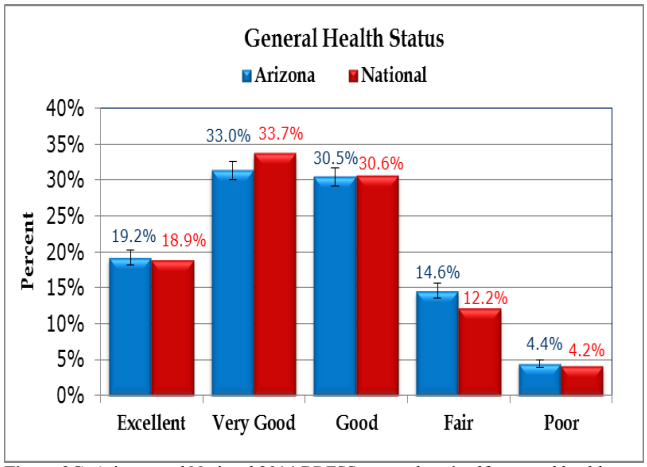


Figure 2C. Arizona and National 2014 BRFSS respondents' self-reported health status.

Figure 2D displays that the percentage of men and women in Arizona was broadly similar in 2014, particularly those who reported their health as 'very good' (31.2% and 31.5% respectively).

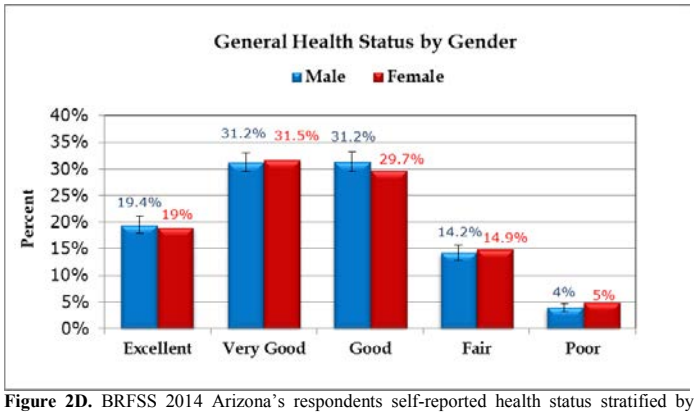


Figure 2D. BRFSS 2014 Arizona's respondents self-reported health status stratified by gender.

6. Mossey JM, Shapiro E. Self-rated health: a predictor of mortality among the elderly. AM J Public Health. 1982 Aug;72(8): 800-8. PMID: 7091475
7 : Estwing C., Ferrans. 2-Definitions and conceptual models of quality of life. In: Gotay C., et al. Outcomes Assessment in Cancer. Cambridge University Press; 2009: 14-30.
8. DeSalvo KB, Bloser N, Reynolds K, He J, Muntner P. Mortality Prediction with a Single General Self-Rated Health Question: A Meta-Analysis. *Journal of General Internal Medicine*. 2006;21(3):267-275. doi:10.1111/j.1525-1497.2005.00291.x.
9. Latham K., Peek CW. Self-rated health and morbidity onset among late midlife U.S. adults. J. Gerontol B Psychol Sci Soc Sci. 2013 Jan;68(1): 107-16: PMID: 23197340

Arizonans Who Reported Good to Excellent Health				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**83.1%**	53		
Arizona	**81.0%**	11904	79.9%	82.0%
Male	81.8%	4825	80.3%	83.3%
Female	80.2%	7079	78.7%	81.6%
18-24	91.3%	441	88.5%	94.1%
25-34	85.5%	820	82.2%	88.7%
35-44	84.4%	1271	81.7%	87.1%
45-54	77.7%	1726	75.1%	80.3%
55-64	73.6%	2515	71.3%	76.0%
65+	76.0%	5131	74.5%	77.6%
Married	82.8%	6468	81.5%	84.1%
Divorced	75.2%	1688	72.2%	78.2%
Widowed	72.0%	1752	68.6%	75.3%
Separated	64.5%	167	54.6%	74.4%
Never Married	84.9%	1391	82.4%	87.3%
Unmarried Couple	78.9%	312	72.8%	85.0%
Less than high school	61.6%	609	57.3%	65.8%
High School/GED	80.9%	2620	79.1%	82.8%
Some College/Technical School	82.4%	3513	80.7%	84.1%
College/Technical School Grad	91.1%	5040	90.1%	92.1%
Employed for Wages	88.3%	4285	86.8%	89.8%
Self Employed	87.1%	901	83.4%	90.8%
Out of Work	80.4%	499	75.9%	84.8%
Homemaker	80.0%	821	76.0%	84.1%
Student	92.6%	232	88.9%	96.2%
Retired	78.9%	4696	77.4%	80.5%
Unable to Work	30.0%	321	25.3%	34.6%
Less than $10,000	60.6%	343	54.6%	66.6%
$10,000 to $14,999	67.6%	418	62.0%	73.3%
$15,000 to $19,999	69.2%	625	64.1%	74.4%
$20,000 to $24,999	70.9%	891	66.6%	75.2%
$25,000 to $34,999	79.3%	1108	75.6%	82.9%
$35,000 to $49,999	84.0%	1635	81.2%	86.8%
$50,000 to $74,999	89.4%	1776	87.2%	91.6%
Above $75,000	92.2%	3112	90.7%	93.6%
White Non-Hispanic	83.7%	9483	82.7%	84.8%
Black/African American	78.5%	315	72.5%	84.5%
Hispanic	75.1%	1387	72.3%	77.9%
Asian/Pacific Islander	91.4%	202	85.8%	97.0%
American Indian Non-Hispanic	73.4%	244	66.5%	80.3%
Other	76.1%	273	69.5%	82.7%

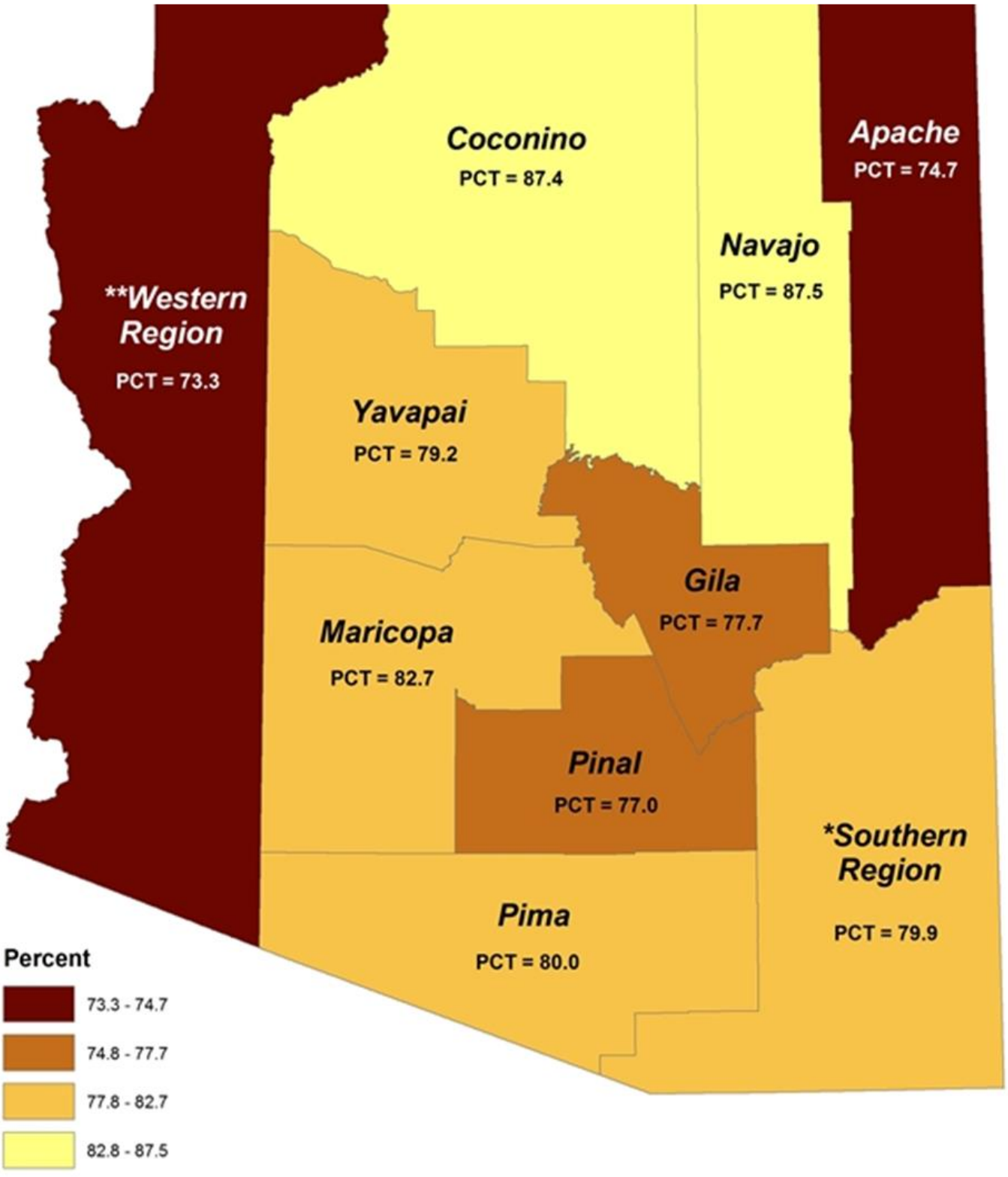
Use caution in interpreting cell sizes less than 50. N* is unweighted.
National N is 53 = all 50 states, DC and Territories.

Health-Related Quality of Life Self-Reported Health Status

The table to the left displays proportions of Arizonans who responded that their health status was good, very good or excellent. Results are also shown by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates are median values across all states, not means. The "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Reporting Good to Excellent Health, By County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health-Related Quality of Life
Frequent Mental Distress

By 2020, depression is projected to be the second leading cause of the global disease burden. Research has shown that depression and other mental health conditions are associated with an increased prevalence of chronic diseases. The association is a complex self-propagating interrelationship between chronic disease and mental illness.[10] For example, an individual may initially suffer from a chronic disease and then develop a mental health condition (i.e., depression), which exacerbates the initial condition. Another individual could suffer from a mental illness which could precipitate a chronic disease, and fall into the cycle of disease and mental health exacerbation.

The BRFSS survey includes depression and anxiety questions within the core section. Researchers have developed and accepted an alternative method of evaluating mental illness called 'Frequent Mental Distress' (FMD). FMD is defined as 14 days or more of poor mental health within the past 30 days.[11] Since 2011 through 2014, Arizonans surveyed report FMD at similar levels to the nation median (see Figure 3A).

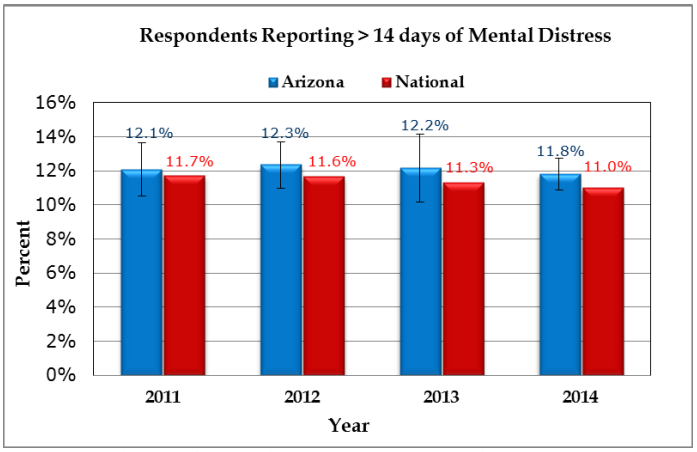


Figure 3A. Arizona and National 2011-2014 BRFSS prevalence of reporting frequent mental distress. Survey Questions: Now thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good?

In 2014, 11.8% of Arizonans surveyed reported that they suffered from FMD; the national median is 11%. When looking at the other states in the nation, Arizona falls in the second-highest class for the percent of respondents reporting FMD (See Figure 3B).

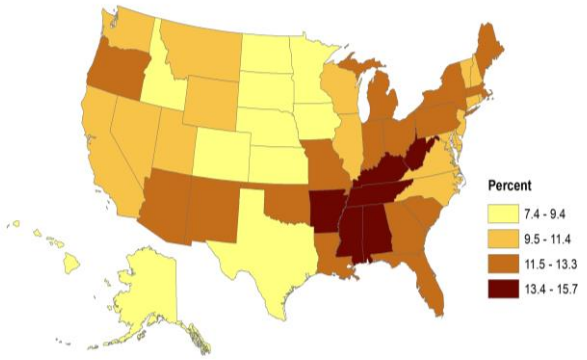
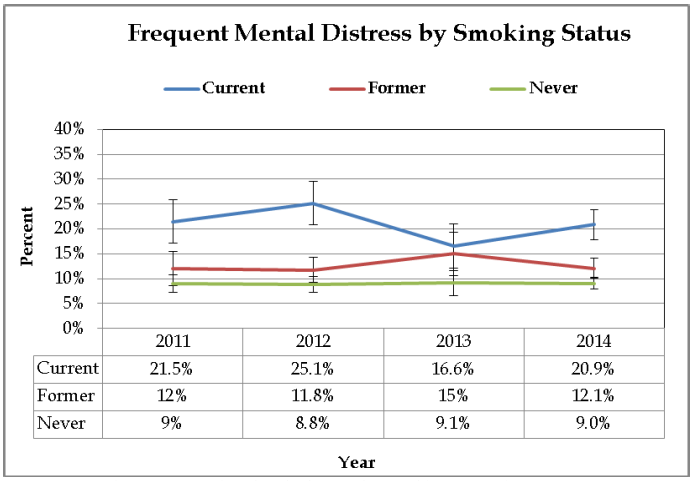


Figure 3B. BRFSS respondents reporting FMD by state (natural breaks).

Among Arizonans surveyed, FMD is reported more frequently in current smokers than nonsmokers or former smokers (see Figure 3C).



	2011	2012	2013	2014
Current	21.5%	25.1%	16.6%	20.9%
Former	12%	11.8%	15%	12.1%
Never	9%	8.8%	9.1%	9.0%

Figure 3C. Arizonans reporting they had FMD by smoking status from 2011 – 2014.

Since 2011 through 2014, FMD has been reported more frequently by Arizonans surveyed as household income declines (see Figure 3D).

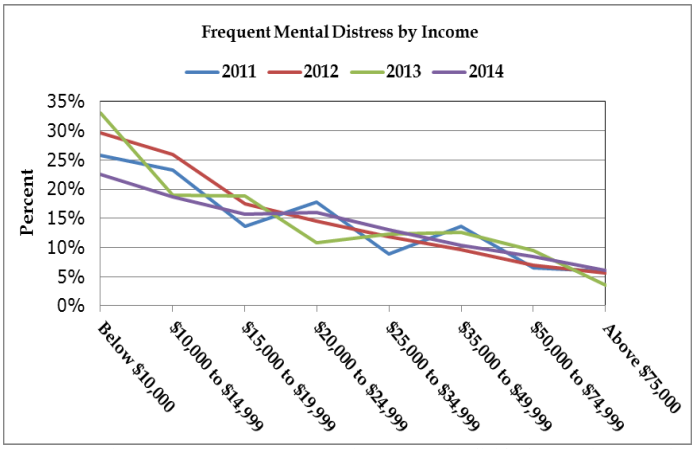


Figure 3D. Arizona 2011-2014 BRFSS over four years of individuals reporting FMD by income.

10. Chapman DP, Perry GS, Strine TW. The vital link between chronic disease and depressive disorders. Prev Chronic Dis. 2005 Jan;2(1):A14. Epub 2004 Dec 15.
11. Al-Nsour M, Zindah M, Belbeisi et al. Frequent Mental Distress, Chronic Conditions, and Adverse Health Behaviors in the Behavioral Risk Factor Surveillance Survey, Jordan, 2007. Prev Chronic Dis 2013; 10:130030.

Arizonans Reporting > 14 days of Frequent Mental Distress in the BRFSS 2014				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**11.0%**	53		
Arizona	**11.8%**	1457	10.9%	12.8%
Male	10.9%	505	9.5%	12.3%
Female	12.7%	952	11.4%	14.0%
18-24	10.9%	58	7.8%	14.0%
25-34	15.7%	138	12.5%	18.8%
35-44	12.6%	176	10.2%	15.0%
45-54	12.7%	257	10.5%	14.9%
55-64	12.2%	370	10.5%	13.9%
65+	7.4%	458	6.4%	8.4%
Married	9.4%	572	8.2%	10.7%
Divorced	14.7%	305	12.2%	17.3%
Widowed	12.0%	211	9.1%	14.9%
Separated	23.8%	58	16.1%	31.4%
Never Married	13.1%	246	10.8%	15.4%
Unmarried Couple	16.7%	54	10.9%	22.6%
Less than high school	18.0%	185	14.4%	21.7%
High School/GED	11.4%	390	9.7%	13.1%
Some College/Technical School	13.1%	503	11.4%	14.7%
College/Technical School Grad	6.6%	361	5.5%	7.7%
Employed for Wages	9.4%	357	8.0%	10.7%
Self Employed	9.5%	73	6.1%	12.9%
Out of Work	19.3%	121	14.1%	24.5%
Homemaker	9.2%	77	6.0%	12.4%
Student	9.0%	21	4.4%	13.6%
Retired	7.1%	363	5.9%	8.3%
Unable to Work	39.7%	416	34.7%	44.7%
Less than $10,000	22.5%	157	17.2%	27.8%
$10,000 to $14,999	18.7%	145	14.0%	23.4%
$15,000 to $19,999	15.7%	136	11.5%	19.9%
$20,000 to $24,999	16.0%	175	11.8%	20.1%
$25,000 to $34,999	13.0%	150	9.7%	16.3%
$35,000 to $49,999	10.4%	152	7.9%	12.9%
$50,000 to $74,999	8.5%	134	6.4%	10.6%
Above $75,000	6.0%	154	4.7%	7.4%
White Non-Hispanic	11.2%	1059	10.2%	12.1%
Black/African American	11.3%	41	6.8%	15.9%
Hispanic	13.1%	229	10.7%	15.6%
Asian/Pacific Islander	4.9%	14	1.5%	8.3%
American Indian Non-Hispanic	15.2%	45	9.2%	21.1%
Other	20.5%	69	13.9%	27.1%

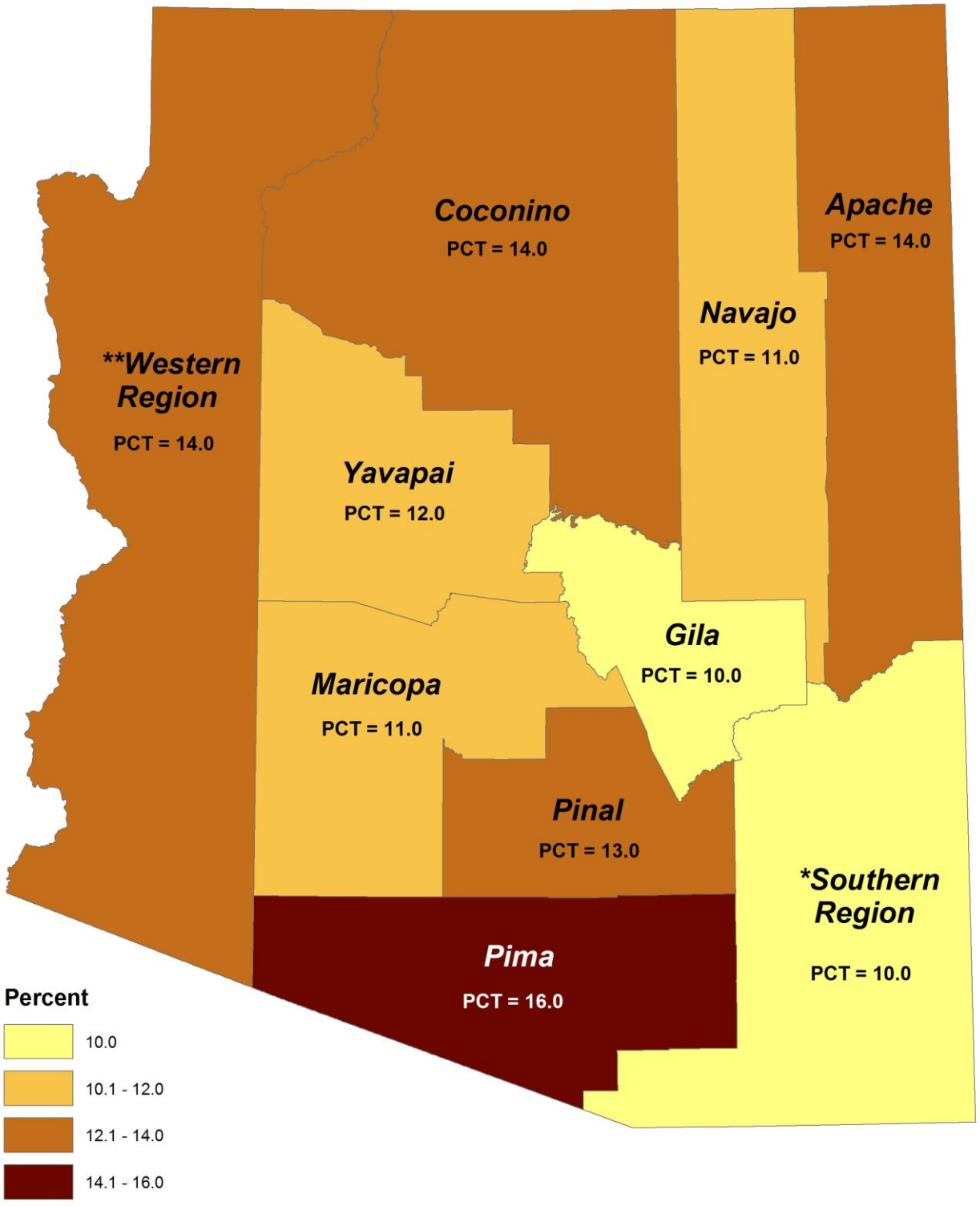
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health-Related Quality of Life
Frequent Mental Distress

The table to the left displays the proportions of Arizonans surveyed in 2014 who responded that they suffered more than 14 days of poor mental health, in the 30 days prior. Results are also shown by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Frequent Mental Distress, Arizona Respondents Reporting Frequent Mental Distress by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health-Related Quality of Life
Frequent Physical Distress

Frequent physical distress (FPD) is defined as suffering 14 or more physically unhealthy days in the 30 days prior. FPD has been associated with both being underweight and with obesity. Obesity increases the risk of morbidity and mortality. Additionally, obesity increases the risk of having heart disease, hypertension, diabetes, arthritis, and some cancers.[12] Furthermore, FPD has been associated with increased risky behaviors, such as drinking and smoking in women of child-bearing age.[13] Arizonans surveyed in 2012, 2013 and 2014 reported FPD more frequently than the national median (see Figure 4A).

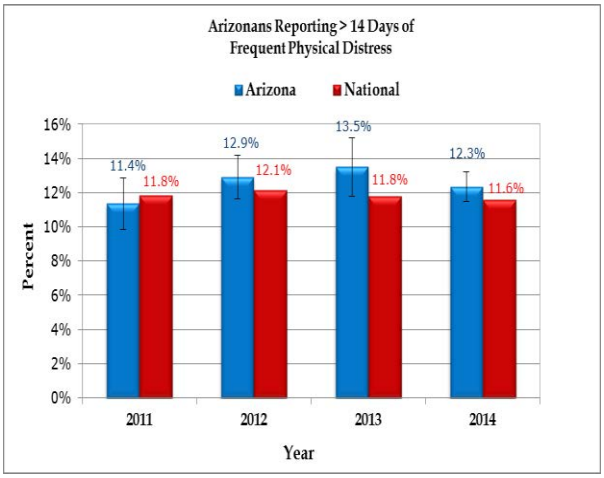


Figure 4A. Arizona and National 2011-2014 BRFSS prevalence of Frequent Physical Distress (FPD) suffering >14 days or more physical unhealthy days within 30 days prior

In 2014, 12.3% of Arizonans BRFSS surveyed reported FPD; slight higher than the national median at 11.6%. Arizona falls in the second-highest class among all states for the percent of respondents reporting FPD (see Figure 4B).

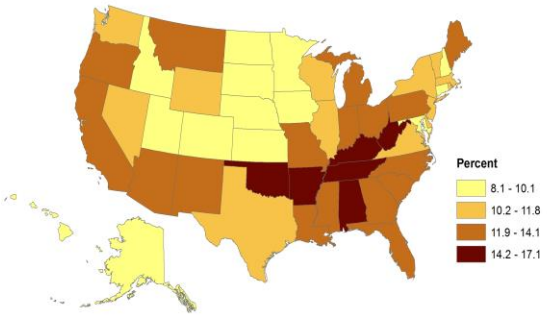


Figure 4B. BRFSS 2014 respondents reporting FPD by state (natural breaks).

Arizona 2014 BRFSS results generally concur with the current literature on FPD among women of child-bearing age (see Figure 4C). Arizona women surveyed who are current or former cigarette smokers report FPD more frequently than Arizona women surveyed who had never smoked.

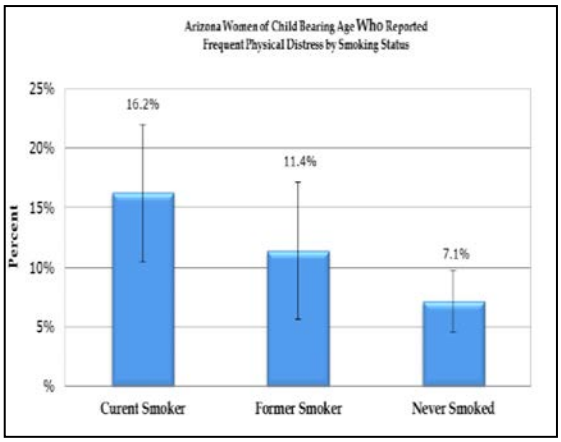


Figure 4C. Arizona 2014 BRFSS data assessing frequent physical distress and risky behaviors such as cigarette smoking in women of child bearing age. Frequent Physical Distress (FPD) suffering >14 days or more physical unhealthy days within 30 days prior.

Among Arizonans surveyed who reported having certain chronic conditions like heart disease, diabetes, hypertension and obesity were more likely to report FPD than those without chronic conditions, and the occurrence of each of these conditions increased the likelihood of reporting FPD above the Arizona average of 12.3% in 2014(see Figure 4D).

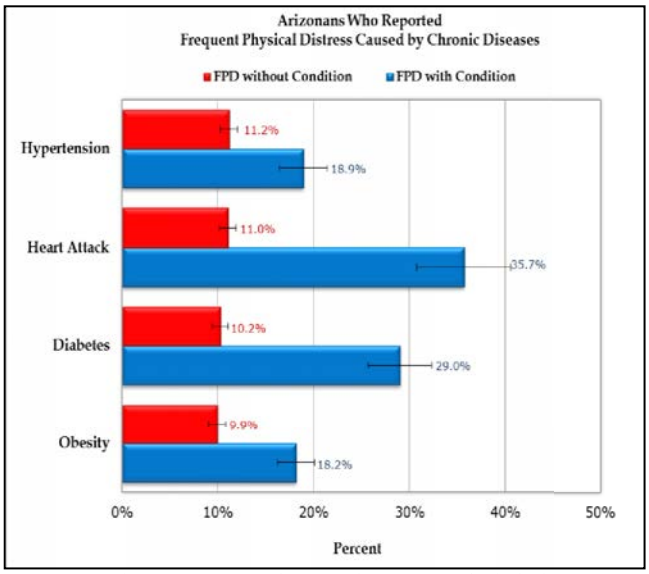


Figure 4D. Arizona 2014 BRFSS data assessing Frequent Physical Distress (FPD), body mass index categories, and conditions associated with being overweight/obese, diabetes, heart attack and hypertension. Frequent Physical Distress (FPD) suffering >14 days or more physical unhealthy days within 30 days prior.

[12] Ford ES, Moriarty DG, Zack MM, Mokdad AH, Chapman DP. Self-reported body mass index and health-related quality of life: findings from the Behavioral Risk Factor Surveillance System. Obes Res. 2001 Jan;9(1):21-31.
[13] Ahluwalia IB, Mack KA, Mokdad A. Mental and physical distress and high-risk behaviors among reproductive-age women. Obstet Gynecol. 2004 Sep;104(3):477-83.

Arizonans Reporting > 14 days of Frequent Physical Distress				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**11.6%**	53		
Arizona	**12.3%**	2069	11.5%	13.2%
Male	11.5%	770	10.3%	12.7%
Female	13.1%	1299	11.9%	14.3%
18-24	5.3%	28	2.9%	7.7%
25-34	9.1%	77	6.5%	11.8%
35-44	10.1%	140	8.0%	12.3%
45-54	13.0%	289	10.9%	15.0%
55-64	18.3%	538	16.2%	20.3%
65+	16.4%	997	15.1%	17.7%
Married	10.9%	879	9.8%	11.9%
Divorced	19.8%	472	16.9%	22.8%
Widowed	16.8%	370	14.0%	19.5%
Separated	23.5%	51	13.7%	33.3%
Never Married	9.6%	217	7.6%	11.5%
Unmarried Couple	12.3%	62	7.9%	16.7%
Less than high school	19.3%	251	15.7%	22.8%
High School/GED	12.2%	532	10.7%	13.7%
Some College/Technical School	13.3%	709	11.8%	14.8%
College/Technical School Grad	7.0%	559	6.1%	7.9%
Employed for Wages	6.1%	301	5.0%	7.2%
Self Employed	7.5%	71	4.9%	10.2%
Out of Work	14.3%	108	10.5%	18.2%
Homemaker	9.8%	121	7.2%	12.4%
Student	8.2%	22	3.5%	12.8%
Retired	14.0%	806	12.7%	15.3%
Unable to Work	55.1%	610	50.0%	60.3%
Less than $10,000	25.9%	211	20.7%	31.1%
$10,000 to $14,999	20.9%	201	16.1%	25.7%
$15,000 to $19,999	17.8%	211	13.5%	22.1%
$20,000 to $24,999	15.5%	236	12.3%	18.7%
$25,000 to $34,999	14.5%	214	11.3%	17.7%
$35,000 to $49,999	9.7%	211	7.7%	11.7%
$50,000 to $74,999	7.9%	179	6.1%	9.7%
Above $75,000	6.1%	226	4.9%	7.3%
White Non-Hispanic	12.3%	1576	11.5%	13.2%
Black/African American	10.3%	53	5.8%	14.7%
Hispanic	12.7%	293	10.4%	14.9%
Asian/Pacific Islander	5.6%	12	1.2%	10.0%
American Indian Non-Hispanic	14.9%	59	9.9%	19.9%
Other	17.8%	76	12.0%	23.5%

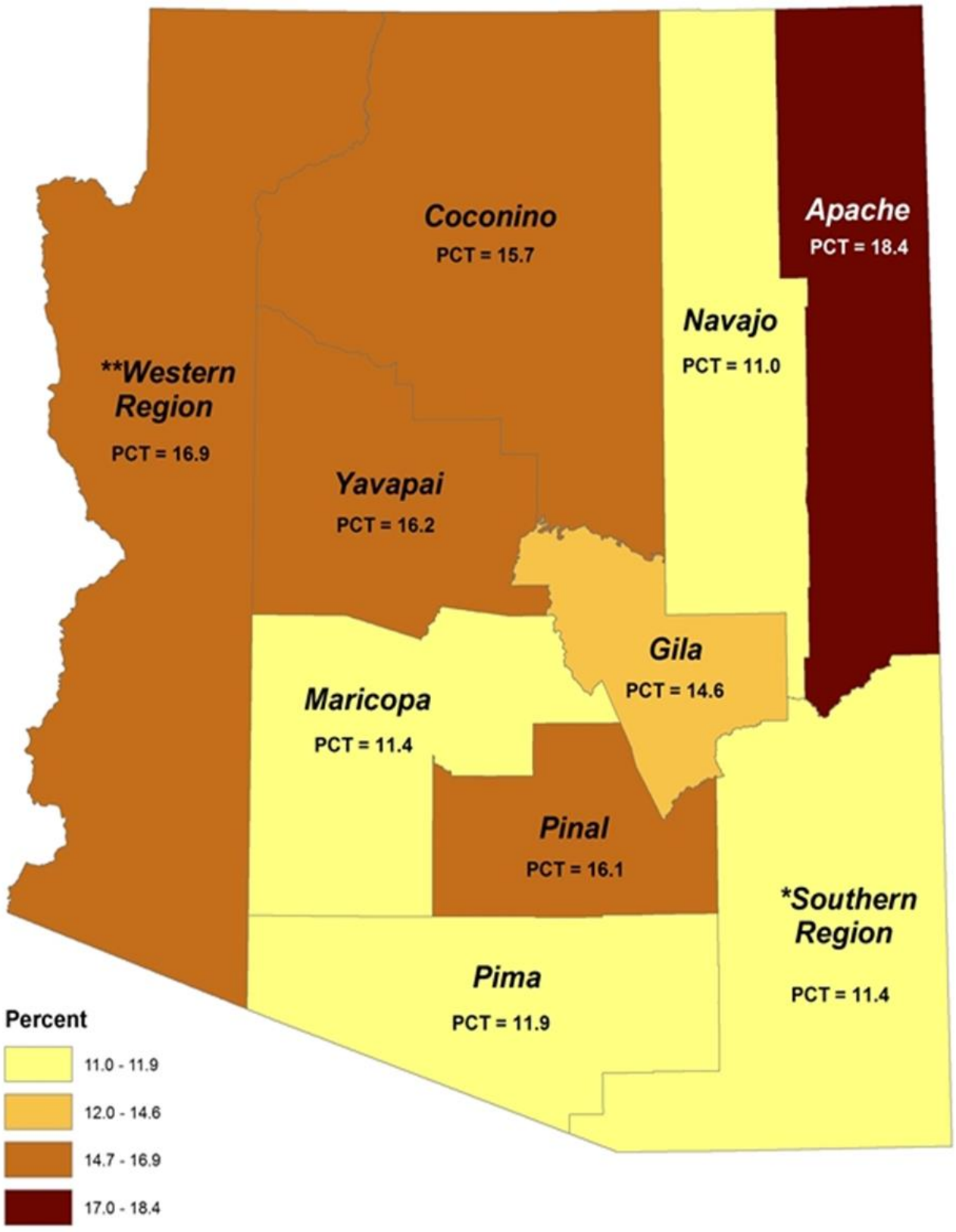
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health-Related Quality of Life Frequent Physical Distress

The table to the left displays the proportions of the prevalence of Arizona adults who responded that they suffered 14 or more days of poor physical health, in the 30 days prior. The data are reported by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Reporting Frequent Physical Distress, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health-Related Quality of Life
Barriers to Socialization

Socialization plays a significant role in public health. Research has shown that individuals who have the fewest social ties have an increased risk of mortality. Furthermore, the number of social relationships is inversely related to all-cause mortality.[14] The BRFSS survey asked if a person's activities were inhibited due to poor physical or mental health. To assess socialization, respondents were classified as inhibited socially if they reported 14 or more days of limited activities due to health, within the 30 days prior. Arizonans surveyed reported a similar frequency of inhibited socialization when compared to the national median (see Figure 5A).

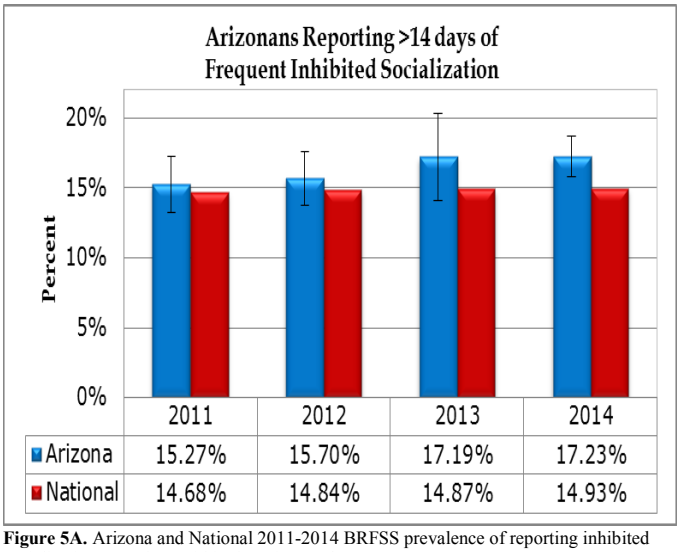


Figure 5A. Arizona and National 2011-2014 BRFSS prevalence of reporting inhibited socialization > 14 days within the prior 30-days.

When looking at all the states in the nation, in 2014, Arizona falls in the second-highest class for the percent of respondents reporting inhibited socialization (see Figure 5B).

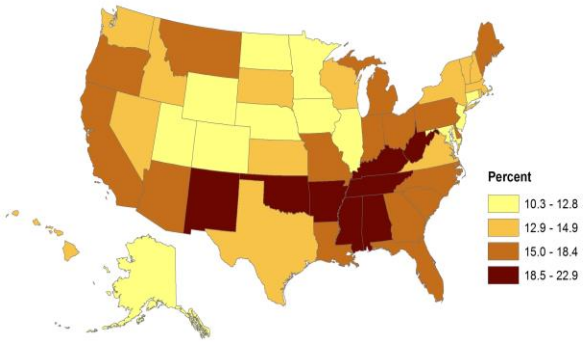


Figure 5B. BRFSS 2014 survey respondents reporting their health interfering with their ability to socialize by state (natural breaks).

There were some differences in frequent inhibited socialization reported by Arizona survey respondents who also engaged in various other types of social activities such as smoking, binge drinking, heavy drinking and marital status (see Figure 5C).

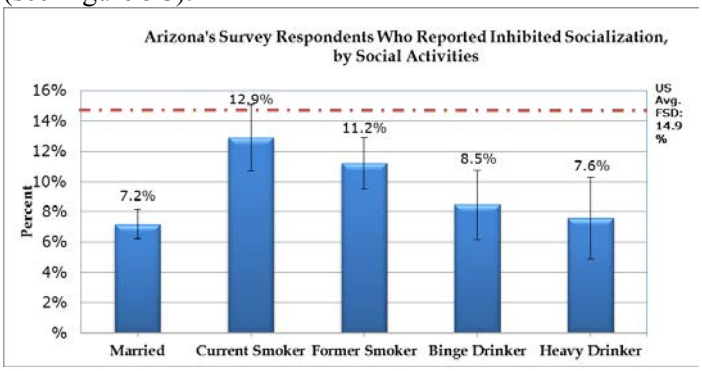


Figure 5C. The Arizona 2014 BRFSS survey respondents who reported FSD by marital status, smoking and drinking behaviors.

There are differences in Arizonans surveyed who reported frequent inhibited socialization who also reported certain medical conditions (see Figure 5D). While the occurrence of chronic conditions is higher among those that reported frequently inhibited socialization, not all respondents with these chronic diseases reported that they are socially inhibited.

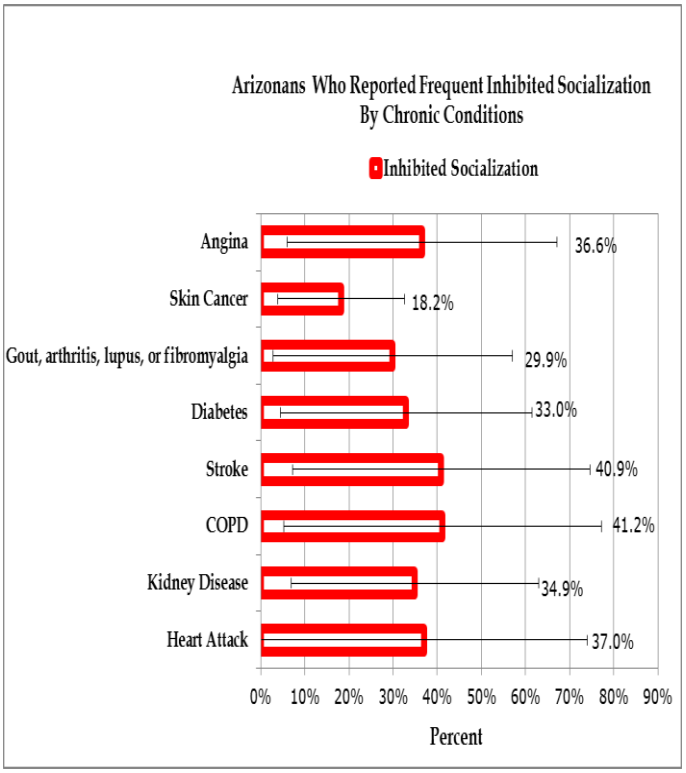


Figure 5D. The Arizona 2014 BRFSS data assessing socialization and skin cancer, COPD, kidney disease, gout, arthritis, lupus, fibromyalgia, diabetes, heart attack, angina, and strokes.

[14] Umberson D, Montez JK. Social Relationships and Health: A Flashpoint for Health Policy. *Journal of health and social behavior*. 2010;51(Suppl):S54-S66. doi:10.1177/0022146510383501.

Arizonans Reporting Frequent Inability to Socialize Due to Poor Health

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**14.9%**	53		
Arizona	**17.2%**	1396	15.8%	18.7%
Male	17.9%	504	15.5%	20.2%
Female	16.7%	892	14.9%	18.5%
18-24	10.9%	30	6.7%	15.1%
25-34	12.4%	50	8.0%	16.7%
35-44	13.8%	101	10.3%	17.2%
45-54	18.9%	216	15.6%	22.2%
55-64	26.0%	379	22.7%	29.3%
65+	21.3%	620	19.2%	23.5%
Married	15.3%	557	13.3%	17.3%
Divorced	27.7%	346	23.3%	32.2%
Widowed	22.4%	231	17.8%	27.1%
Separated	23.7%	42	13.7%	33.6%
Never Married	13.5%	171	10.6%	16.4%
Unmarried Couple	15.2%	34	8.2%	22.2%
Less than high school	24.0%	175	18.9%	29.1%
High School/GED	18.5%	374	15.7%	21.3%
Some College/Technical School	18.3%	503	15.9%	20.8%
College/Technical School Grad	8.5%	331	7.2%	9.7%
Employed for Wages	6.1%	123	4.4%	7.8%
Self Employed	12.5%	37	6.2%	18.9%
Out of Work	18.7%	86	13.2%	24.2%
Homemaker	11.6%	73	7.5%	15.7%
Student	11.1%	15	4.0%	18.3%
Retired	20.1%	499	17.8%	22.5%
Unable to Work	57.5%	537	52.3%	62.7%
Less than $10,000	31.1%	165	24.2%	37.9%
$10,000 to $14,999	32.2%	160	24.7%	39.7%
$15,000 to $19,999	20.8%	151	15.3%	26.2%
$20,000 to $24,999	18.7%	159	13.3%	24.1%
$25,000 to $34,999	20.5%	147	15.0%	25.9%
$35,000 to $49,999	12.8%	132	9.4%	16.2%
$50,000 to $74,999	11.3%	116	8.3%	14.3%
Above $75,000	8.4%	125	6.1%	10.6%
White Non-Hispanic	17.2%	1068	15.7%	18.7%
Black/African American	19.0%	48	11.9%	26.0%
Hispanic	17.2%	179	13.4%	21.1%
Asian/Pacific Islander	2.3%	5	0.0%	5.0%
American Indian Non-Hispanic	20.2%	46	12.7%	27.8%
Other	25.3%	50	15.5%	35.1%

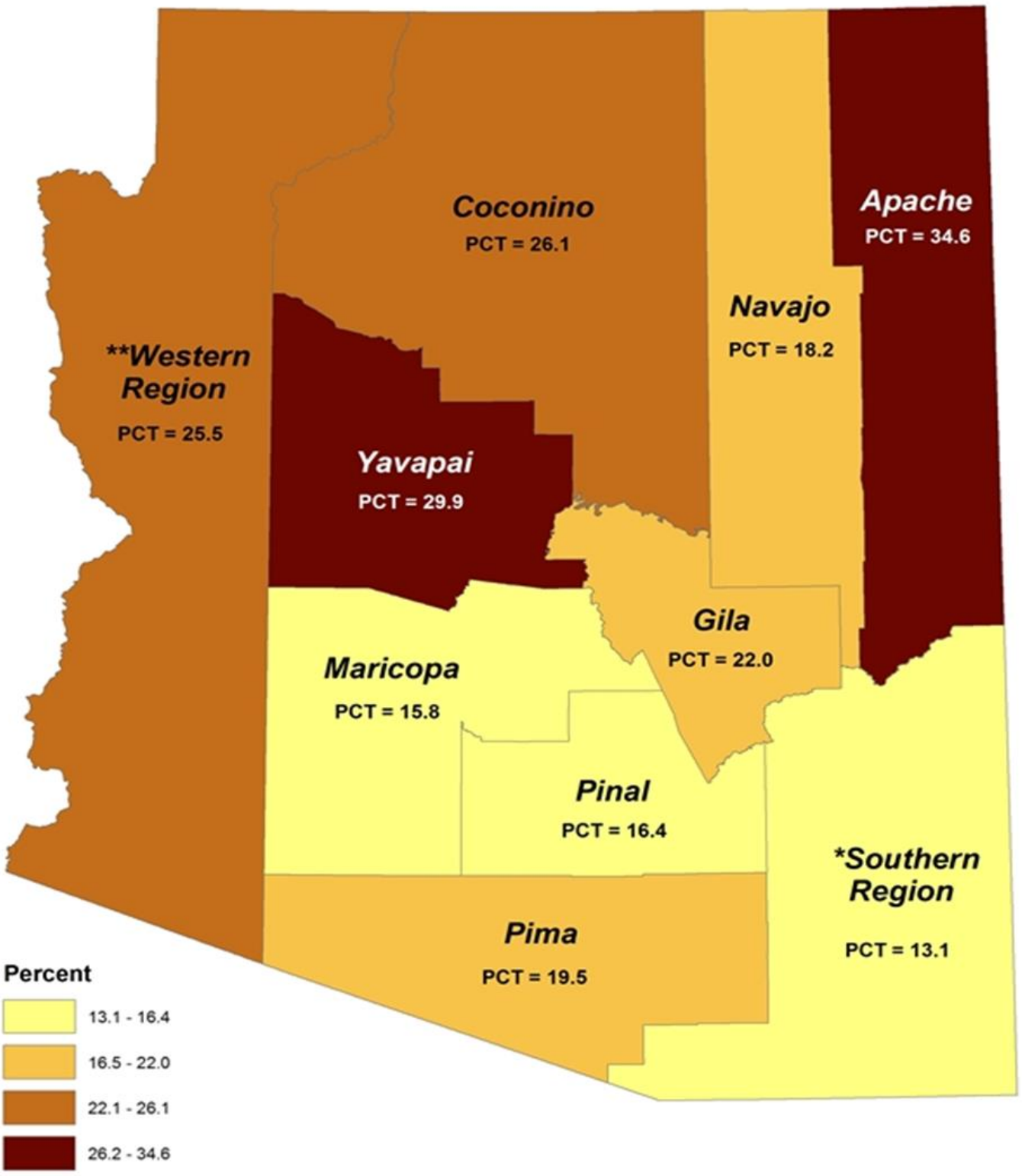
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health-Related Quality of Life Barriers to Socialization

The table to the left proportion of Arizonans surveyed who indicated that they suffered 14 or more days of poor physical or mental health inhibiting daily function in the 30 days prior. The data are also reported by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Reporting Frequent Inhibited Socialization, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Health Practices

Prevention is grouped into three levels: primary, secondary and tertiary. Primary prevention consists of practices aimed at preventing diseases from ever occurring. Vaccination is an example of primary prevention. Secondary prevention is used after the person develops a disease but before they exhibit symptoms. Cancer screening is considered secondary prevention. Lastly, tertiary prevention is targeted at individuals who already have symptoms of a disease. Administration of antibiotics is an example of tertiary prevention. This section of the 2014 BRFSS Annual Report focuses on primary and secondary prevention, including an analysis of the following:

- **Routine Medical Examination (variable CHECKUP1) —** A medical examinations within a year is considered a positive outcome and medical examination over is considered a negative outcome.

- **Annual Influenza Vaccine Adults (variables _FLSHOT6 (age 65+) and FLUSHOT6 (Adults))—**Adults where influenza vaccinations within the last 12 months is considered a positive outcome. Individuals exceeding 12 months are considered a negative outcome.

- **Shingles Age 50+ (variable SHINGLE2)** also called herpes zoster or zoster, is a painful skin rash caused by the varicella zoster virus (VZV). VZV is the same virus that causes chickenpox.

- **Colorectal Cancer Screening**—The guidelines set by the United States Preventive Services Task Force recommend a secondary prevention regiment using annual fecal occult blood testing, sigmoidoscopy every five years, and a colonoscopy every ten years. The BRFSS has two questions that can be used to assess colorectal cancer screening: The guidelines set by the United States Preventive Services Task Force recommends a secondary prevention regimen using annual fecal occult blood testing, sigmoidoscopy every five years, and a colonoscopy every ten years.

    - **Fecal Occult Blood Test (variable BLDSTOOL**)—Individuals 50 and older ever having a fecal occult blood test is considered a positive outcome and never having a fecal occult blood test is considered a negative outcome.

    - **Sigmoidoscopy and Colonoscopy (variable HADSIGM3)**—Individuals 50 and older, ever having a sigmoidoscopy or colonoscopy is considered a positive outcome and never having a colonoscopy or sigmoidoscopy is considered a negative outcome.

- **Pre-conception Health –**Women's reproductive ages should receive preconception care to better manage their condition.
    - **Pre-conception Health (variable AAZ6_1)** Women (childbearing age) whom their health care professional talks to them about ways to prepare for a healthy baby is considered to be a positive outcome.

- **Mammography (variable HOWLONG)** - binary outcome where for women 40 years of age and older, having a mammogram in the past year is considered a positive outcome and having a mammogram over a year ago is considered a negative outcome.

- **Pap Test-(variables LASTPAP2),** Women respondents ages 18+ who had a pap smear in the last 3-years.

- **Prostate Specific Antigen Test (PSA) (calculated from variables PCPSAAD2, PCPSADI1, PCPSARE1, PSATESTS1, PSATIME, and PCPSARS1) –** examines physician practices on communication about PSA and respondent had a PSA Test. PCPSAAD2 = PSAtest (yes, no): did doc ever talk to you about advantages of PSA test? PCPSADI1 = PSAdoc (yes, no): did doc ever talk to you about disadvantages of PSA test? PCPSARE1 = PSArec (yes, no): did doctor recommend you get a PSA test. PSATEST1 = PSAhad (yes, no): ever had a PSA test? PSATIME = PSAtime2 (past year, within 2 years, within 3 years, within 5 years, 5+ years) = When was your last PSA test?PCPSARS1 = PSAwhy (routine exam, prostate problem, family history, told had prostate cancer, other reason) = Why did you get a PSA test?

Strategic Map Link

By collecting data on routine medical exams, influenza vaccines, colorectal cancer screenings, and women's and men's reproductive health the BRFSS is providing Arizona with a tool to evaluate infectious diseases, hospital readmissions, and whether communities are healthy and safe.
The aforementioned indicators are outlined as A3 and C5 of the ADHS Strategic Map.
(See Page 9)

Preventive Practices
Routine Medical Examinations

Regular medical exams are a valuable tool in preventive care. Routine examinations can find problems early, when treatment is more effective.[15] However, there is a growing discussion on what tests to include and how often an examination is necessary. Depending on age and gender, the recommended frequency ranges from 1-5 years for healthy individuals.[16] To assess the utilization of health services, the shortest interval recommended for a routine medical examination (1 year) was used. Arizonans surveyed from 2011 through 2014 reported having a routine medical exam in the past year was lower than the U.S. median (see Figure 6A).

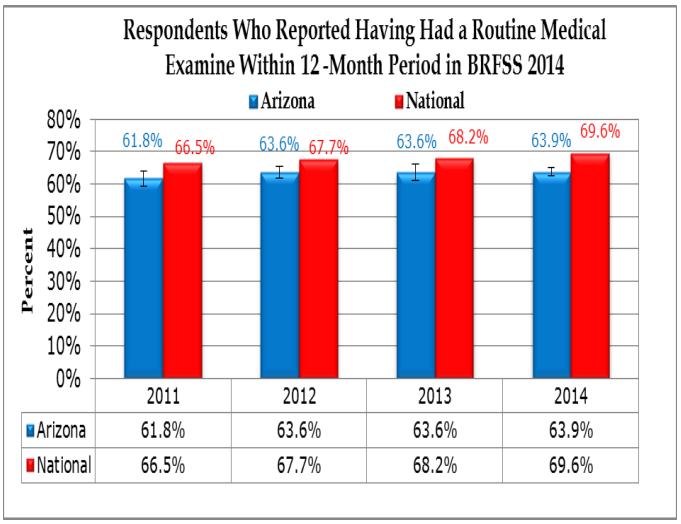


Figure 6A. Prevalence of Arizona and national BRFSS 2014 respondents who have had a routine medical exam within a 12-month period.

In 2014, 63.9% of Arizonans surveyed reported they had a routine medical examination in the past year. The national prevalence is 69.6%. When looking at all the states in the nation, Arizona falls in the second lowest class (see Figure 6B).

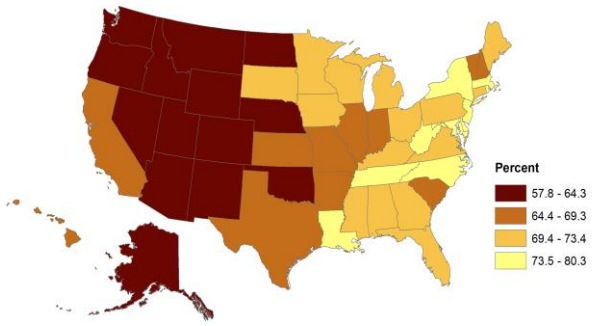


Figure 6B. BRFSS 2014 survey respondents who reported having had a routine medical exam in the past year by state, (natural breaks).

The lack of health insurance acts as a barrier to accessing health care. Uninsured people are more likely to report that they were unable to receive medical care, and are more likely to have poor health status.[17] Arizonans surveyed in 2014 reported having no health insurance were significantly less likely to have had a check-up in the past year when compared to those respondents with health insurance (see Figure 6C).

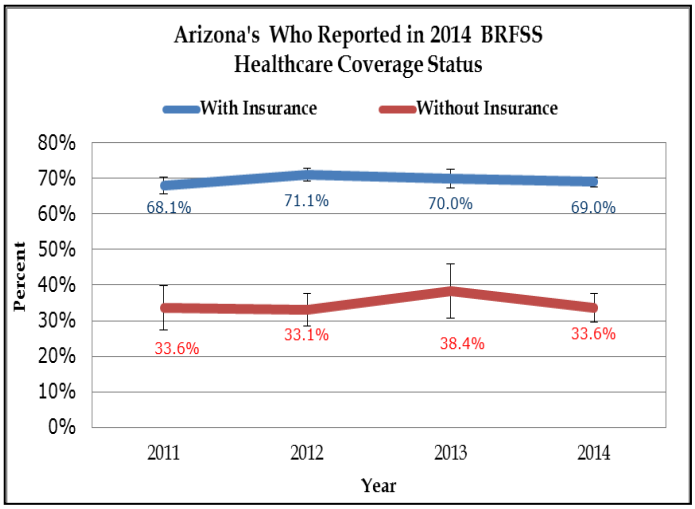


Figure 6C. Prevalence of Arizona respondents who have had a routine medical exam within 12-monnts stratified by insurance status – BRFSS 2014.

There has been much debate on the necessity of routine medical exams for healthy individuals. If a person suffers from a serious medical condition, it is advised that he/she see a medical professional regularly.[17] The percent of Arizonans surveyed who reported having a chronic condition (CC) and had a checkup within the prior year ranges from 77.9% to 85.3%, depending upon the CC. This is higher than the average percentage among all Arizonans surveyed, at 63.9% (see Figure 6D). Although individuals with CCs are more likely to have had a routine medical exam within the past 12 months, when compared to all Arizonans surveyed, it still falls below the recommended 100%. Routine medical examinations prevent the exacerbation of CCs and reduce future costs of care.

Arizonans who reported having gout, arthritis, lupus and fibromialgia (GALF) at 77.9 % The red dashed line is the overall percent of Arizonans who have had a routine medical exam in the last 12 months, BRFSS 2014 (see Figure 6D).

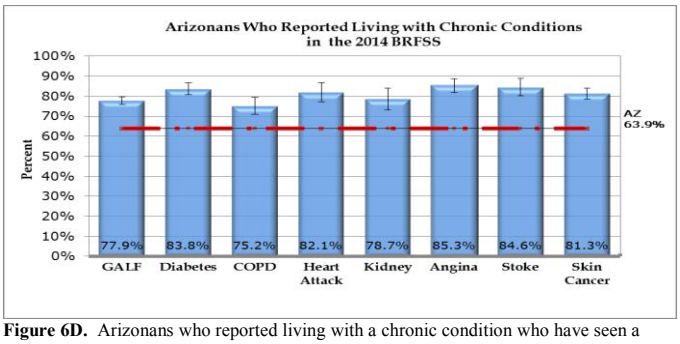


Figure 6D. Arizonans who reported living with a chronic condition who have seen a medical professional in the past year.

15 "Regular Check- Are Important." Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, n.d. Web. 08 Oct. 2013. http://www.cdc.gov/family/checkup/.
16 Physical Exam Frequency: MedlinePlus Medical Encyclopedia." U.S National Library of Medicine. U.S. National Library of Medicine, n.d. Web. 08 Oct. 2013. http://www.nlm.nih.gov/medlineplus/ency/article/002125.htm.

17 Bodenheimer T. Willard-Grace R. Teamlets in Primary Care: Enhancing the Patient and Clinical Experience. J Am Board of Fam Med. 2006 Jan-Feb: 29(1): 135-138. doi: 10.3122/ jabfm . 2016.01.150176

Preventive Practices
Routine Medical Examinations

The table to the left displays the proportions of Arizona Adults who have had a routine medical examination in the past 12 months by: sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

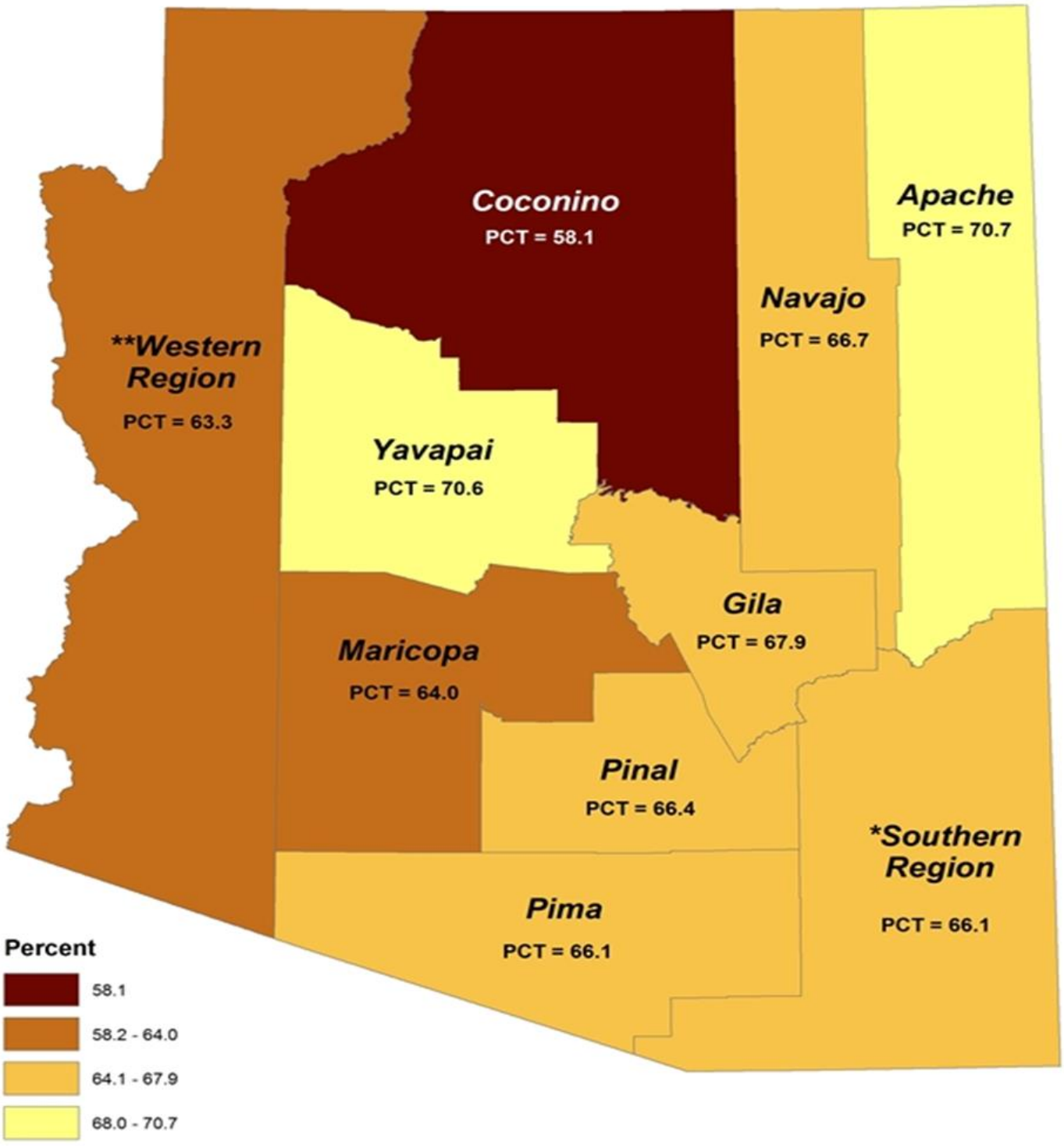
The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizonans Who Had a Checkup in the Past Year

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**69.6%**	53		
Arizona	**63.9%**	10860	62.5%	65.3%
Male	59.3%	4223	57.2%	61.4%
Female	68.4%	6637	66.6%	70.2%
18-24	45.6%	233	40.3%	51.0%
25-34	47.8%	462	43.6%	52.0%
35-44	59.0%	882	55.5%	62.5%
45-54	65.0%	1413	62.1%	67.9%
55-64	71.9%	2316	69.7%	74.1%
65+	86.1%	5554	84.9%	87.3%
Married	69.2%	5800	67.5%	70.9%
Divorced	65.4%	1629	61.9%	69.0%
Widowed	82.2%	1927	79.2%	85.1%
Separated	54.7%	153	44.3%	65.2%
Never Married	49.4%	1001	45.8%	53.1%
Unmarried Couple	50.3%	238	43.1%	57.4%
Less than high school	58.3%	760	53.7%	62.9%
High School/GED	61.5%	2465	58.7%	64.2%
Some College/Technical School	63.9%	3203	61.5%	66.3%
College/Technical School Grad	70.3%	4328	68.3%	72.2%
Employed for Wages	57.0%	3119	54.8%	59.3%
Self Employed	52.9%	612	47.9%	57.9%
Out of Work	50.1%	383	43.8%	56.4%
Homemaker	63.3%	721	58.4%	68.2%
Student	54.9%	146	47.1%	62.8%
Retired	85.0%	4925	83.7%	86.3%
Unable to Work	79.9%	827	76.2%	83.7%
Less than $10,000	59.3%	431	52.9%	65.7%
$10,000 to $14,999	62.2%	515	55.6%	68.7%
$15,000 to $19,999	56.3%	637	50.6%	62.0%
$20,000 to $24,999	57.5%	890	52.5%	62.5%
$25,000 to $34,999	60.6%	1012	55.9%	65.3%
$35,000 to $49,999	63.9%	1440	59.9%	67.9%
$50,000 to $74,999	66.7%	1496	63.2%	70.2%
Above $75,000	69.8%	2562	67.3%	72.3%
White Non-Hispanic	66.1%	8528	64.7%	67.6%
Black/African American	76.9%	342	70.1%	83.7%
Hispanic	58.0%	1359	54.6%	61.5%
Asian/Pacific Islander	55.0%	145	45.8%	64.2%
American Indian Non-Hispanic	64.0%	233	56.5%	71.4%
Other	59.4%	253	51.5%	67.4%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Arizona Respondents Reporting Having a Medical Checkup in the Past Year, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices
Influenza Vaccinations

Since 1918, there have been four influenza (flu) pandemics; the most recent was the 2009-2010 H1N1 pandemic. The CDC estimates that 43 million to 89 million people contracted H1N1 during the 2009/2010 pandemic.[18] An analysis comparing the cost effectiveness of vaccination versus antiviral treatment of the flu found that antiviral treatment was the most consistently cost-effective treatment for working adults. However, the analysis did not take into consideration flu pandemics, herd immunity or the possibility of drug resistant strains of the flu. When H1N1 was discovered, it was resistant to two of the four available antivirals; at the end of the pandemic, evolved strains were found that were resistant to three antivirals.[19] For this reason, the CDC recommends annual flu vaccinations. In 2014, 33.8% of Arizonans surveyed reported having a flu vaccine in the last year, which was lower than the national median (see Figure 7A).

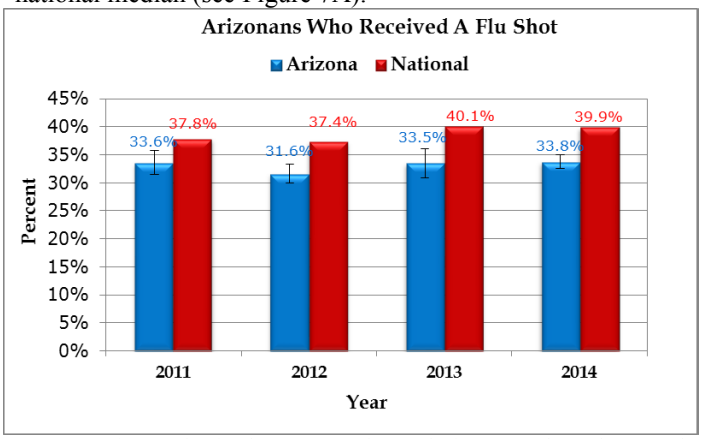


Figure 7A. Arizona and national BRFSS 2014 data results from respondents who reported having a flu vaccine in the past year.

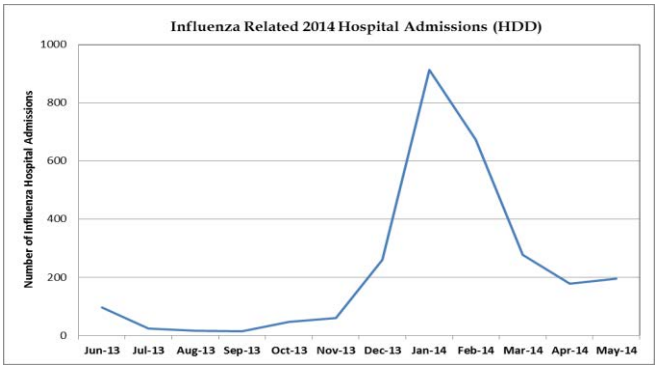


Figure 7B. Hospital discharges containing ICD-9 codes : 487 and 488 was used to identify flu related hospitalizations from June 2013 to May 2014.

Controlling seasonal flu requires targeted campaigning; it is important to begin vaccination before high flu activity presents clinically (see Figure 7B).

During the 2013- 2014 influenza season, flu and pneumonia increased the risk of mortality in the U.S.[20] In 2014, Arizona in-patient and emergency departments reported 2,754 hospitalizations due to combined flu and pneumonia, with charges totaling more than $161.7 million (see Table 4).

Influenza with Pneumonia Related Hospital Inpatient & Emergency Department Discharges			
Age	Number of Discharges	Charges	Average Length of Stay (Days)
UNDER 18 YEARS	562	$23,289,574	4.8
18 TO 24	92	$2,597,896	3.6
25 TO 39	327	$17,887,842	4.8
40 TO 54	449	$33,908,929	6.6
55 AND ABOVE	1,324	$84,040,156	6.1
Total	**2,754**	**$161,724,397**	

Table 4. Hospital encounters, both emergency department and admissions in 2014, contained the ICD-9 codes: 487.00, 488.01, 488.11, and 488.81.

Due to the potential co-occurrence of the flu and pneumonia, infection in high-risk populations is of greater concern. Monitoring vaccination prevalence of individuals who are over the age of 6-months and those who are 65 and older is recommended. In 2014, there were 2,754 hospitalizations after presenting with both the flu and pneumonia. In 2014, more than one-half (56.1%) of Arizonans over the age of 65 years surveyed in 2014 BRFSS reported having a flu vaccine within the past year, levels similar to the national median (see Figure 7C).

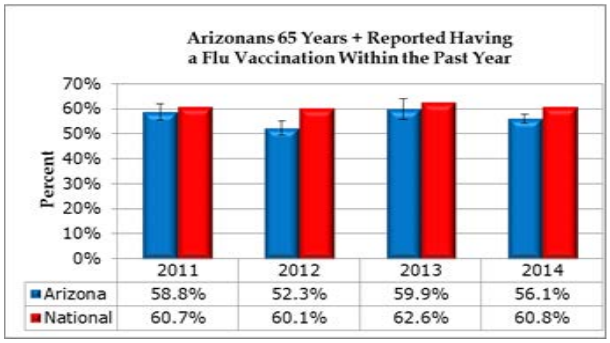


Figure 7C. Percent of Arizona who received a flu vaccine within one-year from 2011 – 2014.

When compared to the other states in the nation, Arizona fell into the lowest class for individuals 65+ reporting a flu shot in the last 12 months (see Figure 7D).

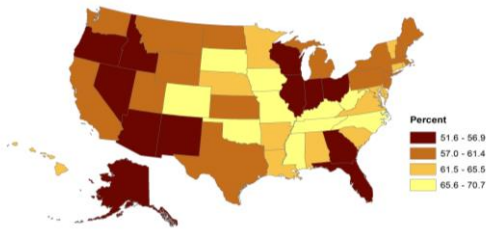


Figure 7D. BRFSS respondents 65 and older who had an influenza vaccination in the last 12 months by state (natural breaks).

[18] Centers for Disease Control and Prevention. "Key Facts About Seasonal Flu Vaccine." CDC, 07 Nov. 2013. Web. 12 Feb. 2014. <http://www.cdc.gov/flu/protect/keyfacts.htm>.
[19] Nichol, K. The efficacy, effectiveness and cost-effectiveness of inactivated influenza virus vaccines. Vaccine 21 (2003) 1769–1775

[20] Centers for Disease Control and Prevention. Influenza Activity—United States, 2013-14 and Composition of the 2014-15 Influenza Vaccines MMWR 10 June6, 2014 State-Specific Trends in Fruit and Vegetable Consumption Among Adults --- United States, 2000—2009. MMWR 10 September 2010. Web. 12 Feb. 2014
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6322a2.htm

Preventive Practices
Influenza Vaccinations

The table to the left displays the proportion of the 2014 Arizona BRFSS respondents of 65 years and older who reported that they had a flu vaccination in the past 12 months. Responses are also represented by sex, age categories, marital status, educational attainment, employment status, income and race/ ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizonans 65 Years and Older Who Had a Flu Shot in the Last 12-Months

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**60.8%**	53		
Arizona	**56.1%**	3522	54.4%	57.9%
Male	54.4%	1322	51.5%	57.3%
Female	57.5%	2200	55.3%	59.7%
65+	56.1%	3522	54.4%	57.9%
Married	57.9%	1774	55.4%	60.3%
Divorced	46.7%	484	42.2%	51.2%
Widowed	58.8%	1072	55.6%	62.1%
Separated	51.2%	22	36.6%	65.8%
Never Married	47.4%	119	38.7%	56.0%
Unmarried Couple	49.9%	36	32.2%	67.6%
Less than high school	57.9%	270	51.4%	64.3%
High School/GED	54.6%	827	51.3%	58.0%
Some College/Technical School	52.4%	980	49.4%	55.4%
College/Technical School Grad	62.0%	1436	59.5%	64.4%
Employed for Wages	48.7%	237	42.4%	54.9%
Self Employed	37.4%	95	29.0%	45.9%
Out of Work	52.2%	39	38.3%	66.2%
Homemaker	58.2%	187	50.9%	65.5%
Student	59.2%	2	0.0%	100.0%
Retired	57.5%	2808	55.5%	59.5%
Unable to Work	56.8%	143	47.8%	65.9%
Less than $10,000	49.8%	91	36.4%	63.3%
$10,000 to $14,999	48.8%	153	41.0%	56.5%
$15,000 to $19,999	55.5%	226	48.2%	62.8%
$20,000 to $24,999	50.0%	308	44.2%	55.9%
$25,000 to $34,999	51.8%	418	46.9%	56.7%
$35,000 to $49,999	54.9%	538	50.7%	59.2%
$50,000 to $74,999	59.9%	494	55.3%	64.6%
Above $75,000	62.0%	614	58.1%	66.0%
White Non-Hispanic	56.4%	3089	54.6%	58.1%
Black/African American	48.8%	57	37.2%	60.4%
Hispanic	53.9%	256	46.3%	61.4%
Asian/Pacific Islander	52.4%	13	29.1%	75.8%
American Indian Non-Hispanic	71.5%	45	57.1%	85.8%
Other	52.7%	62	40.1%	65.4%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Preventive Practices
Influenza Vaccinations

The table to the left displays the proportion of the 2014 Arizona BRFSS respondents of all ages who reported that they had a flu vaccination in the past 12 months. The data are reported by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

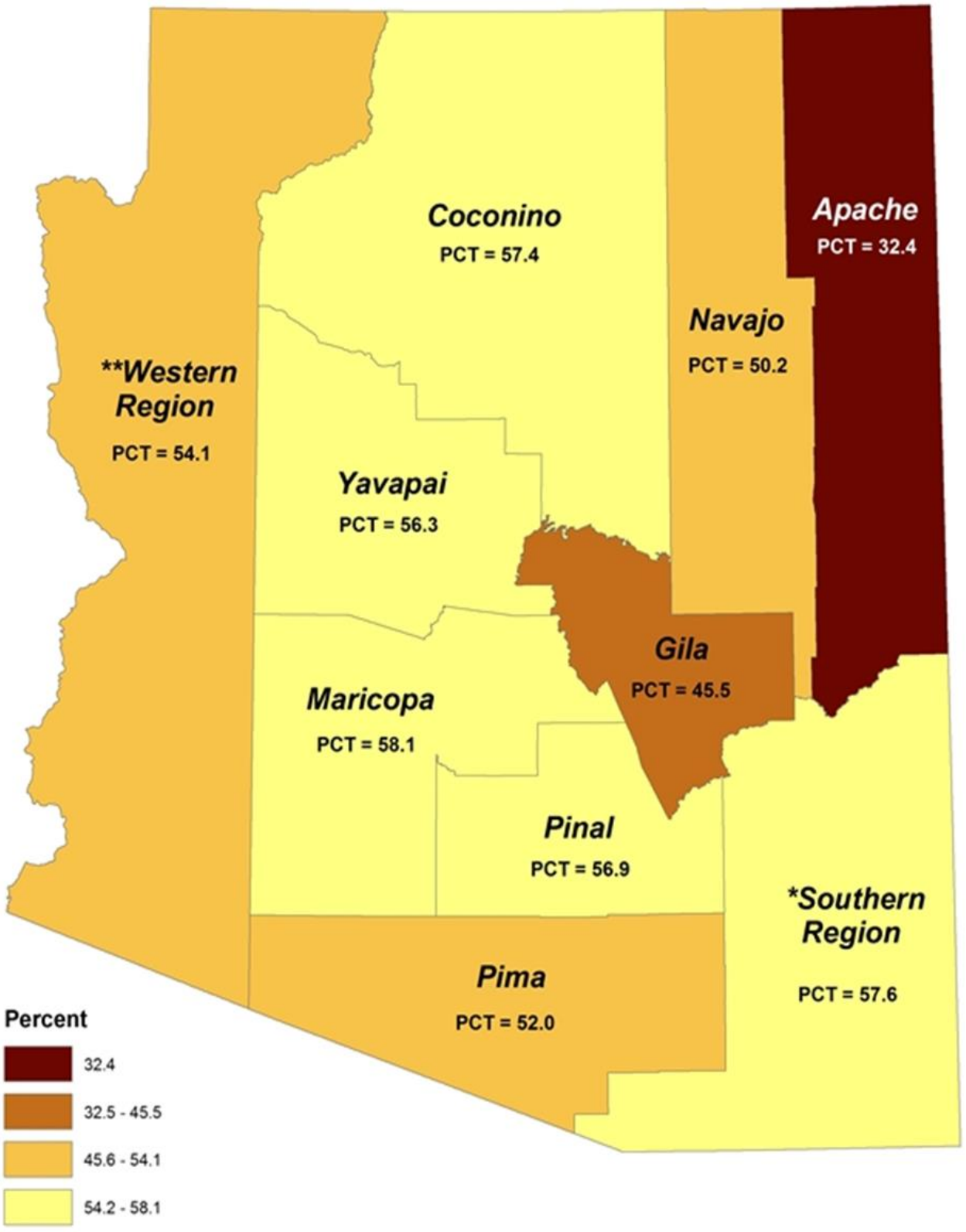
The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizonans Who Received a Flu Shot in the Last 12-Months

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**39.9%**	53		
Arizona	**33.8%**	6171	32.5%	35.0%
Male	30.3%	2330	28.6%	32.1%
Female	37.0%	3841	35.3%	38.7%
18-24	16.6%	74	12.5%	20.7%
25-34	22.6%	225	19.2%	26.0%
35-44	29.0%	397	25.6%	32.3%
45-54	31.1%	690	28.4%	33.7%
55-64	38.6%	1241	36.2%	41.0%
65+	56.1%	3544	54.3%	57.8%
Married	38.9%	3374	37.3%	40.6%
Divorced	33.4%	887	30.1%	36.7%
Widowed	52.4%	1203	48.9%	55.8%
Separated	19.1%	68	12.5%	25.7%
Never Married	19.9%	469	17.1%	22.8%
Unmarried Couple	25.5%	125	19.1%	31.9%
Less than high school	30.5%	442	26.6%	34.5%
High School/GED	29.6%	1300	27.2%	31.9%
Some College/Technical School	31.9%	1709	29.8%	34.1%
College/Technical School Grad	42.9%	2701	40.9%	44.8%
Employed for Wages	29.5%	1660	27.5%	31.4%
Self Employed	20.5%	282	17.0%	24.1%
Out of Work	16.7%	157	12.9%	20.5%
Homemaker	33.2%	371	28.5%	37.8%
Student	23.5%	61	16.5%	30.4%
Retired	54.0%	3161	52.1%	55.9%
Unable to Work	42.7%	453	37.8%	47.6%
Less than $10,000	29.3%	222	23.8%	34.8%
$10,000 to $14,999	25.5%	248	20.4%	30.6%
$15,000 to $19,999	30.8%	356	25.9%	35.8%
$20,000 to $24,999	30.4%	471	26.1%	34.6%
$25,000 to $34,999	34.5%	600	30.2%	38.9%
$35,000 to $49,999	33.4%	839	30.0%	36.8%
$50,000 to $74,999	33.8%	860	30.6%	36.9%
Above $75,000	39.0%	1567	36.6%	41.4%
White Non-Hispanic	36.5%	5022	35.2%	37.9%
Black/African American	26.0%	131	19.6%	32.3%
Hispanic	27.2%	667	24.3%	30.2%
Asian/Pacific Islander	31.7%	73	22.9%	40.5%
American Indian Non-Hispanic	43.2%	144	35.8%	50.7%
Other	30.3%	134	23.4%	37.3%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Arizona Respondents Age 65 or Older Who Reported Having a Flu Vaccine in the Past 12 Months, by County & Region, BRFSS 2014



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Preventive Practices
Shingles Vaccinations

Almost 1 out of every 3 people in the United States will develop shingles, also known as zoster or herpes zoster, in their lifetime. There are an estimated 1 million cases of shingles each year in this country. Anyone who has recovered from chickenpox may develop shingles; even children can get shingles. However the risk of shingles increases as you get older. About half of all cases occur in men and women 60 years old or older. Shingles is caused by the varicella zoster virus (VZV), the same virus that causes chickenpox. After a person recovers from chickenpox, the virus stays dormant (inactive) in the body. For reasons that are not fully known, the virus can reactivate years later, causing shingles. Shingles is not caused by the same virus that causes genital herpes, a sexually transmitted disease.[21] Anyone 60 years of age or older should get the shingles vaccine, regardless of whether they recall having had chickenpox or not. Studies show that approximately 75% of American adults[22] have had chickenpox, even if they don't remember getting the disease.

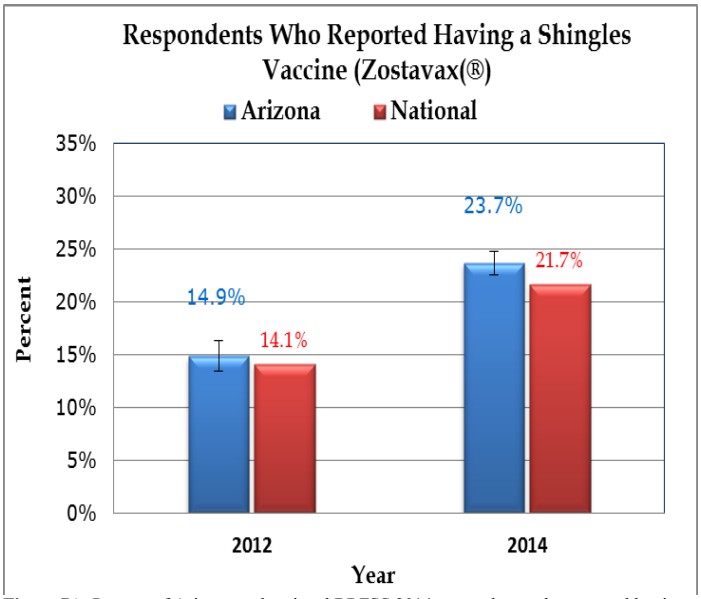


Figure 7A. Percent of Arizona and national BRFSS 2014 respondents who reported having a flu vaccine in the past year.

Shingles is an often-painful outbreak of rash or blisters on the skin which is caused by the chickenpox virus. The shingles vaccine is specifically designed to protect people against herpes zoster, which is another name for shingles disease. It will not protect people against other forms of herpes, such as genital herpes.

A person's risk for getting shingles begins to rise around age 50. However, shingles vaccine (Zostavax®) is recommended by the Centers for Disease Control and Prevention (CDC) for persons age 60 and older because the elderly are most likely to get shingles and to have severe pain with shingles while the length of vaccine protection is not yet known. Future research will determine if the CDC recommended age for shingles vaccination should be changed. Arizona respondents reported having received a shingles vaccine at 39.2% see Figure 7B.

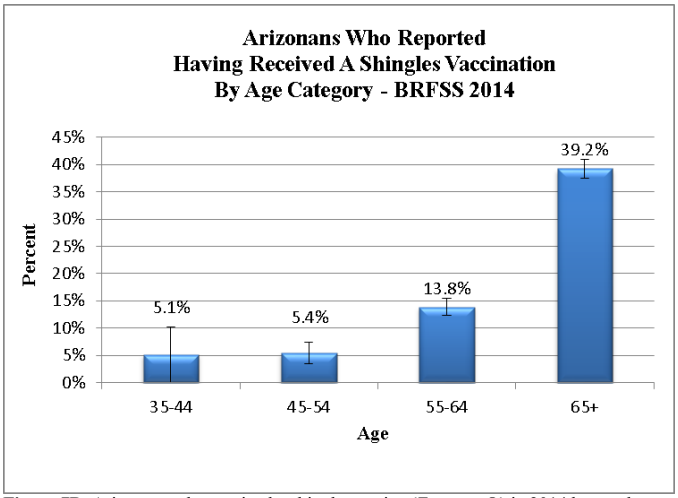


Figure 7B. Arizonans who received a shingle vaccine (Zostavax®) in 2014 by gender.

According to CDC studies found that more women than men develop herpes zoster; the reason for a possible difference between women and men is not known. [23]

Arizona females reported in the BRFSS 2014 had a higher percentage than the males at 20.6% (see Figure 7C).

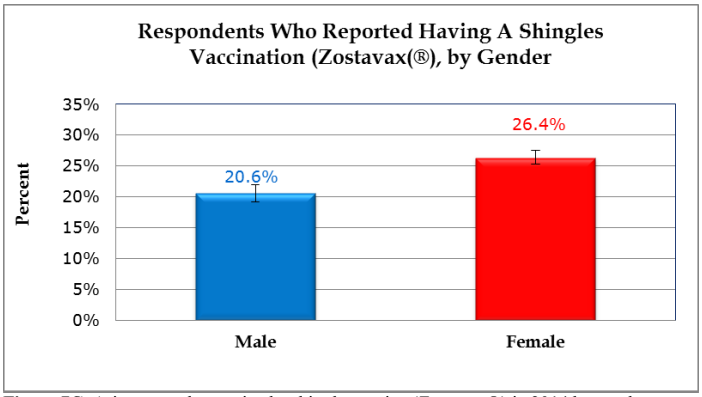


Figure 7C. Arizonans who received a shingle vaccine (Zostavax®) in 2014 by gender.

[21] U.S. Department of Health & Human Services. Center for Disease Control and Prevention. "Shingles (Herpes Zoster)". March 15 2016. https://www.cdc.gov/shingles/about/overview.html
[22] LaRussa P, Steinberg SP, Seeman MD, et al.: Determination of immunity to varicella-zoster virus by means of an intradermal skin test. J Infect Dis. 152: 869-875, 1985. http://jid.oxfordjournals.org/content/152/5/869.full.pdf+html

[23] CDC. Prevention of herpes zoster: recommendations of the Advisory Committee on Immunization Practices (ACIP)(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5705a1.htm). *MMWR Recomm Rep*. 2008;57(05):1-30.[23] Thomas SL, Hall AJ. What does epidemiology tell us about risk factors for herpes zoster? *Lancet Infect Dis*. 2004;4(1):26-33.

Arizonans 50+ who Reported Having Received A Shingles Vaccination				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**21.7%**	53		
Arizona	**23.7%**	3021	22.6%	24.8%
Male	20.6%	1069	18.9%	22.3%
Female	26.4%	1952	25.0%	27.9%
35-44	5.1%	1	0.0%	25.5%
45-54	5.4%	59	3.5%	7.4%
55-64	13.8%	477	12.3%	15.4%
65+	39.2%	2484	37.5%	41.0%
Married	25.3%	1632	23.8%	26.8%
Divorced	17.3%	422	14.9%	19.7%
Widowed	32.5%	775	29.4%	35.5%
Separated	5.7%	13	1.2%	10.2%
Never Married	13.3%	127	9.7%	16.9%
Unmarried Couple	12.3%	31	6.9%	17.6%
Less than high school	13.0%	110	9.4%	16.6%
High School/GED	20.9%	584	18.8%	23.0%
Some College/Technical School	24.1%	867	22.2%	26.1%
College/Technical School Grad	31.4%	1447	29.6%	33.2%
Employed for Wages	12.1%	391	10.5%	13.7%
Self Employed	13.8%	122	10.7%	16.8%
Out of Work	9.6%	44	5.4%	13.8%
Homemaker	21.5%	151	17.4%	25.7%
Student	7.5%	3	5.4%	9.6%
Retired	36.6%	2162	34.9%	38.4%
Unable to Work	16.7%	137	12.6%	20.8%
Less than $10,000	10.7%	54	4.9%	16.4%
$10,000 to $14,999	18.2%	92	12.2%	24.3%
$15,000 to $19,999	16.0%	133	12.1%	20.0%
$20,000 to $24,999	18.4%	216	15.0%	21.7%
$25,000 to $34,999	21.0%	278	17.8%	24.2%
$35,000 to $49,999	25.7%	482	22.9%	28.5%
$50,000 to $74,999	31.0%	497	27.7%	34.2%
Above $75,000	25.5%	722	23.3%	27.7%
White Non-Hispanic	27.1%	2765	25.9%	28.3%
Black/African American	15.3%	40	9.2%	21.4%
Hispanic	10.5%	111	7.2%	13.7%
Asian/Pacific Islander	19.1%	18	10.1%	28.1%
American Indian Non-Hispanic	18.2%	37	10.9%	25.4%
Other	22.3%	50	15.4%	29.1%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

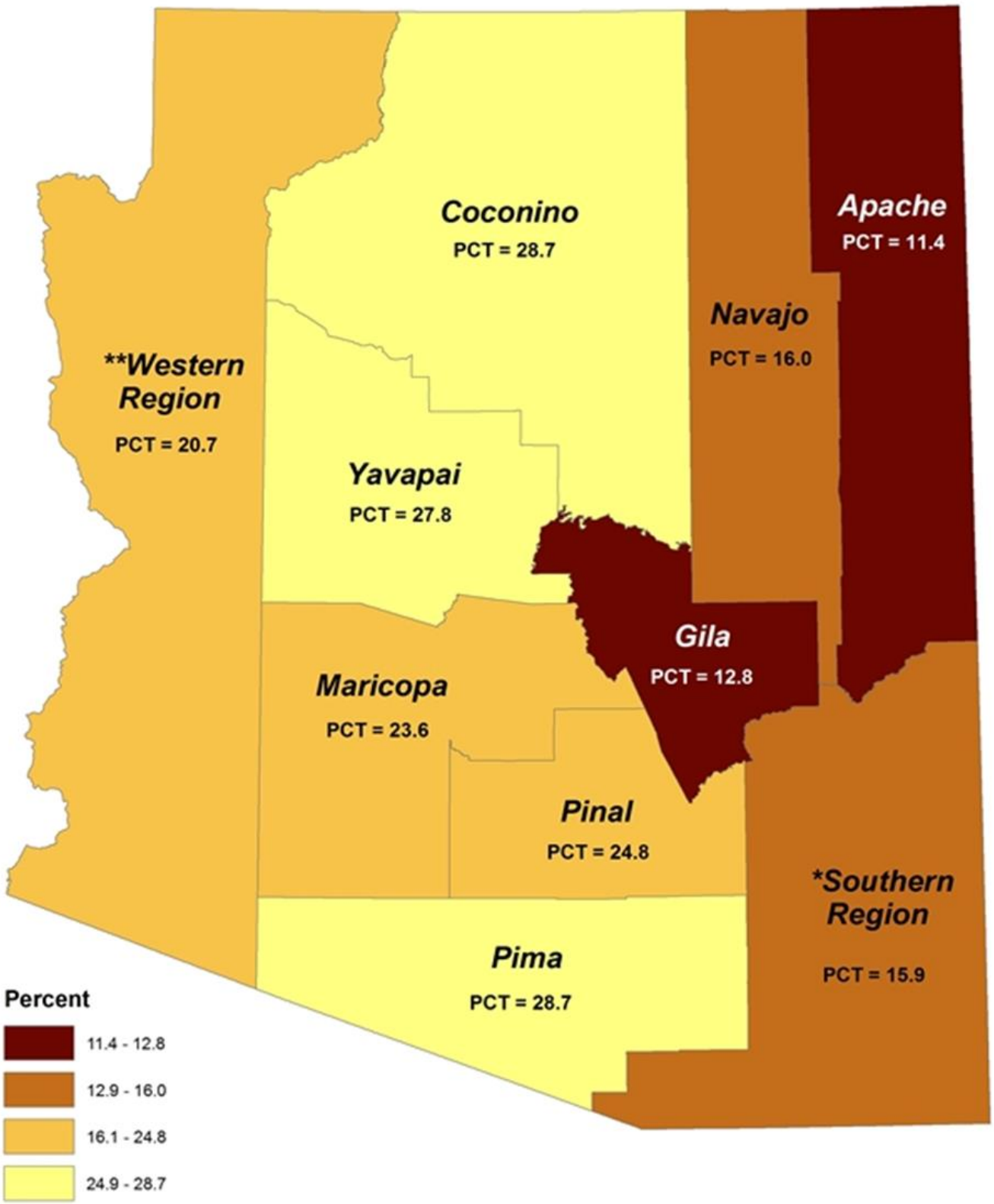
Preventive Practices
Shingles Vaccinations

The table to the left displays the proportion of the 2014 Arizona BRFSS respondents of all ages who reported that they had a flu vaccination in the past 12 months. The data are reported by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity. Some studies conducted in the United States and elsewhere found that herpes zoster is less common in blacks (by at least 50%) than in whites[24].

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

[24] Tseng HF, Smith N, Harpaz R, Bialek SR, Sy LS, Jacobsen SJ. Herpes zoster vaccine in older adults and the risk of subsequent herpes zoster disease. JAMA. 2011 Jan 12;305(2):160-6.

Arizona Respondents Age 50 or Older Who Reported Having a Shingles Vaccination, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices Colorectal Cancer Fecal Occult Blood Test

Colorectal cancer is the third-most common type of non-skin cancer in both men and women. Patients who have early stages of colorectal cancer typically do not exhibit symptoms. Therefore, regular screening is the best prevention.[25] Three types of tests are recommended by the United States Preventive Services Task Force (USPSTF) to screen for colon cancer: sigmoidoscopy, colonoscopy and fecal occult blood testing (FOBT). The FOBT is a lab test that is used to check stool samples for hidden (occult) blood. It is considered a noninvasive and cost-effective way to screen for colorectal cancer. The test is completed at home and then submitted to a lab for analysis. The optimal use of the FOBT is part of a programmatic screening as suggested by the USPSTF. A positive FOBT may indicate colon cancer, or polyps in the colon.[26] The USPSTF currently recommends that individuals 50 to 75, who do not have a first-degree relative diagnosed with colorectal cancer, have an annual FOBT.[27] Over one third (36.5%) of Arizonans over the age of 50 who were surveyed in 2014 reported they had a FOBT, slightly higher to the national median (see Figure 8A).

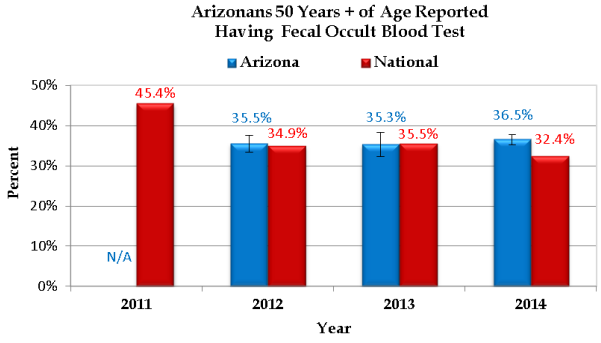


Figure 8A. Arizona 2014 BRFSS respondents over the age 50 who reported ever having a fecal occult blood test. Of those surveyed who reported having a FOBT, only 32.4% nationally had the exam within a year.

Although Arizona had fewer BRFSS respondents reporting having had an FOBT, compared to the other states in the nation, Arizona fell into the second-highest class for FOBT (see Figure 8B).

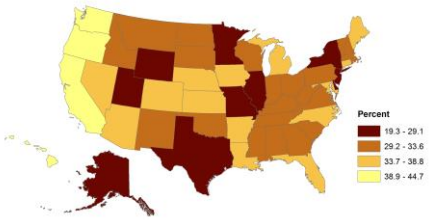


Figure 8B. BRFSS 2014 respondents who were 50 years old or older who reported having had a FOBT by state (natural breaks).

The largest proportion of Arizona BRFSS respondents who reported an FOBT had received it five years or more ago, at 31.5%, and lower to the National levels, at 34.9% (see Figure 8C).

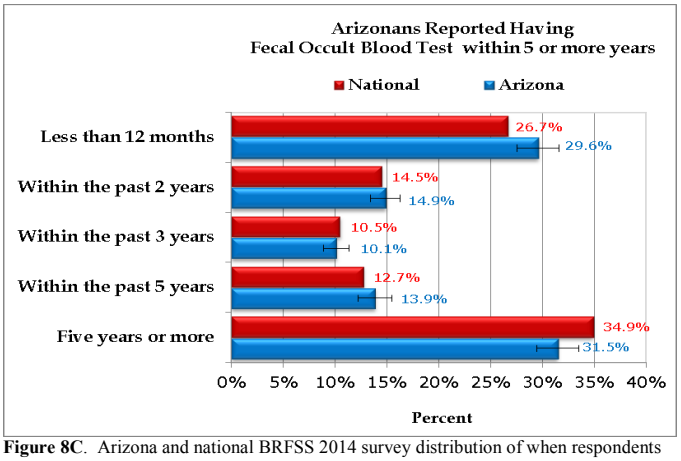


Figure 8C. Arizona and national BRFSS 2014 survey distribution of when respondents reported last having an FOBT.

Colorectal cancer is associated with lifestyle factors such as being overweight or obese; alcohol consumption; low fruit and vegetable intake and tobacco use.[28] Arizona residents who eat less than five servings of fruit and vegetables a day, who were former or current smokers, who are overweight or obese, and who drink heavily are less likely to report having an FOBT (see Figure 8D). Medical advances have only offered slightly improved survival rates for patients who present with advanced colon cancer. Therefore, prevention, screening and education should be the primary focus of colorectal cancer treatment.

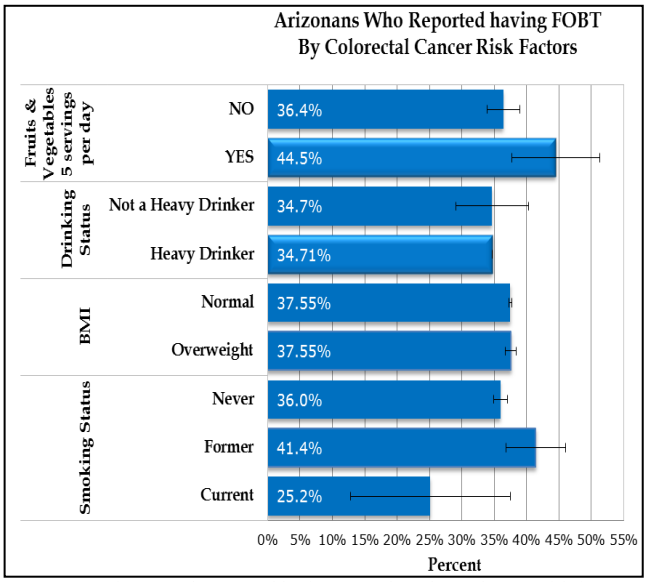


Figure 8D. Arizonans who reported having FOBT by colorectal cancer risk factors-BRFSS 2014 survey.

25 Haggar FA, Boushey RP. Colorectal Cancer Epidemiology: Incidence, Mortality, Survival, and Risk Factors. *Clinics in Colon and Rectal Surgery*. 2009;22(4):191-197. doi:10.1055/s-0029-1242458.
26 Mayo Clinic. "Diseases and Conditions Colon Polyps." N.p., n.d. Web. 15 Jan. 2014. <http://www.mayoclinic.org/diseases-conditions/colon-polyps/basics/definition/con-20031957>
27 U.S. Preventive Services Task Force. "Screening for Colorectal Cancer." : U.S. Preventive Services Task Force Recommendation Statement. N.p., n.d. Web. 17 Jan. 2014. <http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm>.

28 Haggar FA, Boushey RP. Colorectal Cancer Epidemiology: Incidence, Mortality, Survival, and Risk Factors. Clinics in Colon and Rectal Surgery. Nutritional Practices, Physical Activity and Obesity, Cigarette Smoking, Heavy Alcohol Consumption 2009;22(4):191-197. doi:10.1055/s-0029-1242458.

Arizonans 50 years of age & Older Reported Having a Fecal Occult Blood Test				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**32.4%**	53		
Arizona	**36.5%**	4208	35.1%	37.8%
Male	33.2%	1558	31.1%	35.2%
Female	39.3%	2650	37.6%	41.1%
45-54	19.5%	223	16.3%	22.7%
55-64	30.3%	946	28.0%	32.6%
65+	49.0%	3039	47.2%	50.8%
Married	37.7%	2224	35.9%	39.4%
Divorced	30.1%	643	26.8%	33.3%
Widowed	45.1%	1019	41.8%	48.5%
Separated	24.4%	38	14.3%	34.5%
Never Married	28.7%	203	22.4%	35.0%
Unmarried Couple	27.7%	56	19.2%	36.1%
Less than high school	22.1%	193	17.9%	26.3%
High School/GED	36.3%	934	33.6%	38.9%
Some College/ Technical School	39.9%	1282	37.6%	42.3%
College/Technical School Grad	39.8%	1783	37.8%	41.7%
Employed for Wages	25.9%	698	23.5%	28.3%
Self Employed	26.3%	195	21.7%	30.9%
Out of Work	23.3%	91	16.4%	30.3%
Homemaker	37.1%	226	31.5%	42.8%
Student	4.2%	3	1.0%	7.4%
Retired	48.0%	2722	46.1%	49.9%
Unable to Work	31.5%	256	26.6%	36.4%
Less than $10,000	23.5%	109	16.8%	30.1%
$10,000 to $14,999	29.5%	177	23.4%	35.6%
$15,000 to $19,999	32.4%	238	26.5%	38.2%
$20,000 to $24,999	31.7%	351	26.9%	36.5%
$25,000 to $34,999	36.1%	443	32.2%	40.1%
$35,000 to $49,999	40.9%	661	37.2%	44.5%
$50,000 to $74,999	41.5%	624	37.8%	45.2%
Above $75,000	37.4%	884	34.7%	40.1%
White Non-Hispanic	40.1%	3733	38.7%	41.5%
Black/African American	41.4%	97	33.0%	49.7%
Hispanic	21.4%	215	17.4%	25.4%
Asian/Pacific Islander	20.0%	20	10.8%	29.1%
American Indian Non-Hispanic	27.5%	52	17.4%	37.6%
Other	40.7%	91	31.2%	50.1%

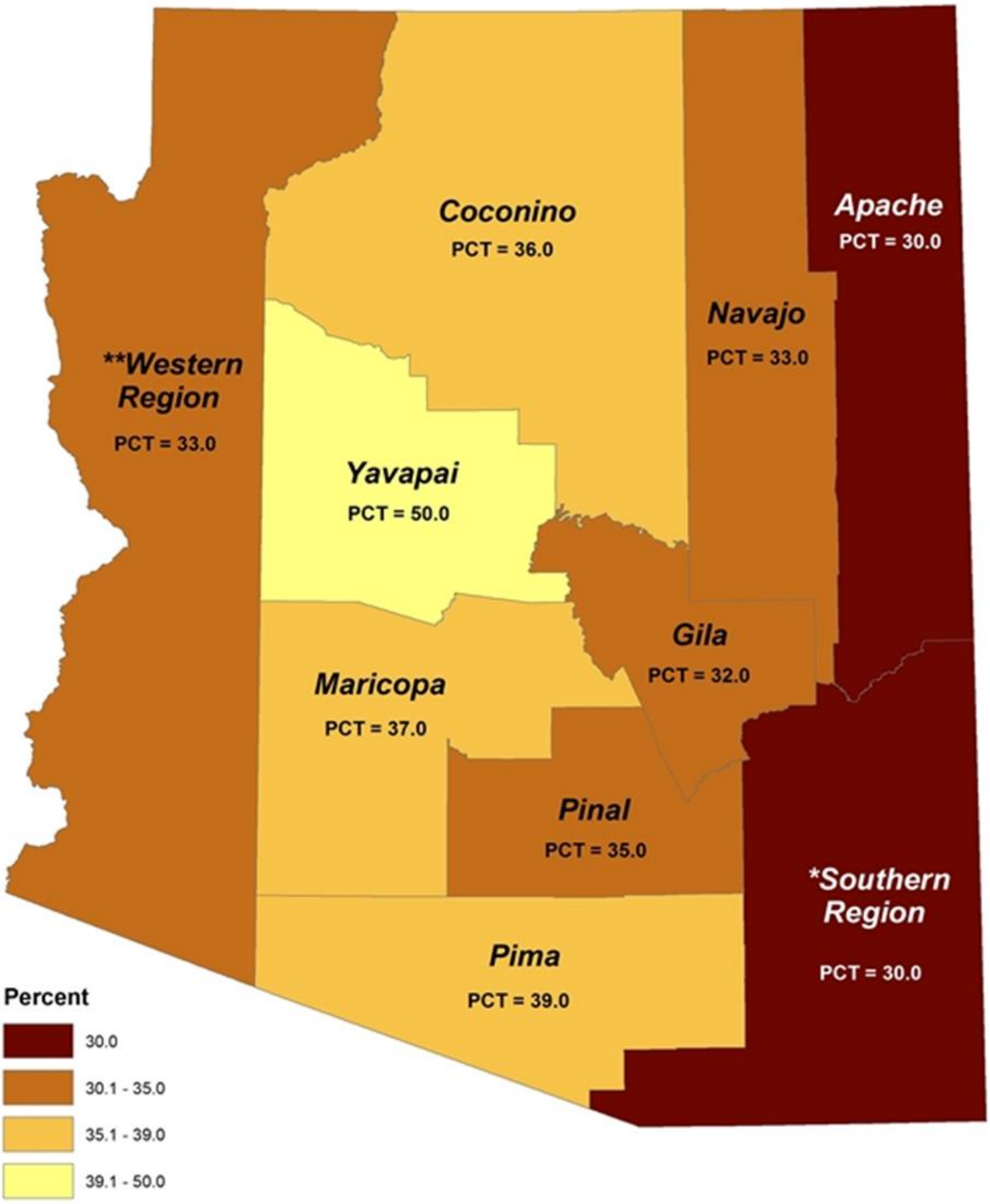
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

Preventive Practices
Fecal Occult Blood Test

The table to the left reflects surveyed Arizona adults aged 50 and over who indicated they have ever had a FOBT. Results are also presented by sex, age, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Age 50+ Reporting Having Had a Fecal Occult Blood Test, by County & Region, by BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices
Colonoscopy and Sigmoidoscopy

In 2014, according to the Arizona hospital discharge database, there were 4,315 unique inpatient/emergency discharges that were associated with colorectal cancer (CRC). The total charges accumulated in 2014 were more than $310 million. The distribution of the discharges and their associated payer type are presented in the (Table 5 below).

Colorectal Cancer Associated Inpatient & Emergency Department Discharges

Payer Type	Number of Discharges	Average Charges	Total Charges
Charity	3	$25,567	$76,700
Medicaid	507	$67,764	$34,356,187
Medicare	2,400	$74,693	$179,263,854
Other	88	$59,735	$5,256,664
Private Insurance	1,232	$69,689	$85,786,716
Self-Pay	85	$67,047	$5,698,999
Total	**4,315**	**$364,494**	**$310,439,120**

Table 5. Arizona's 2014 HDD colorectal cancer emergency department and admissions ICD-9 codes: 153.0-153.9, and 154.0-154.1.

To reduce mortality associated with CRC, programmatic screening that utilizes fecal occult blood tests, flexible sigmoidoscopy and colonoscopy are recommended by the (USPSTF).[29] Research has shown that colonoscopies can reduce mortality related to CRC by 29%; sigmoidoscopy has been shown to reduce CRC-related mortality by 26%.[30, 31] In the 2014 BRFSS, over 67.5% of Arizonans over the age of 50 reported having had a colonoscopy or sigmoidoscopy, slightly lower than the national median (see Figure 9A).

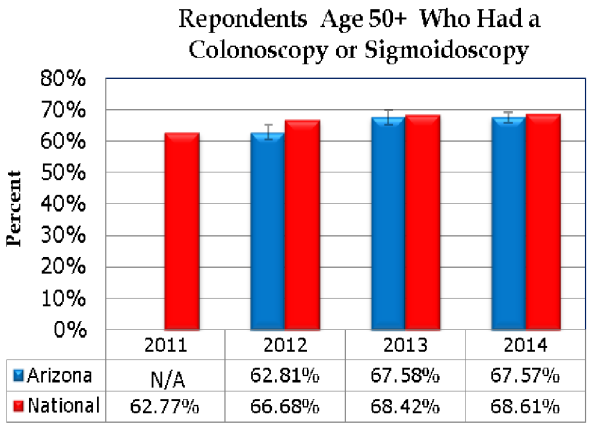


Figure 9A. Arizona and National BRFSS respondents over the age 50 who reported ever having a sigmoidoscopy or colonoscopy. Note: The Arizona's BRFSS 2011 survey excluded question regarding those who had a sigmoidoscopy or colonoscopy.

When compared to the other states in the nation Arizona fell into the second lowest class for its residents having had a colonoscopy or sigmoidoscopy (see Figure 9B).

Figure 9B. Arizona 2014 BRFSS respondents who were 50 years or older who reported having had a sigmoidoscopy or colonoscopy by state (natural breaks).

Arizonans surveyed in 2014 who reported having a known risk for CRC (eating less than five servings of fruit and vegetables daily, being a former or current smoker, being overweight, obese or drinking heavily) also more frequently reported having had a colonoscopy or sigmoidoscopy (see Figure 9C).

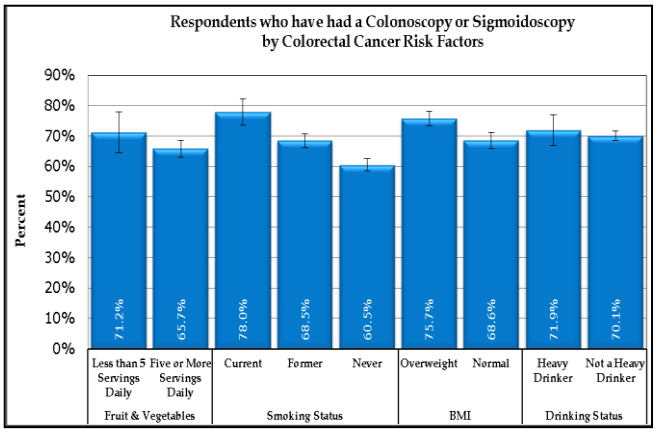


Figure 9C. Arizona's 2014 BRFSS who reported having a Colonoscopy or Sigmoidoscopy and categorized by colorectal cancer risk factors.

BRFSS 2014 survey results indicate that 20.9% of Arizonans over the age of 50 reported they had either a sigmoidoscopy or colonoscopy within the last 5 years. The national median was at 21.4% (see Figure 9D).

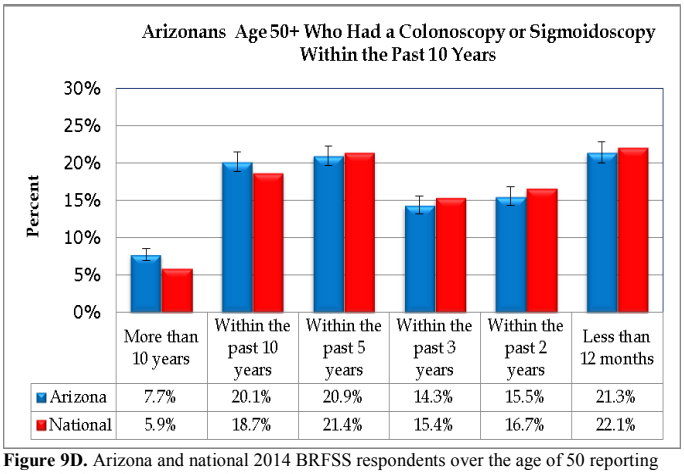


Figure 9D. Arizona and national 2014 BRFSS respondents over the age of 50 reporting having had a colonoscopy and sigmoidoscopy.

29 U.S. Preventive Services Task Force. "Screening for Colorectal Cancer." : U.S. Preventive Services Task Force Recommendation Statement. N.p., n.d. Web. 17 Jan. 2014. <http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm>.
30 Singh H, et al. The reduction in colorectal cancer mortality after colonoscopy varies by site of the cancer. Gastroenterology. 2010 Oct;139(4):1128-37. doi: 10.1053/j.gastro.2010.06.052.
31 Schoen RE, Pinsky PF, Weissfeld JL, et al. Colorectal-Cancer Incidence and Mortality with Screening Flexible Sigmoidoscopy. *The New England journal of medicine*. 2012;366(25):2345-2357. doi:10.1056/NEJMoa111 4635.

Arizonans 50 Years of Age & Older Who Had a Colonoscopy or Sigmoidoscopy				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**68.6%**	53		
Arizona	**67.6%**	7365	66.1%	69.0%
Male	65.9%	2868	63.5%	68.2%
Female	69.0%	4497	67.3%	70.8%
35-44	5.1%	1	0.0%	25.5%
45-54	47.8%	547	43.6%	51.9%
55-64	64.2%	2030	61.7%	66.7%
65+	79.4%	4787	77.9%	80.9%
Married	70.3%	3997	68.5%	72.2%
Divorced	64.1%	1215	60.2%	68.0%
Widowed	70.2%	1548	66.9%	73.6%
Separated	57.6%	79	44.8%	70.3%
Never Married	50.8%	372	43.7%	57.8%
Unmarried Couple	56.0%	100	46.1%	66.0%
Less than high school	53.2%	412	47.4%	58.9%
High School/GED	64.1%	1597	61.2%	67.0%
Some College/ Technical School	69.5%	2183	67.1%	71.8%
College/Technical School Grad	75.7%	3143	73.9%	77.6%
Employed for Wages	58.9%	1501	56.0%	61.8%
Self Employed	50.9%	370	45.3%	56.5%
Out of Work	51.0%	202	40.9%	61.1%
Homemaker	70.9%	413	65.9%	76.0%
Student	17.9%	8	4.5%	31.3%
Retired	79.3%	4322	77.7%	81.0%
Unable to Work	61.3%	521	56.2%	66.5%
Less than $10,000	48.8%	208	40.8%	56.9%
$10,000 to $14,999	58.9%	321	52.1%	65.8%
$15,000 to $19,999	58.1%	411	51.9%	64.3%
$20,000 to $24,999	61.5%	605	55.7%	67.4%
$25,000 to $34,999	68.9%	738	64.6%	73.3%
$35,000 to $49,999	72.0%	1085	68.3%	75.7%
$50,000 to $74,999	72.3%	1075	68.6%	75.9%
Above $75,000	73.6%	1710	70.9%	76.3%
White Non-Hispanic	71.5%	6354	70.1%	72.9%
Black/African American	70.6%	156	62.3%	78.9%
Hispanic	54.6%	578	49.4%	59.8%
Asian/Pacific Islander	63.8%	46	51.5%	76.1%
American Indian Non-Hispanic	34.6%	76	24.9%	44.3%
Other	75.1%	155	67.5%	82.7%

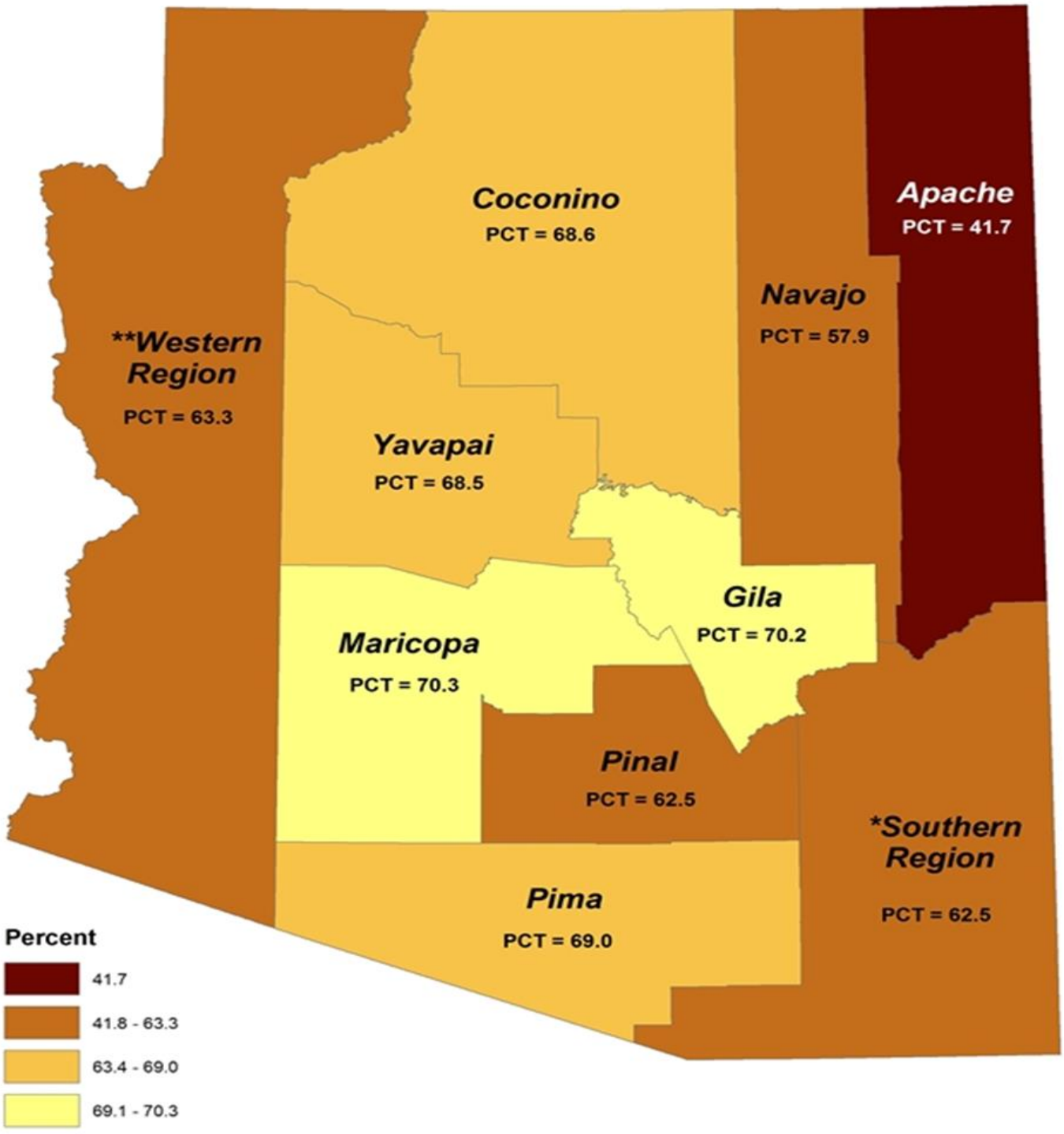
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

Preventive Practices
Colonoscopy and Sigmoidoscopy

The table to the left displays the results of surveyed Arizonans aged 50 and above that reported having ever had either a sigmoidoscopy or colonoscopy. Data results are also presented by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Over 50 Years Old Who Reported Having a Colonoscopy or Sigmoidoscopy, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices
Preconception Health

Preconception health refers to the health of women and men before and between pregnancies and focuses on improving one's health *before* becoming pregnant in the hopes of improving future pregnancy and birth outcomes in the future, resulting in healthier infants and children.[32]

As preconception health is about getting and staying healthy overall throughout the lifespan, all women and men can benefit from improving their preconception health, regardless of whether they plan to have a baby. Preconception health encompasses multiple areas of health, including reproductive health, nutrition and physical activity, tobacco use, substance abuse and learning to manage chronic conditions,[33] not only improving the lives of individuals, but also leading to healthier communities as a whole.

In addition, while no one expects an unplanned pregnancy, the reality is that it happens frequently. About half of all pregnancies in the United States are unintended,[34] making preconception health even more important to ensure optimal health *before pregnancy* and safeguarding babies' future health. In 2014, the BRFSS survey asked respondents if a doctor, nurse or other health care worker had ever talked with them about ways to prepare for a healthy pregnancy and baby. The percentage of Arizonans surveyed indicating they had been asked was 35% in 2014, lower than response levels since 2011 (see Figure 10A).

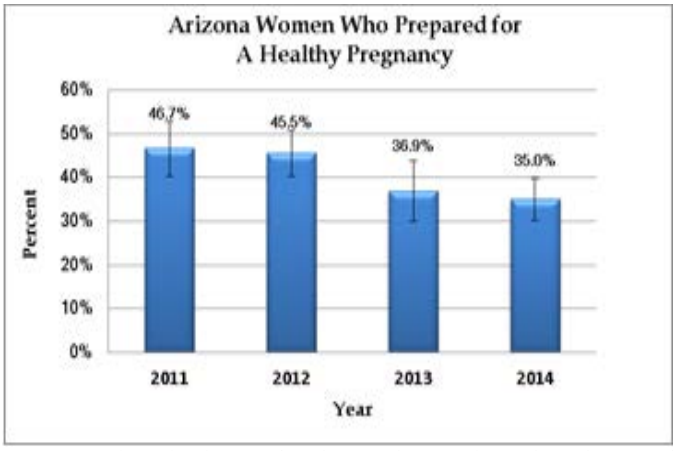


Figure 10A. Arizona female respondents between the ages of 18 and 45 who reported a doctor, nurse, or other health care worker ever having talked with them about ways to prepare for a healthy pregnancy and baby.

Recognizing the importance of preconception health, since 2006, the Centers for Disease Control and Prevention have recommended that preconception health and care be incorporated into routine primary care visits.[35]

While all women and men of reproductive age should receive preconception care, it is particularly important for women with chronic diseases.[36] Chronic diseases before and during pregnancy, such as diabetes, hypertension, high cholesterol and mental health conditions, have been associated with increased risk of adverse birth outcomes, such as pre-term birth, low birth weight, birth defects and even infant mortality.[37] During preconception health counseling, women can discuss with their health professionals ways to better manage their conditions, increase compliance with treatment and alter treatment plans if necessary (see Figure 10B).

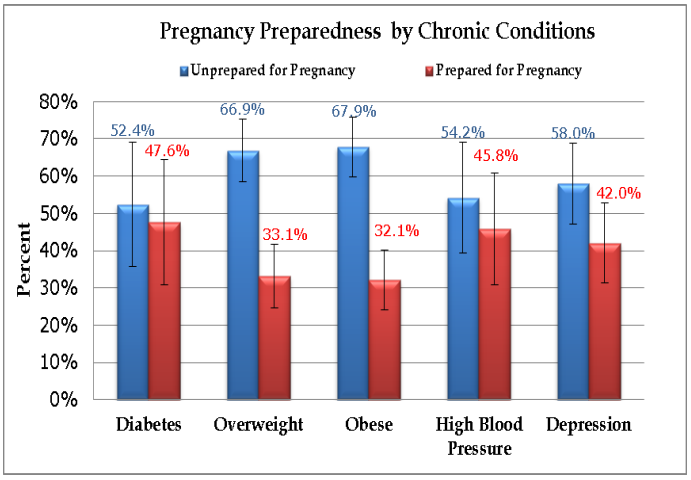


Figure 10B. Arizona women who reported a health care professional ever having talked with them about ways to prepare for a healthy pregnancy and baby by chronic conditions.

[32] Web: 14 January 2014 (http://www.azdhs.gov/prevention/womens-childrens-health/womens-health/index.php#preconception-home)
[33] Mumford SL, Michels KA, Salaria N, Valanzasca P, Belizán JM. Preconception care: it's never too early. *Reproductive Health*. 2014;11:73. doi:10.1186/1742-4755-11-73.
[34](Kathryn M. Curtis & Curtis, PhD, 2013) *Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion Center for Chronic Disease Prevention and Health Promotion*;Finer LB, Zolna MR. Unintended pregnancy in the United States: incidence and disparities, 2006. Contraception 2011;84:478–85.

[35] Bello JK et al. Trends in Contraceptive and Preconception Care in United States Ambulatory Practices. Fam Med. 2015;47(4):264-271.
[36] Steel A, Lucke J, Adams J. The prevalence and nature of the use of preconception services by women with chronic health conditions: an integrative review. *BMC Women's Health*. 2015;15:14. doi:10.1186/s12905-015-0165-6.
[37] Neuman G. Counselling a patient with chronic illness before pregnancy. J Popul Ther Clin Pharmacol. 2014;21(3):e520-5.

Preventive Practices
Preconception Health

Arizona Women of Childbearing Age (Between the Ages of 18 and 45) Who Reported a Health Care Professional Ever Having Talked to Them About Ways to Prepare for a Healthy Pregnancy and Baby

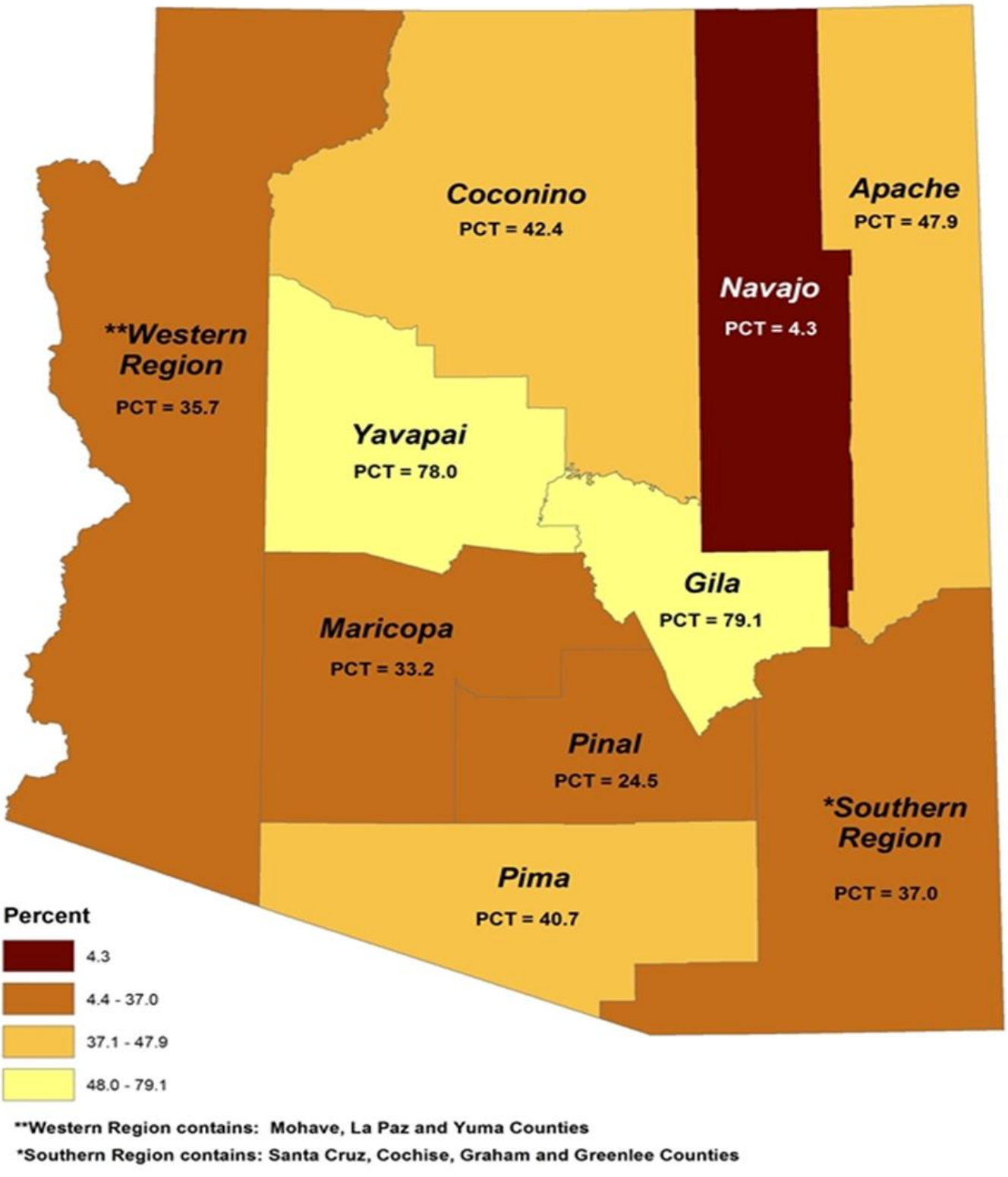
Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
Female	**35.0%**	269	30.2%	39.8%
18-24	23.2%	24	14%	33%
25-34	38.7%	78.0	29.4%	48.1%
35-44	40.4%	167.0	34.1%	46.7%
Married	44.5%	167.0	37.4%	51.7%
Divorced	36.7%	33.0	23.1%	50.3%
Widowed	69.8%	5.0	31.7%	100.0%
Separated	40.6%	6.0	2.2%	79.0%
Never Married	22.6%	44.0	14.6%	30.5%
Unmarried Couple	25.7%	12.0	8.1%	43.4%
Less than high school	41.5%	27.0	26.7%	56.3%
High School/GED	30.2%	50.0	20.6%	39.8%
Some College/Technical School	33.4%	86.0	25.8%	41.0%
College/Technical School Grad	38.0%	106.0	30.5%	45.5%
Employed for Wages	29.1%	133.0	23.0%	35.3%
Self Employed	45.5%	21.0	24.5%	66.5%
Out of Work	45.3%	19.0	28.8%	61.8%
Homemaker	42.1%	68.0	31.9%	52.3%
Student	22.9%	12.0	8.3%	37.6%
Unable to Work	58.8%	15.0	31.1%	86.5%
Less than $10,000	31.8%	14.0	16.1%	47.5%
$10,000 to $14,999	58.6%	16.0	34.5%	82.8%
$15,000 to $19,999	22.7%	19.0	12.7%	32.8%
$20,000 to $24,999	34.5%	17.0	16.1%	52.9%
$25,000 to $34,999	33.8%	26.0	17.4%	50.2%
$35,000 to $49,999	38.4%	37.0	24.9%	52.0%
$50,000 to $74,999	28.4%	29.0	15.7%	41.1%
Above $75,000	37.1%	81.0	28.1%	46.0%
White Non-Hispanic	39.9%	180.0	33.7%	46.2%
Black/African American	38.2%	8.0	3.4%	72.9%
Hispanic	29.5%	63.0	20.8%	38.2%
Asian/ Pacific Islander	10.0%	3.0	0.0%	23.8%
American Indian Non-Hispanic	34.4%	9.0	10.6%	58.3%
Other	36.5%	6.0	1.1%	71.9%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

The table to the left displays the characteristics of Arizona women of childbearing age (between the age of 18 and 45) who reported a health care professional ever having talked to them about ways to prepare for a healthy pregnancy and baby. The data are reported by age categories, marital status, educational attainment, employment status, income, and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Female Respondents Who Reported A Health Care Professional Ever Having Talked with Them About Ways to Prepare for A Healthy Pregnancy and Baby, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

*Indicates that the region has a significantly lower percentage of respondents reporting ever having either a sigmoidoscopy or colonoscopy than the overall state percentage.

Preventive Practices
Women's Health: Mammography

In 2009, the U.S. Preventative Services Task Force (USPSTF) changed its mammogram recommendation. The change was twofold, first the age women should begin seeking mammograms was raised from 40 to 50. Second, they recommended that women have a mammogram once every two years, instead of annually. Other agencies, such as the American Cancer Society (ACS), continued to support annual mammograms for women 40 years and older.[38,39] The new USPSTF recommendation has faced much controversy. Many organizations state that the guidelines set by the USPSTF would cause a substantial degree of under-diagnosis.[40] The current USPSTF guidelines are less stringent than those set in the past; however, compliancy has not reached 100%. The BRFSS 2014 survey reported that 18.1% of Arizona women, over the age of 55 had a mammogram within a two-year period, 17.9% nationally. (see Figure 11A).

U.S. Preventative Services Task Force Guidelines

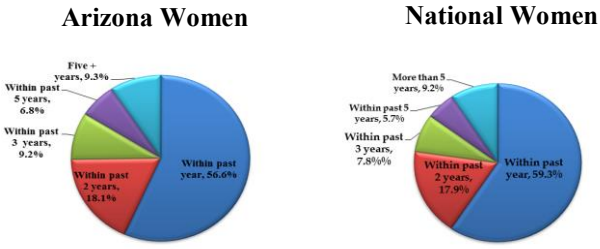


Figure 11A. Time since last mammogram, for women 55 years and older.

According to the BRFSS, there has not been a statistically significant change in the percent of women, between the ages of 40 and 50, reporting an annual mammogram (see Figure 11B).

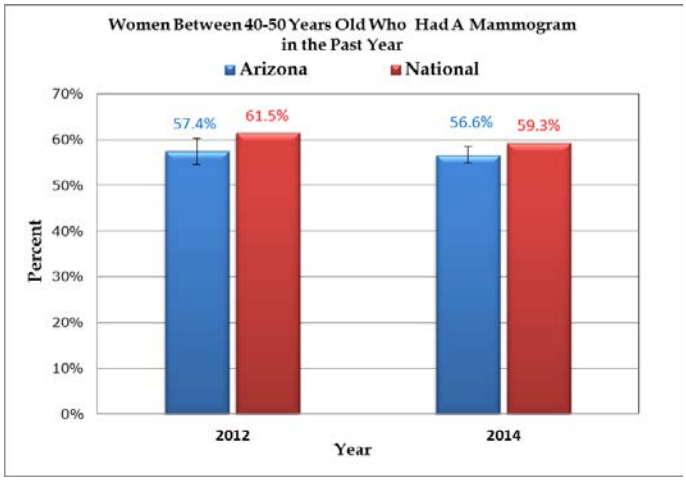


Figure 11B. Women between the ages of 40 and 50, who responded having had a mammogram in the past year.

Each woman's risk of breast cancer is different. Family history, high penetrance genes, obesity, and exposure to radiation are risk factors that increase the odds of having breast cancer. To ensure that each woman is treated and tested appropriately the USPSTF and other breast cancer awareness organizations promotes an open dialog between women and their health care providers.[24,25] The BRFSS does not collect information on breast cancer awareness counseling; until the module is revised the more stringent guideline will be assessed.

When looking at all the states in the nation, Arizona falls in the second lowest class for female respondents, over 40, reporting that they had a mammogram within the past year since 2014 (see Figure 11C).

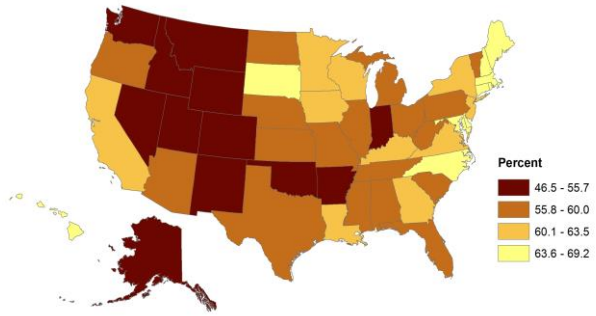


Figure 11C. BRFSS 2014 Survey reported female respondents, 40 years and older, had a mammogram within the past 12 months (natural breaks)

According to the state cancer profile data provided by the National Cancer Institute (NCI), age-adjusted incidence rate for all cancer sites was 386.0 per 100,000 population.[41] Looking at 2014 hospitalizations, there were 2,987 discharges captured for women who received care at an inpatient or emergency department, with a principle diagnosis of breast cancer. These women represent severe cases, as most breast cancer procedures (mastectomies, lumpectomies, and biopsies) are now handled in an outpatient setting. Seventy-Five women died at the hospital, and 197 were transferred to hospice. The total charges amounted to over $155.8 million dollars (see Table 5).

Breast Cancer Related Inpatient & Emergency Department Discharges

Payer Type	Number of Discharges	Died	Transferred to Hospice	Total Costs
Charity	3	0	0	$ 164,656
Medicaid	366	12	14	$ 17,257,145
Medicare	1,493	34	128	$ 74,435,533
Private Insurance	1,036	25	53	$ 58,853,215
Self-Pay	33	1	2	$ 1,836,282
Other	56	3	0	$ 3,280,216
Total	**2,987**	**75**	**197**	**$ 155,827,047**

Table 5. 2014 Inpatient and Emergency Department breast cancer discharges. ICD-9 codes used were: V10.3, 174.0, 174.1, 174.2, 174.3, 174.5, 174.6, 174.8, and 174.9.

[38]. Recommendations of the U.S. Preventive Services Task Force: Abstract (Guide to Clinical Preventive Services). September 2010. Agency for Healthcare Research and Quality, Rockville, MD.
[39] "American Cancer Society Guidelines for the Early Detection of Cancer." American Cancer Society Guidelines for the Early Detection of Cancer. N.p., n.d. Web. 07 Nov. 2013. <cancer.org>
[40] NCBI. U.S. National Library of Medicine, n.d. Web. 07 Nov. 2013. <http://www.ncbi.nlm.nih.gov/>.

[41] "State Cancer Profiles: Arizona." Quick Profiles: Arizona. National Cancer Institute, n.d. Web. 10 Dec. 2016. <https://statecancerprofiles.cancer.gov/quick-profiles/index.php?statename=arizona#t=2>.

Preventive Practices
Women's Health: Mammography

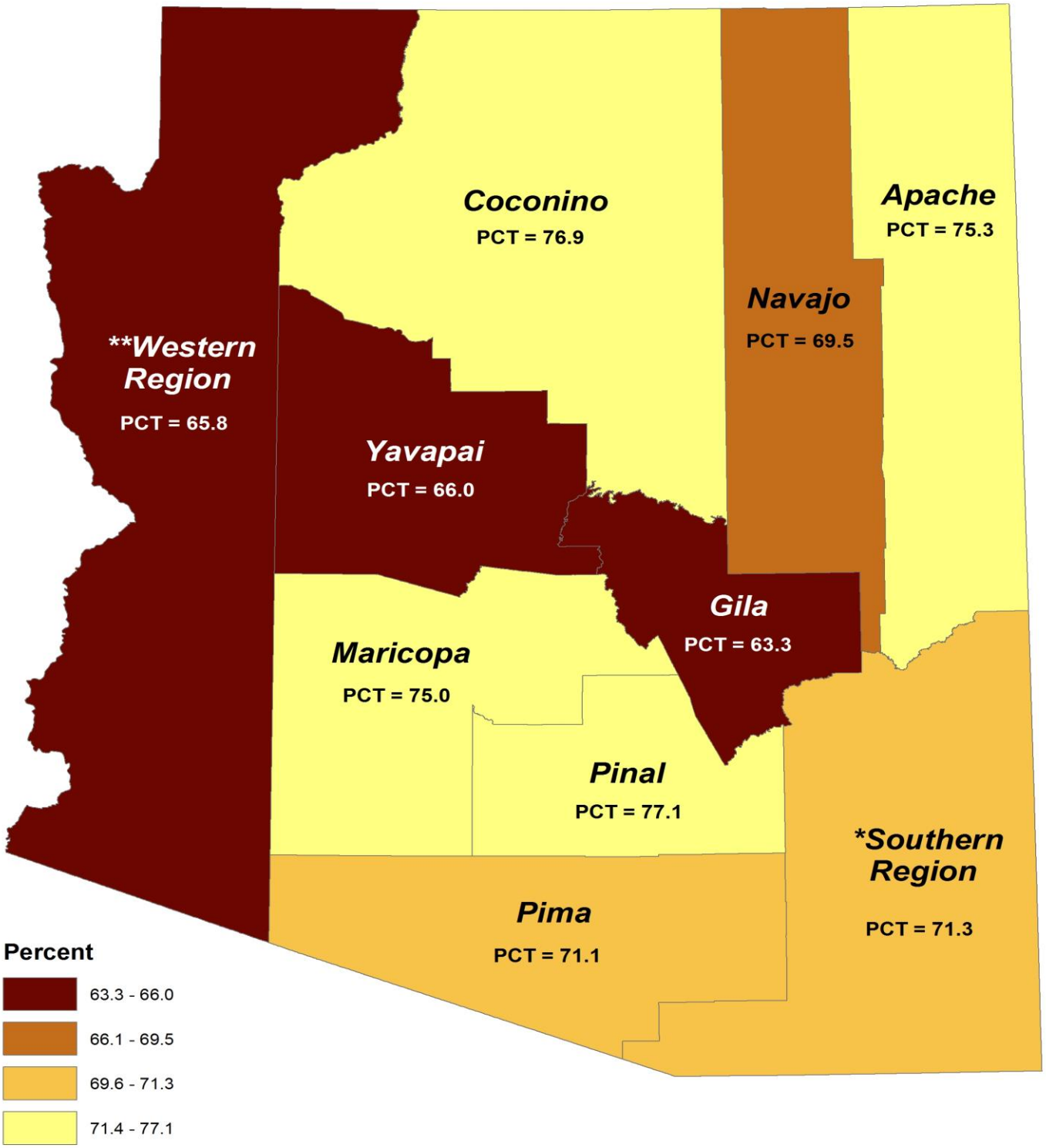
Arizona Women 40 Years+ Reported Having a Mammogram				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**59.3%**	53		
Arizona	**56.6%**	4029	54.8%	58.5%
Female	56.6%	4029	54.8%	58.5%
18-24	50.4%	8	26.1%	74.7%
25-34	38.7%	34	25.0%	52.5%
35-44	48.0%	234	41.7%	54.4%
45-54	56.6%	587	52.4%	60.7%
55-64	62.5%	1064	59.2%	65.7%
65+	59.5%	2102	57.3%	61.6%
Married	60.1%	2078	57.6%	62.5%
Divorced	50.2%	689	45.7%	54.6%
Widowed	55.8%	852	52.1%	59.4%
Separated	40.7%	52	26.5%	54.9%
Never Married	54.9%	260	46.2%	63.6%
Unmarried Couple	50.1%	67	36.8%	63.4%
Less than high school	57.9%	266	51.4%	64.5%
High School/GED	54.2%	926	50.4%	58.0%
Some College/Technical School	53.7%	1206	50.5%	56.9%
College/Technical School Grad	62.5%	1622	59.8%	65.2%
Employed for Wages	55.6%	1097	52.1%	59.1%
Self Employed	54.5%	214	46.5%	62.5%
Out of Work	48.9%	142	38.8%	59.1%
Homemaker	55.7%	402	50.3%	61.0%
Student	32.8%	14	7.3%	58.2%
Retired	60.1%	1838	57.7%	62.5%
Unable to Work	58.8%	308	52.2%	65.4%
Less than $10,000	47.0%	151	38.1%	56.0%
$10,000 to $14,999	56.8%	189	48.0%	65.5%
$15,000 to $19,999	51.8%	249	44.3%	59.4%
$20,000 to $24,999	52.6%	349	46.0%	59.3%
$25,000 to $34,999	52.6%	375	46.5%	58.7%
$35,000 to $49,999	56.4%	561	51.7%	61.2%
$50,000 to $74,999	61.6%	527	56.5%	66.7%
Above $75,000	60.1%	913	56.3%	64.0%
White Non-Hispanic	55.9%	3212	54.0%	57.9%
Black/African American	62.1%	103	51.6%	72.6%
Hispanic	57.6%	521	52.1%	63.2%
Asian/Pacific Islander	60.9%	45	47.7%	74.0%
American Indian	62.4%	79	49.9%	75.0%
Other	43.6%	69	31.2%	56.0%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

The table to the left displays the distribution of the prevalence of Arizona women, who are 40 and older, who responded that they had a mammogram in the past 12 months. The data is broken down by age categories, marital status, education attainment, employment status, income, and race.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Percentage of Women 40+ Who Had a Mammogram In the Past Year by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices
Women's Health: Cervical Cancer

Cervical cancer used to be the leading cause of cancer death for women in the United States. However, in the past 40 years, the number of cases of cervical cancer and the number of deaths from cervical cancer have decreased significantly. This decline largely is the result of many women getting regular Pap tests, which can find pre-cancerous cells before it turns into cancer. Cervical cancer is the first cancer with a proposed necessary cause, the human papillomavirus (HPV), in cancer epidemiology.[42] The term necessary cause implies that cervical cancer will not develop or progress without persistent HPV infection. Cervical cancer is highly preventable in most Western countries because screening tests and a vaccine to prevent human papillomavirus (HPV) infections are available. When cervical cancer is found early, it is highly treatable and associated with long survival and good quality of life. All women are at risk for cervical cancer. It occurs most often in women over age 30. Each year, about 12,000 women in the United States get cervical cancer and about 4,000 women die from it. Human papillomavirus (HPV) is the main cause of cervical cancer. [43]

The BRFSS 2014 reported only ~73.9% of Arizona women were vaccinated within the past 3 years against HPV. These guidelines state that women, between 21 and 65 years old, should get a pap smear once every three years and once every five years if they receive HPV testing (see Figure 12A).

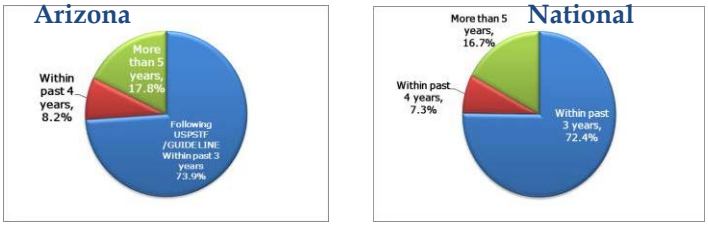


Figure 12A. BRFSS 2014 pap smear screening results for Arizona and National women between ages 21 and 65.

Although vaccines for HPV exist, they are only recommended for women under 26; therefore, pap smears must be part of a woman's preventive health routine. In 2012, the United States Preventative Services Task Force (USPSTF) and the American Cancer Society (ACS) released new cervical cancer screening guidelines. These guidelines state that women between 21 and 65 should get a pap smear once every three years and once every five years if they receive HPV testing. [44]The BRFSS data indicates that the percent of women between the ages of 21 and 65 who had a pap smear within 3 years has been decreasing. The national prevalance was ~1.9% higher than Arizona, at 73.9% (see Figure 12B).

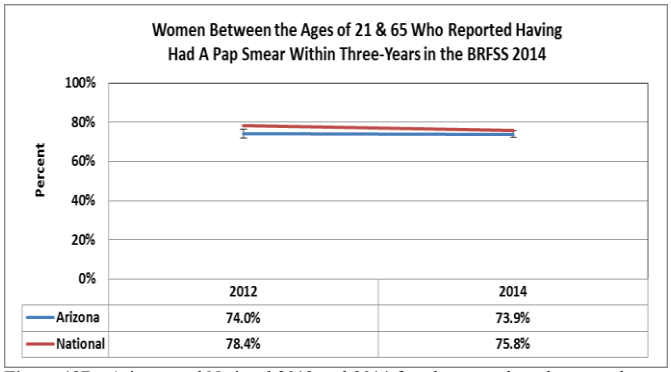


Figure 12B. Arizona and National 2012 and 2014 female respondents between the ages of 21 and 65 who had a pap smear within three years. Note: Pap Smear questions were not asked in 2013.

When compared across all the states, Arizona falls in the second lowest class category for following the USPSTF guidelines (see Figure 12C).

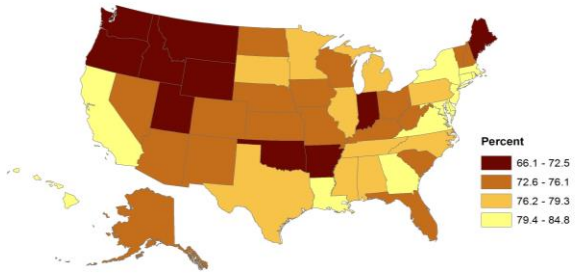


Figure 12C. Percent of BRFSS respondents, women age 21 to 65, who reported having a Pap smear within the last three years (natural breaks).

Women who smoke should be especially diligent in their cervical cancer screening routine. Smoking has been established as an HPV cofactor for the development of cervical cancer. Women who smoke are at a higher risk of developing cervical cancer. However, women who currently smoke were the least likely to have a Pap smear within three years (see Figure 12D).

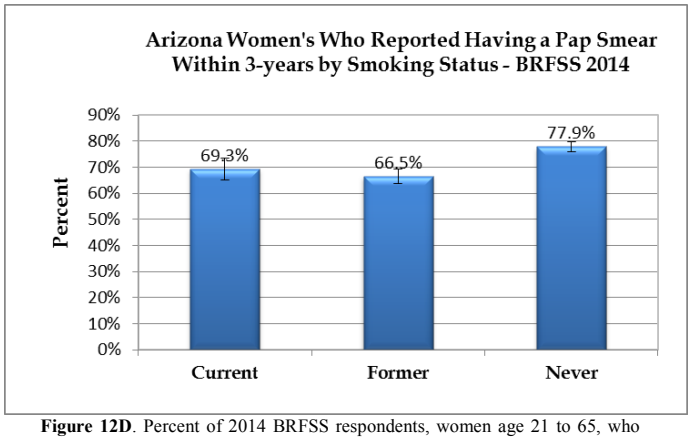


Figure 12D. Percent of 2014 BRFSS respondents, women age 21 to 65, who reported having a Pap smear within three years by smoking status.

[42] Thomas E. Rohan and Keerti V. Shah, *Cervical Cancer: From Etiology to Prevention* (Springer-Science+Business Media, B.V., 2014), 212.
[43] U.S. Department of Health & Human Services. Center for Disease Control and Prevention. "Gynecologic Cancers: Reduce my risk of cervical cancer". Nov 17 2016.
[44] Final Update Summary: Cervical Cancer: Screening. U.S. Preventive Services Task Force. September 2016. https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cervical-cancer-screening

Preventive Practices
Women's Health: Cervical Cancer

Arizona Women Between the Ages 21 and 65 Who Had a Pap Smear Within the Last Three Years

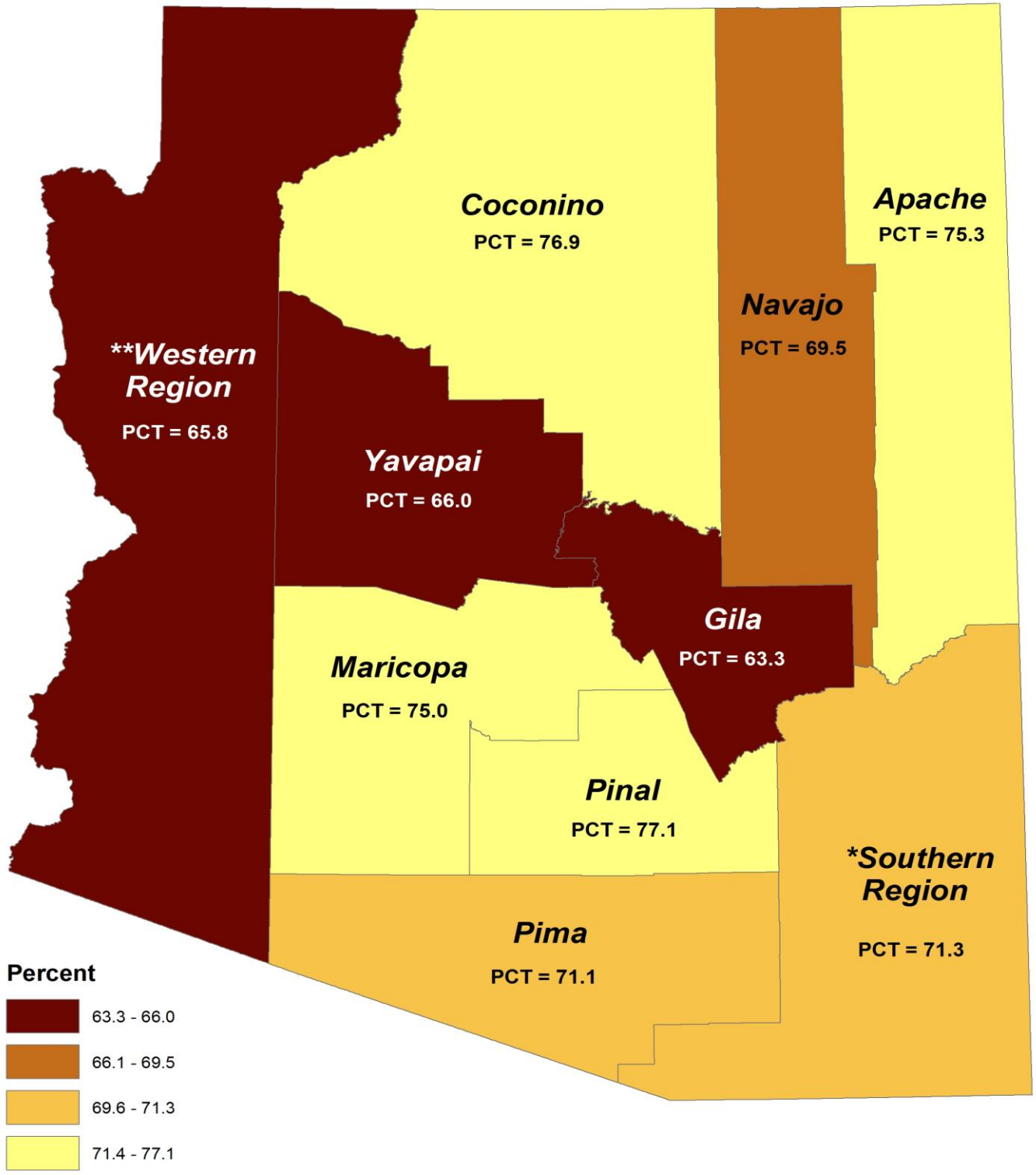
Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**75.8%**	53		
Arizona	**73.9%**	4749	72.4%	75.4%
Female	73.9%	4749	72.4%	75.4%
18-24	87.7%	95	78.9%	96.6%
25-34	92.6%	382	89.8%	95.5%
35-44	84.3%	672	80.5%	88.2%
45-54	76.8%	837	73.3%	80.4%
55-64	72.4%	1232	69.6%	75.3%
65+	46.6%	1531	44.3%	48.9%
Married	76.0%	2574	74.1%	77.9%
Divorced	69.4%	786	65.7%	73.0%
Widowed	49.4%	662	45.4%	53.4%
Separated	79.7%	94	70.3%	89.1%
Never Married	83.1%	449	78.5%	87.7%
Unmarried Couple	84.5%	149	77.0%	91.9%
Less than high school	75.4%	348	70.5%	80.3%
High School/GED	70.0%	986	67.0%	73.1%
Some College/Technical School	71.5%	1422	68.8%	74.1%
College/Technical School Grad	80.4%	1985	78.5%	82.2%
Employed for Wages	83.1%	1791	80.8%	85.4%
Self Employed	80.3%	312	75.4%	85.2%
Out of Work	72.0%	215	63.6%	80.4%
Homemaker	80.6%	593	77.4%	83.8%
Student	93.0%	68	86.5%	99.5%
Retired	51.7%	1413	49.3%	54.2%
Unable to Work	65.8%	336	59.5%	72.2%
Less than $10,000	67.2%	191	59.6%	74.8%
$10,000 to $14,999	68.1%	197	60.7%	75.6%
$15,000 to $19,999	75.7%	295	70.8%	80.6%
$20,000 to $24,999	71.0%	367	66.3%	75.8%
$25,000 to $34,999	66.9%	406	61.6%	72.2%
$35,000 to $49,999	72.9%	660	69.0%	76.9%
$50,000 to $74,999	78.1%	685	74.3%	81.9%
Above $75,000	82.8%	1228	80.2%	85.5%
White Non-Hispanic	69.5%	3552	67.9%	71.1%
Black/African American	83.9%	144	77.2%	90.7%
Hispanic	81.7%	765	77.9%	85.6%
Asian/Pacific Islander	83.5%	65	75.4%	91.6%
American Indian	84.5%	130	77.5%	91.5%
Other	72.4%	93	63.1%	81.6%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

The table to the left displays the distribution of the prevalence of Arizona women, between the ages of 21 and 65, who had a pap smear within the past three years. The data is broken down by sex, age categories, marital status, education attainment, employment status, income, and race.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Percentage of Arizona Women Between The Ages of 21 and 65 Who Had a Pap Smear Within Three Years, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Preventive Practices Men
Prostate Specific Antigen Test

In 2014, there were 3,714 inpatient and emergency department discharges, of men over the age of 40, which had a primary diagnosis of prostate cancer; seven of whom died in the hospital. The total charges were over $216 million dollars. Eighty nine of them died in the hospital. The average length of stay ranged from 2.5 to 5 days; the average length of stay increased as the age category increased (see Table 6).

Prostate Cancer Related Inpatient & Emergency Department Discharges				
Age Group	Number of Discharges	Died	Charges	Average Length of Stay (Days)
Under 40	128	4	$7,609,751	3.6
40 - 54	259	0	$15,111,503	2.5
55 - 69	1,475	19	$89,158,712	3.1
70 +	1,852	66	$104,158,484	5.0
Total	**3,714**	**89**	**$216,038,450**	

Table 6. Men age under 40 and older who visited an emergency room or inpatient facility and had had a primary diagnosis containing the following ICD-9 code: 185.

Currently, there are two methods to test for prostate cancer: the digital rectal exam and the Prostate Specific Antigen (PSA) Test. The U.S. Preventative Services Task Force (USPSTF) recommends against the use of the PSA.[44] While other organizations such as the American Urological Association (AUA) recommends that men, between the ages of 55 to 69, consider PSA screening, after talking to their physician about the risk and benefits of the procedure.[45] This disconnect has emerged due to the large number of false positives, which lead to needless biopsies for tumors that are benign or extremely slow growing. The risks associated with biopsies are infection, blood in semen, difficulty urinating, and bleeding at the site.[46] According to 2014 BRFSS the percent of men over age of 40 who received a PSA test and was counselled on the advantage and disadvantages, at 91.3%. Arizona men who received the PSA test but did not receive counseling, at 61% (see Figure 13A).

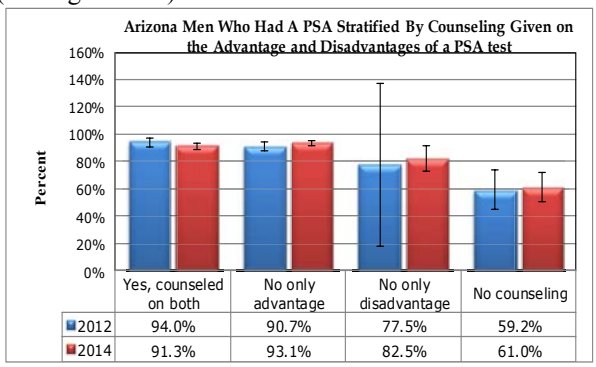


Figure 13A. 2014 Arizona Men age 40 years and older responded to the BRFSS prostate cancer screening module (PSA test (yes) + PSAdoc (yes) + PSAhad (yes)*PSAcounsel. Respondent was talked to about the advantages and disadvantages of a PSA test and has had a PSA test.

A major risk associated with prostate biopsies is infection, which then leads to acute prostatitis. In men over the age of 50, acute prostatitis is associated with having a benign prostatic hyperplasia commonly referred to as an enlarged prostate. As men get older it is common for their prostate to concontinue growing. More than half of the men over the age of 60 will experience complications due to an enlarged prostate, and approximately 6.4% of men over the age of 40 and older will experience complications. Furthermore, men with enlarged prostates will have elevated levels of PSA in blood.. Meaning, as men get older their blood PSA levels will increase for numerous reasons that are unrelated to prostate cancer; resulting in more false positive PSA tests.[31] According to the 2014 BRFSS, 70.5% of Arizona men over the age of 40 had a PSA during a routine examination. When looking at PSA screening 70.5% reporting having one during routine examination in Arizona and 71.7% nationally (see Figure 13B).

Arizona falls in the second lowest class for respondents reporting they were counseled on the benefits and risks of the exam by a health professional and received a PSA Test (see Figure 13C).

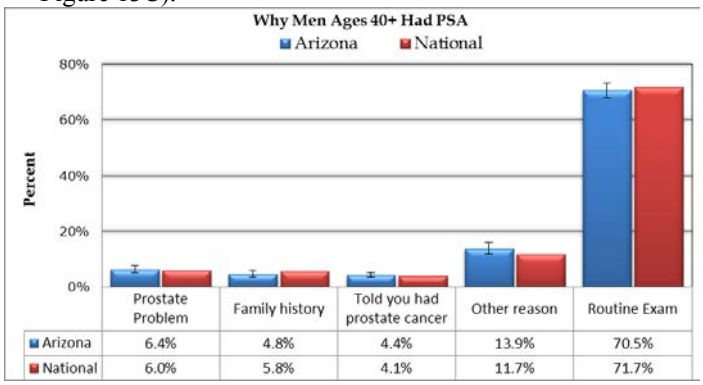


Figure 13B. Distribution of why men had a PSA test, in the 2014 BRFSS. Variable PSAwhy, respondents reason for why they had a PSA test.

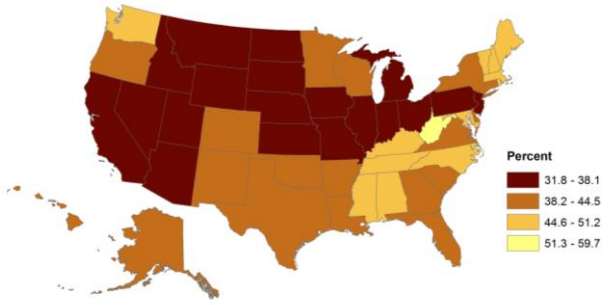


Figure 13C. Percent of BRFSS 2014 survey respondents who reported that they had a PSA and received counseling on both the benefits and risk of the PSA (natural breaks).

[44] Recommendations of the U.S. Preventive Services Task Force: Abstract (Guide to Clinical Preventive Services). September 2010. Agency for Healthcare Research and Quality, Rockville, MD.
[45] "Detection of Prostate Cancer: American Urological Association." *Detection of Prostate Cancer: American Urological Association*. N.p., n.d. Web. 23 Oct. 2013. <http://www.auanet.org/>
[46] Ehdaie B, Vertosick E, Spaliviero M, et al. The Impact of Repeat Biopsies on Infectious Complications in Men with Prostate Cancer on Active Surveillance. J Urol. 2013 Sep 6. pii: S0022-5347(13)

Arizona Men Who Reported Having PSA and Had a Medical Professional Tell Them About Its Benefits and Risks

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**41.1%**	53		
Arizona	**37.4%**	1125	34.9%	40.0%
Male	37.4%	1125	34.9%	40.0%
35-44	54.9%	31	40.2%	69.6%
45-54	36.7%	129	29.8%	43.6%
55-64	40.2%	314	35.6%	44.9%
65+	33.9%	651	31.0%	36.8%
Married	39.0%	799	36.0%	42.1%
Divorced	34.0%	134	26.8%	41.1%
Widowed	34.0%	104	26.6%	41.4%
Separated	43.9%	15	19.0%	68.7%
Never Married	33.0%	60	22.3%	43.7%
Unmarried Couple	18.3%	10	4.3%	32.3%
Less than high school	34.3%	52	24.4%	44.3%
High School/GED	34.1%	160	28.7%	39.5%
Some College/Technical School	34.1%	266	29.4%	38.7%
College/Technical School Grad	43.4%	644	40.2%	46.7%
Employed for Wages	40.2%	297	35.4%	45.1%
Self Employed	41.2%	82	32.1%	50.3%
Out of Work	34.9%	28	13.8%	55.9%
Homemaker	22.5%	4	0.0%	58.1%
Retired	35.6%	647	32.5%	38.7%
Unable to Work	34.9%	62	23.8%	46.0%
Less than $10,000	23.8%	21	12.5%	35.2%
$10,000 to $14,999	37.3%	37	23.4%	51.3%
$15,000 to $19,999	32.6%	37	19.2%	46.0%
$20,000 to $24,999	37.2%	61	26.4%	47.9%
$25,000 to $34,999	39.3%	81	29.5%	49.2%
$35,000 to $49,999	29.7%	134	23.1%	36.2%
$50,000 to $74,999	35.6%	196	30.3%	41.0%
Above $75,000	43.5%	426	39.3%	47.8%
White Non-Hispanic	36.9%	956	34.3%	39.5%
Black/African American	62.4%	44	45.8%	79.0%
Hispanic	34.6%	83	26.4%	42.9%
Asian/Pacific Islander	37.6%	7	9.0%	66.2%
American Indian Non-Hispanic	38.5%	10	26.6%	50.4%
Other	34.6%	25	22.7%	46.5%

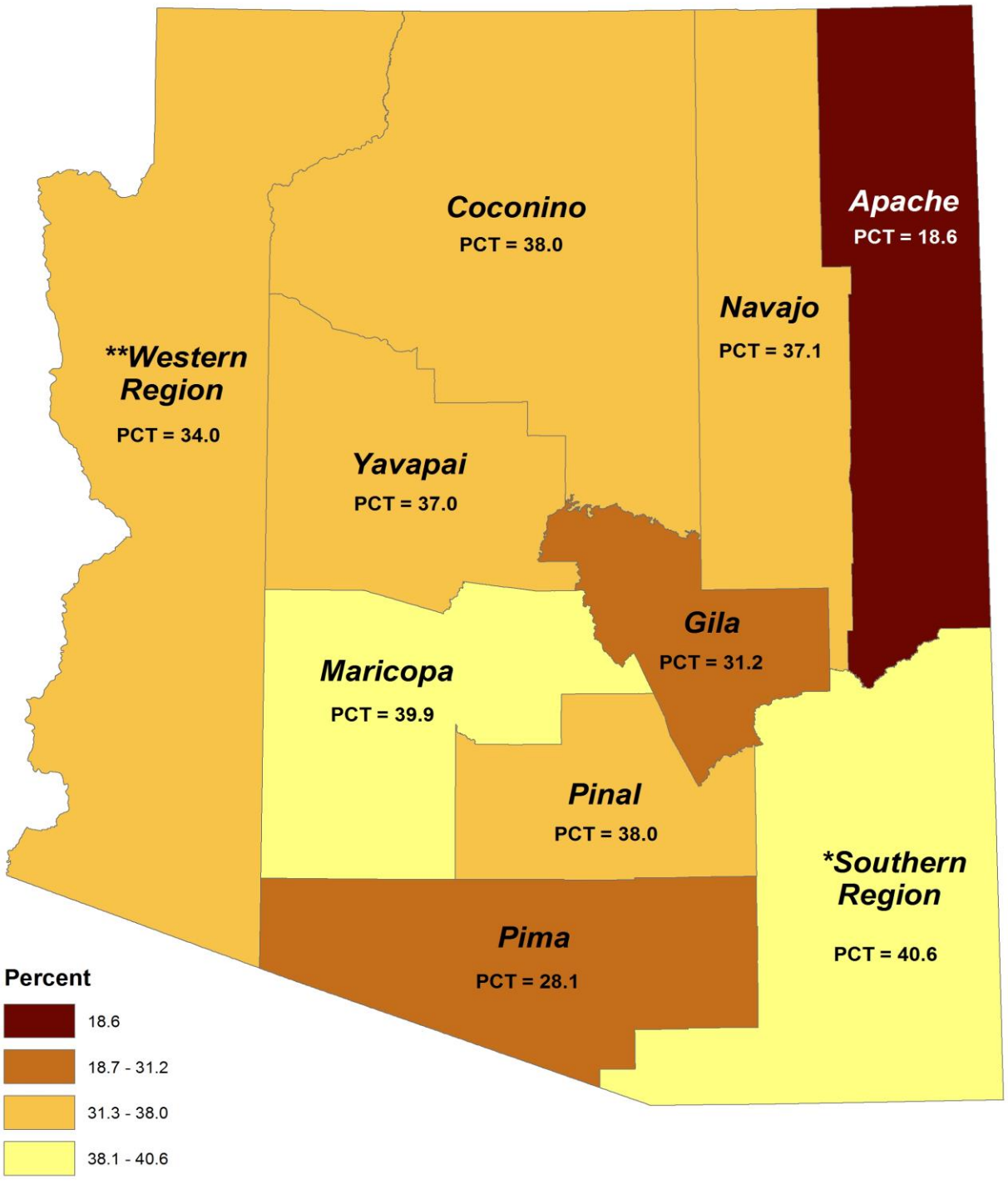
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Preventive Practices
Prostate Specific Antigen Test

The table to the left displays the distribution of the 2014 Arizona BRFSS respondents who had PSA, and had a medical professional tell them about benefits and risk of the PSA. The data is broken down by age categories, marital status, education attainment, employment status, income, and race.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Percentage of Arizona Men Age 40+ Who Had a PSA, and Had a Medical Professional Tell Them About Its Benefits and Risks, by County & Region, by BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Barriers to Health Care

As of the writing of this report in early 2014, the United States has entered a new health care model with the implementation of Patient Protection and Affordable Care Act (ACA). Under the ACA, Medicaid coverage was expanded to include individuals/households with incomes less than the 133% of the federal poverty level. Furthermore, refundable tax credits will be available to all Americans with incomes between 100% and 400% of the federal poverty line. Continued monitoring of barriers to healthcare will provide the feedback needed to assess Arizona's efforts to provide services and care to its population. On March 23, 2010, President Obama signed the Affordable Care Act and set into place an effort that will help ensure Americans have secure, stable, affordable health insurance. As part of the law the Centers for Consumer Information & Insurance Oversight (CCIO) within the division of the Centers for Medicare & Medicaid Services (CMS) and part of the Department of Health & Human Services (DHHS) provides national leadership in setting and enforcing standards for health insurance that promote fair and reasonable practices to ensure that affordable, quality health coverage is available to all Americans. People with low and middle incomes are eligible for tax subsidies that will help them buy coverage from state health insurance exchanges. The Affordable Care Act also broadens Medicaid eligibility in many states including Arizona to generally include individuals with income below 133% of the Federal poverty line ($14,400 for an individual and $29,300 for a family of 4), including single adults without children who were previously not generally eligible for Medicaid. Persons living with human immunodeficiency virus (HIV) who meet this income threshold no longer have to wait for an AIDS diagnosis in order to become eligible for Medicaid. The ACA also helps people with public or private coverage have access to the information they need to get the best quality care.[47] This section of the 2014 BRFSS Annual Report will include analysis of the following:

- **Poverty (variable calculated from INCOME2 NUMMEN NUMWOMEN and CHILDCOUNT) -** binary variable where household size and income are used to calculate 133% of the federal poverty line.
- **Healthcare Insurance status (variable calculated from HLTHPLN1) -** binary variable where having insurance is considered a positive outcome and not having insurance is considered a negative outcome.
- **Cannot Afford Needed Healthcare (variable MEDCOST) -** binary variable where being able to afford needed healthcare is a positive outcome and being able to not afford needed health care is considered a negative outcome.
- **Usual Source of Healthcare (variable calculated from PERSDOC2) –** binary variable in which having a usual health care provider is considered a positive outcome and not having a usual health care provider is considered a negative outcome.

Strategic Map Link

By collecting data on poverty, insurance status, the ability to afford needed healthcare, and if respondents have a usual source of care the BRFSS is providing Arizona with a tool to evaluate if its programs are providing a safety net of services and community support, and tools to improve policy development and implementation.

[47] Web. 14 January 2014 http://www.cdc.gov/hiv/pdf/policies_Affordable_Care_Act_English.pdf

Barriers to Health Care
Poverty

Globally there are approximately 1.2 billion people living in extreme poverty (less than a dollar a day).[48] It is very rare to find extreme poverty in the U.S.; however, poverty does exist. Poverty in the U.S. is based on income and the size of the household. Research has shown that individuals who live in poverty have worse health outcomes. The U.S. Census Bureau sets the federal poverty limit (FPL) using annual household income data and household size.[49] According to the 2014 BRFSS, 6.3% of Arizonans surveyed reported they lived with household incomes below 133% of FPL, 2.6% above the national 2014 BRFSS median. The charts that follow report respondents indicating they were at or below 133% of the FPL in each year ("In Poverty"). The proportion of survey respondents below 133% FPL has declined for both national median and Arizona survey respondents each year since 2011 (se e Figure 11A).

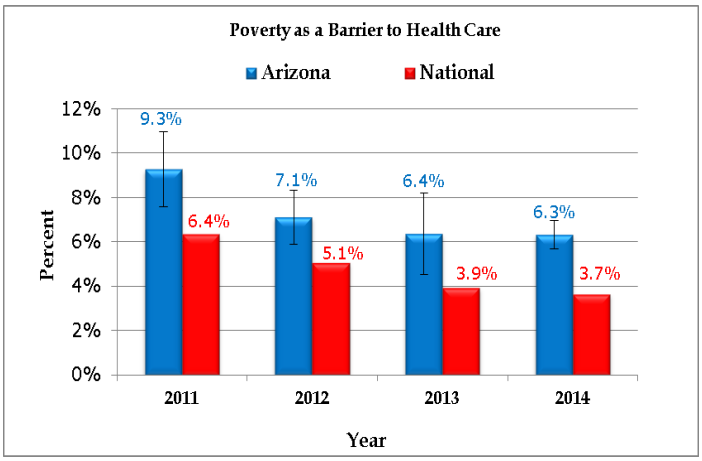


Figure 11A. Arizona and National BRFSS 2011-2014 survey respondents who reported living in poverty.

When looking at all the states in the nation, Arizona is in the highest class for percent of impoverished respondents (see Figure 11B.)

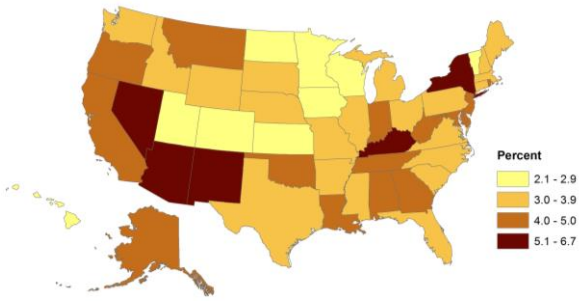


Figure 11B. BRFSS 2014 respondents who reported living in poverty by state (natural breaks).

The prevalence of poverty is broadly similar among Arizonans surveyed in 2014 when different chronic conditions are taken into consideration. Those reporting heart attack, COPD or diabetes diagnoses reported poverty slightly more frequently than those with other conditions (see Figure 11C).

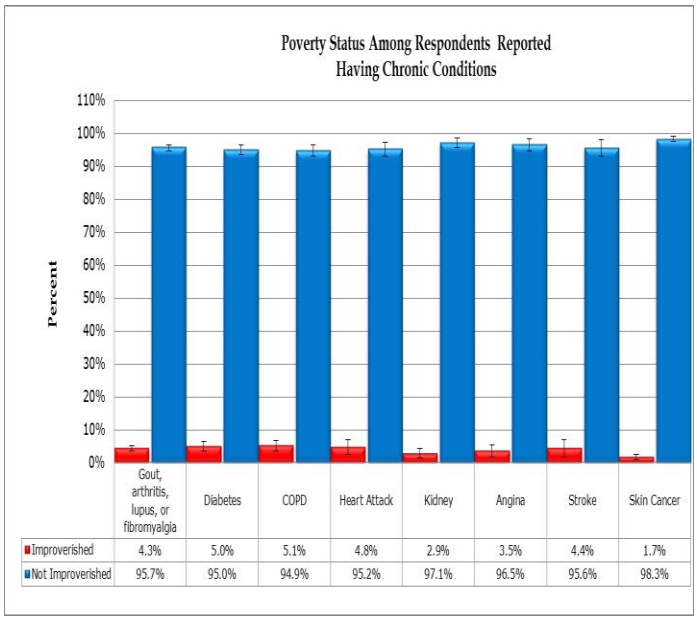


Figure 11C. Arizona 2014 BRFSS data assessing poverty status and chronic conditions.

Arizona BRFSS 2014 respondents who reported living in poverty (below 133% of FPL) and having no insurance constituted 18.5% (2011), 12.4% (2012), 11% (2013) and 12.2% (2014). Uninsured individuals (in red) whose earned income was above 133% of FPL, reported 81.5% (2011), 87.6% (2012), 89% (2013) and 87.8% (2014) (see Figure 11D).

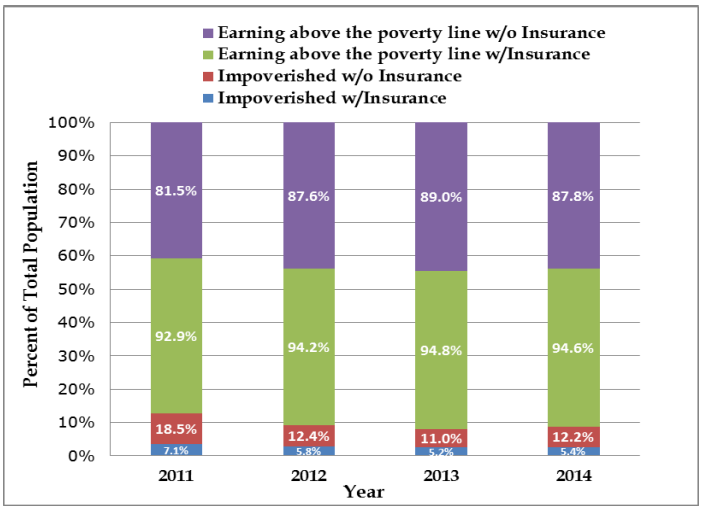


Figure 11D. Arizona 2011-2014 BRFSS respondents reporting insurance status by poverty status.

48 Wagstaff, Adam. (2002). Poverty and health sector inequalities. *Bulletin of the World Health Organization*, *80*(2), 97-105. Retrieved March 29, 2016, from http://www.scielosp.org/scielo.php?script=sci_arttext&pid=S0042-96862002000200004&lng=en&tlng=en.

49 Federal Register, Vol. 78, No. 16, January 24, 2013, pp. 5182-5183. Web. Dec. 2013. "The poverty guidelines updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2)" http://aspe.hhs.gov/2013-poverty-guidelines.html

Arizonans Who Reported Living in Poverty (<133% FPL)				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**3.7%**	53		
Arizona	**6.3%**	648	5.7%	7.0%
Male	4.9%	203	4.1%	5.7%
Female	7.7%	445	6.7%	8.7%
18-24	7.8%	48	5.4%	10.3%
25-34	8.2%	118	6.5%	9.8%
35-44	10.8%	190	8.8%	12.7%
45-54	8.3%	169	6.7%	9.8%
55-64	3.1%	74	2.2%	4.0%
65+	1.2%	49	0.8%	1.5%
Married	6.3%	322	5.4%	7.2%
Divorced	4.6%	94	3.4%	5.8%
Widowed	3.6%	35	1.5%	5.6%
Separated	15.6%	35	9.3%	21.9%
Never Married	6.4%	123	5.0%	7.8%
Unmarried Couple	10.8%	37	6.5%	15.0%
Less than high school	14.2%	163	11.7%	16.7%
High School/GED	7.5%	205	6.2%	8.8%
Some College/Technical School	5.6%	207	4.5%	6.6%
College/Technical School Grad	1.4%	73	1.0%	1.9%
Employed for Wages	5.7%	233	4.8%	6.7%
Self Employed	5.9%	54	4.0%	7.7%
Out of Work	10.4%	69	7.2%	13.5%
Homemaker	16.8%	128	13.0%	20.6%
Student	6.7%	28	4.0%	9.5%
Retired	1.2%	38	0.7%	1.6%
Unable to Work	9.6%	96	7.1%	12.1%
Less than $10,000	15.5%	119	12.1%	18.9%
$10,000 to $14,999	15.3%	87	11.5%	19.0%
$15,000 to $19,999	20.0%	144	16.0%	23.9%
$20,000 to $24,999	18.2%	148	14.7%	21.6%
$25,000 to $34,999	9.9%	100	7.6%	12.2%
$35,000 to $49,999	4.4%	50	3.0%	5.9%
White Non-Hispanic	2.8%	232	2.3%	3.2%
Black/African American	9.9%	35	6.0%	13.7%
Hispanic	13.8%	311	12.0%	15.6%
Asian/Pacific Islander	3.4%	6	0.2%	6.6%
American Indian Non-Hispanic	11.1%	42	6.4%	15.8%
Other	6.3%	22	3.3%	9.3%

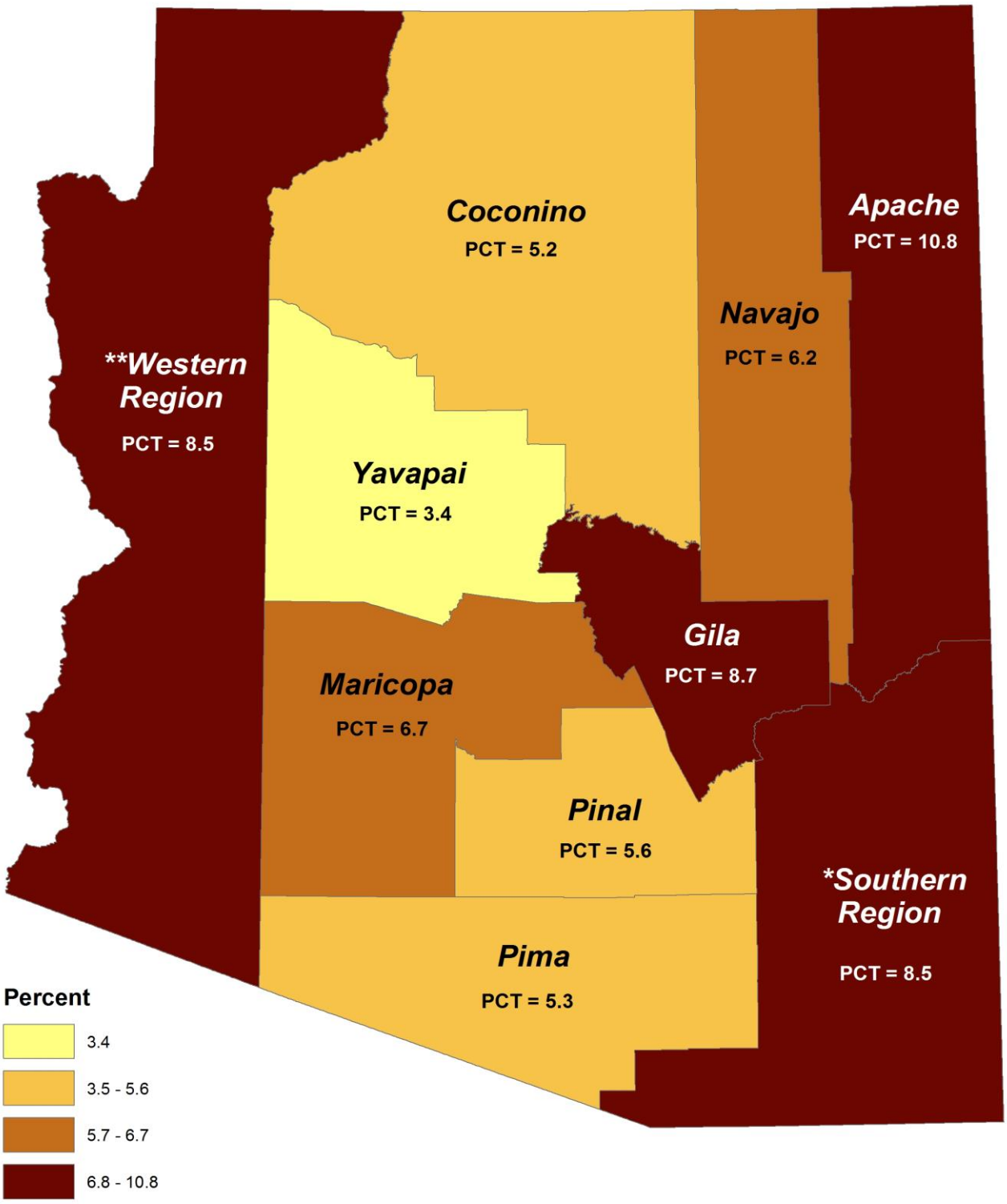
Use caution in interpreting cell sizes less than 50. N* is unweighted
Indicates an unreliable estimate due to small sample size (n ≤ 6).

Barriers to Health Care
Poverty

The table to the left displays the proportions of Arizona adults living in poverty (defined as earning less than 133% of the federal poverty line) by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Living In Poverty, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Barriers to Health Care
No Health Insurance

On May 23, 2010, the Patient Protection and Affordable Care Act (ACA) was passed by Congress and signed into law by the President. A number of lawsuits followed, each challenging the constitutionality of parts of the ACA. The U.S. Supreme Court combined several of these cases into one. On June 28, 2012, the Supreme Court (i) upheld the part of the ACA that requires all citizens to obtain health insurance or pay a penalty on taxable income, and (ii) struck down as unconstitutional the part that "penalized" states with loss of federal funding for Medicaid programs for not participating in the ACA, but approved the federal government providing states a choice to accept a federal grant and comply with accompanying conditions, or not participate. [37] One of the key functions of the law is to expand the scope of Medicaid and the number of individuals the state must cover. In the past, Medicaid was designed to provide assistance in obtaining medical care to pregnant women, children, needy families, the blind, the elderly and the disabled. Under the ACA, Medicaid will provide coverage to adults with an income up to 133% of the FPL.[50] In Arizona in 2014, there were over 500,000 inpatient and emergency department discharges with charges totaling more than $26.2 billion (see Table 6). Uninsured individuals accounted for 3.52% of the hospitalizations and accrued charges over 1.2 billion dollars (sum of Charity and Self-Pay payer statuses).

2014 Arizona Inpatient & Emergency Department Hospital Discharges			
Payer Type	**Number of Discharges**	**Total Charges**	**Average Length of Stay (Days)**
Charity	547	$35,339,321	7.6
Medicaid	86,606	$4,570,002,525	5.4
Medicare	253,203	$15,145,339,343	5.4
Other	13,705	$855,467,058	5.6
Private Insurance	80,941	$4,750,481,759	5.1
Self-Pay	16,698	$917,759,221	4.7
Total	**451,700**	**$26,274,389,227**	

Table 6. Inpatient and emergency department discharges in 2014 by payer type.

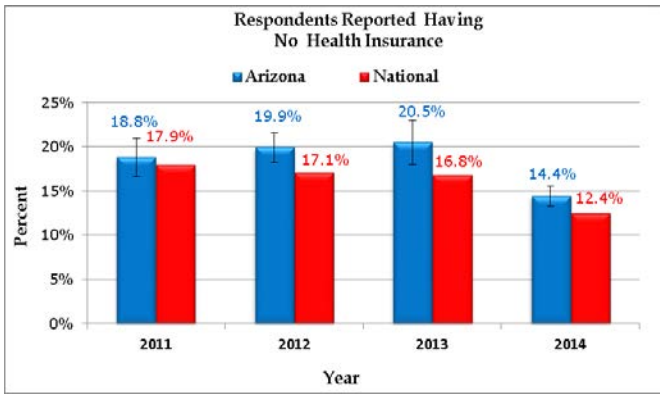


Figure 12A. Arizona and National 2011-2014 BRFSS respondents who reported that they had no health insurance.

Nearly one in seven (14.4%) Arizonans surveyed in 2014 reported that they did not have insurance, which is above the national median, by 2%. Data from 2011 through 2014 predate the implementation of the ACA, and can establish a baseline against which to measure the impact of the ACA (see Figure 12A). When compared to other states in the nation, Arizona is in the second-highest category for respondents who reported that they do not have health insurance (see Figure 12B).

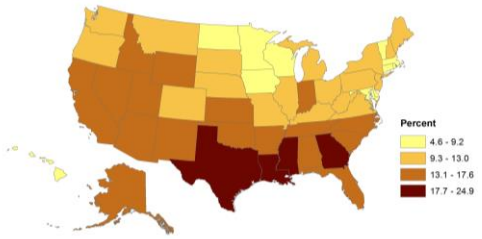
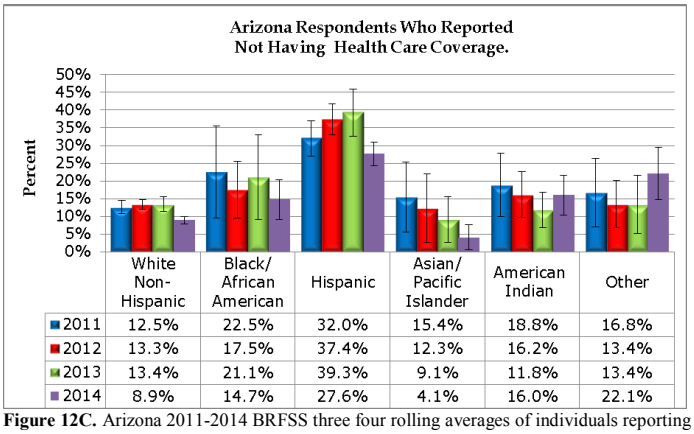


Figure 12B. Arizona BRFSS 2014 respondents who do not have insurance by state (natural breaks).

Research shows that uninsured African Americans, Hispanics and American Indins were less likely than uninsured Whites to obtain needed medical care.[51] These findings are reflected among Arizonans surveyed each year since 2011 (see Figure 12C).



	White Non-Hispanic	Black/ African American	Hispanic	Asian/ Pacific Islander	American Indian	Other
2011	12.5%	22.5%	32.0%	15.4%	18.8%	16.8%
2012	13.3%	17.5%	37.4%	12.3%	16.2%	13.4%
2013	13.4%	21.1%	39.3%	9.1%	11.8%	13.4%
2014	8.9%	14.7%	27.6%	4.1%	16.0%	22.1%

Figure 12C. Arizona 2011-2014 BRFSS three four rolling averages of individuals reporting no insurance by race/ethnicity.

When assessing insurance status it is necessary to exclude the elderly from the analysis as individuals 65 and older qualify for Medicare. In 2014, Hispanics were 31% of Arizona's population (2014 Pew estimates), but comprised 38% of Arizonans surveyed who reported having no health insurance. Hispanics factor disproportionately among those surveyed who are without health insurance (see Figure 12D).

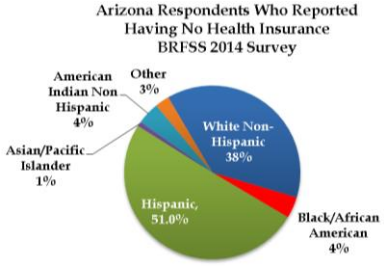


Figure 12D. The distribution of uninsured Arizonans reported from 2014 .BRFSS by race/ethnicity (weighted percent).

50 Nat'l Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 132 , S. Ct. 2566, 2608 (2012).

51 Lillie-Blaton M, Hoffman C. The role of health insurance coverage in reducing racial/ethnic disparities in health care. Health Aff (Millwood). 2005 Mar-Apr;24(2): 398-408. doi: 10.1377/hlthaff.24.2.398

Barriers to Health Care
No Health Insurance

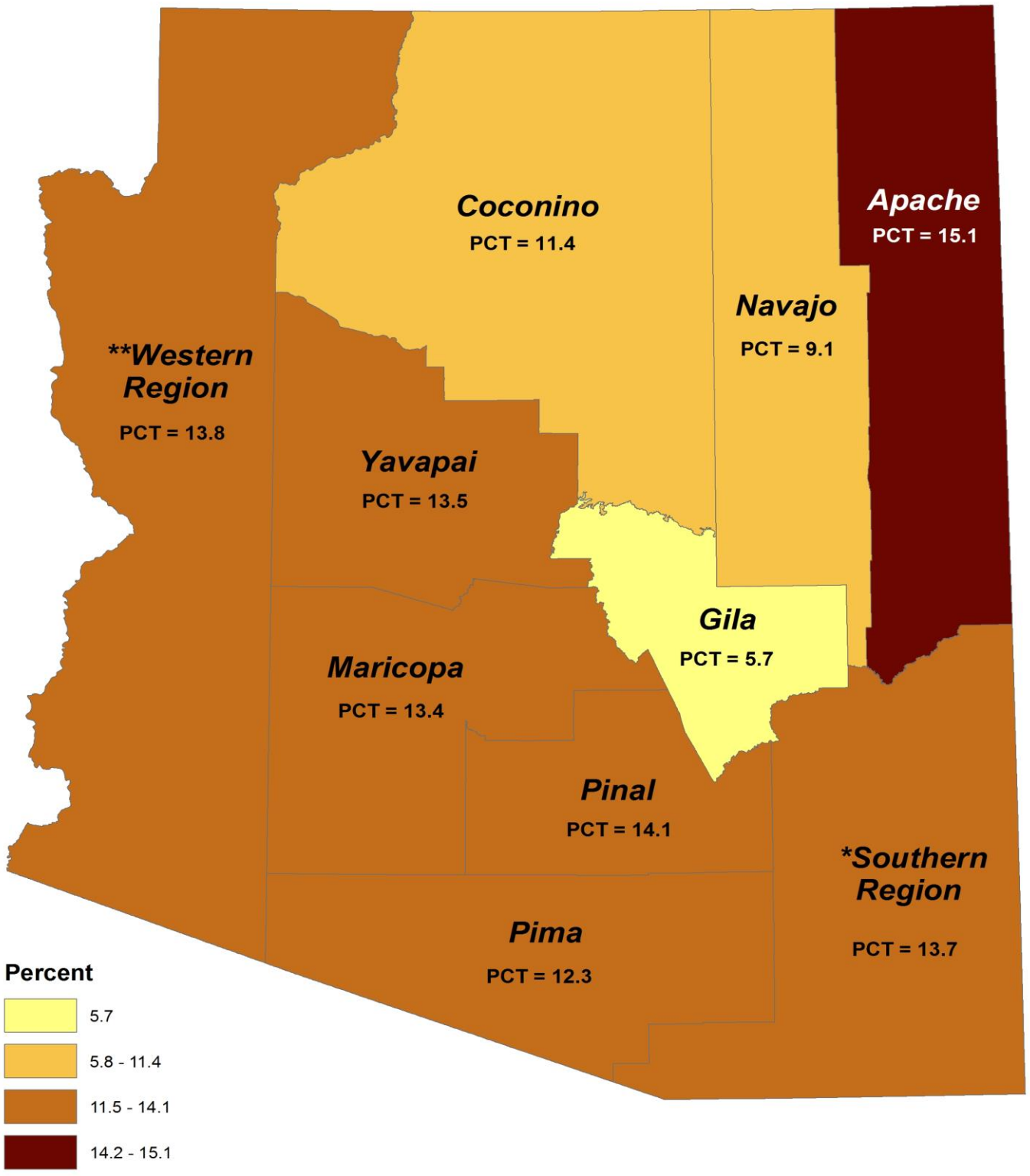
Arizona Respondents Who Reported being Uninsured				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**12.4%**	53		
Arizona	**14.4%**	1052	13.3%	15.6%
Male	16.2%	482	14.3%	18.0%
Female	12.7%	570	11.3%	14.2%
18-24	24.3%	107	19.6%	29.0%
25-34	21.6%	164	17.8%	25.3%
35-44	18.2%	187	15.2%	21.2%
45-54	15.3%	252	12.9%	17.7%
55-64	10.8%	290	9.1%	12.5%
65+	1.2%	52	0.7%	1.6%
Married	9.8%	422	8.5%	11.1%
Divorced	14.7%	162	11.6%	17.8%
Widowed	5.8%	67	3.8%	7.8%
Separated	36.4%	52	25.6%	47.3%
Never Married	22.7%	269	19.5%	25.9%
Unmarried Couple	23.4%	66	17.1%	29.8%
Less than high school	32.6%	215	28.1%	37.1%
High School/GED	17.4%	333	15.1%	19.7%
Some College/Technical School	10.5%	298	8.9%	12.2%
College/Technical School Grad	4.8%	191	3.8%	5.7%
Employed for Wages	14.2%	390	12.3%	16.0%
Self Employed	27.5%	166	22.6%	32.3%
Out of Work	34.5%	164	28.3%	40.7%
Homemaker	18.0%	122	14.0%	22.0%
Student	15.8%	39	9.9%	21.6%
Retired	2.5%	92	1.7%	3.3%
Unable to Work	9.3%	60	5.8%	12.8%
Less than $10,000	23.0%	100	17.3%	28.7%
$10,000 to $14,999	22.2%	86	16.4%	28.1%
$15,000 to $19,999	27.6%	141	22.1%	33.2%
$20,000 to $24,999	22.5%	157	18.1%	26.9%
$25,000 to $34,999	20.7%	125	16.3%	25.1%
$35,000 to $49,999	13.4%	123	9.9%	16.9%
$50,000 to $74,999	6.4%	79	4.6%	8.3%
Above $75,000	2.9%	59	1.9%	3.9%
White Non-Hispanic	8.9%	537	7.9%	10.0%
Black/African American	14.7%	39	9.1%	20.4%
Hispanic	27.6%	385	24.4%	30.8%
Asian/Pacific Islander	4.1%	11	0.6%	7.6%
American Indian Non-Hispanic	16.0%	36	10.4%	21.6%
Other	22.1%	44	14.6%	29.6%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

The table to the left displays the proportions of Arizonans that are uninsured by gender, age, categories, marital status, educational attainment, employment status, income, and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Having No Health Insurance, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Barriers to Health Care
Could Not Afford Health Care

When people lack health insurance or sufficent coverage, or their fincanial situation deteriorates, they may often forgo needed medical tests and therapies. Electing to decline needed medical care has many ethical and clinical implications. Often, symptoms of one disease overlap with another, and tests are necessary to determine if a treatment is appropriate. Barriers to care associated with cost imposes ethical dilemmas on healthcare professionals: do they treat the patient's symptoms, treat at minimal or substandard care levels, or deny them care outright? Patients will often request that their providers treat at minimal or substandard care because it is more affordable. By treating patients in this way, underlying disease(s) may remain untreated, resulting in a more serious condition later.[52] The inability to seek or receive appropriate medical care creates a strain on the medical system for both patients and providers. One in six (15.5%) of Arizonans surveyed reported they could not afford needed medical care, similar to the national median (see Figure 13A).

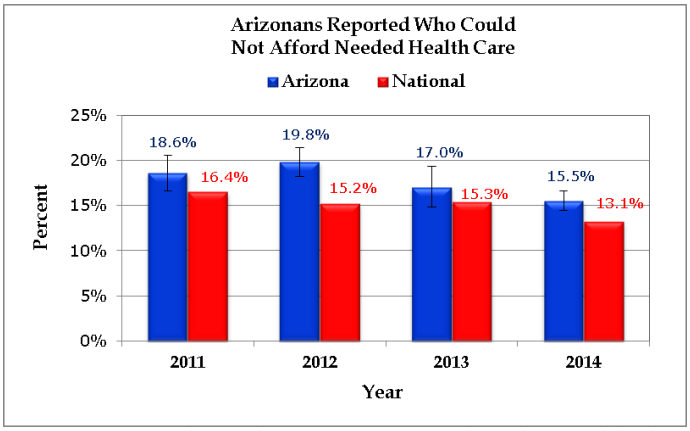


Figure 13A. Arizona and National 2011-2014 BRFSS respondents who reported that they could not afford needed medical care.

When compared to the other states, Arizona is in the highest category of respondents reporting that they could not afford needed medical care (see Figure 13B).

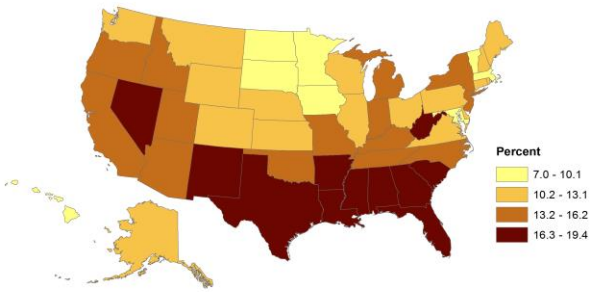


Figure13B. Arizona BRFSS 2014 respondents who reported they could not afford needed health care by state (natural breaks).

Research has shown that families are more likely to be unable to pay their medical bills. Families are defined as a group of two or more related individuals living in the same housing unit. Analysis of family units is important due to the shared impact of taking on financial risks.[53] Nationally, in general, as household size increases, the inability to afford needed health care also increases. Data comparing Arizona family size to national medians since 2011 are shown in (Figure 13C).

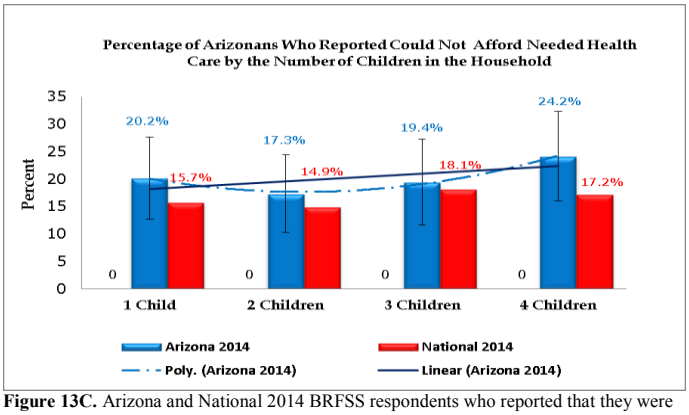


Figure 13C. Arizona and National 2014 BRFSS respondents who reported that they were unable to afford needed medical care by the number of children in the household.

Household composition can also play a significant role in one's ability to afford needed medical care. BRFSS data only provides information on the gender of the guardian; it is not possible to differentiate familial relationships. However, information on family composition can still offer insight on potential disparities. Nationally, single individuals and traditional families were the least likely to report being unable to afford medical care. Families with a single female guardian and non-traditional structures were more likely to report being unable to afford medical care (Figure 13D).

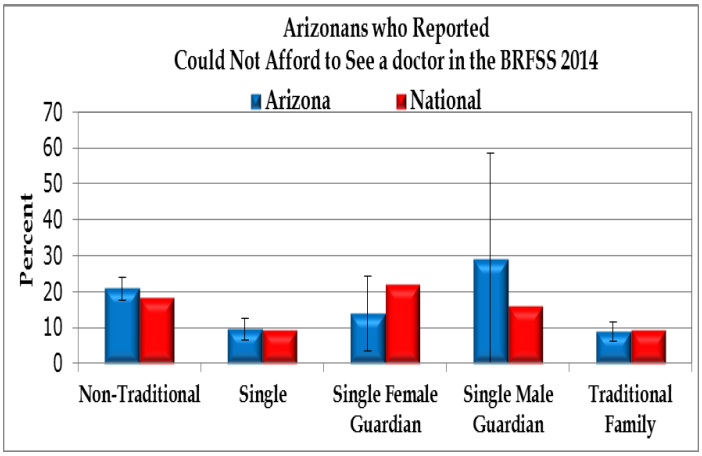


Figure 13D. BRFSS 2014 Arizona respondents who reported that they were unable to afford needed medical care by household composition.

52 Weiner, S. (2001), "I Can't Afford That!". Journal of General Internal Medicine, 16: 412–418. doi: 10.1046/j.1525-1497.2001.016006412.x

53 Cohen, R., and Kirzinger, W. (2014, Jan.). *Financial Burden of Medical Care: A Family Perspective. NCHS Data Brief No. 142.* Washington: U.S. Department of Health and Human Services..

Arizona Respondents Who Could Not Afford Healthcare				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**13.1%**	53		
Arizona	**15.5%**	1623	14.4%	16.6%
Male	13.2%	552	11.7%	14.7%
Female	17.7%	1071	16.2%	19.3%
18-24	18.5%	81	14.3%	22.6%
25-34	19.3%	169	15.8%	22.8%
35-44	19.2%	236	16.4%	22.1%
45-54	18.0%	355	15.5%	20.5%
55-64	15.3%	443	13.3%	17.2%
65+	5.5%	339	4.7%	6.4%
Married	12.2%	675	10.9%	13.5%
Divorced	21.1%	363	18.0%	24.2%
Widowed	11.8%	176	9.0%	14.6%
Separated	38.2%	70	27.3%	49.1%
Never Married	16.9%	239	14.1%	19.7%
Unmarried Couple	24.9%	83	18.6%	31.1%
Less than high school	29.3%	245	24.9%	33.6%
High School/GED	15.6%	449	13.6%	17.6%
Some College/Technical School	15.4%	538	13.6%	17.2%
College/Technical School Grad	7.1%	370	6.1%	8.1%
Employed for Wages	15.2%	550	13.5%	16.9%
Self Employed	19.9%	140	15.5%	24.3%
Out of Work	32.8%	179	26.8%	38.9%
Homemaker	17.9%	151	14.0%	21.7%
Student	11.7%	35	6.6%	16.7%
Retired	4.8%	253	3.9%	5.7%
Unable to Work	27.0%	286	22.4%	31.6%
Less than $10,000	22.2%	148	17.3%	27.2%
$10,000 to $14,999	24.1%	179	19.0%	29.1%
$15,000 to $19,999	27.8%	206	22.3%	33.4%
$20,000 to $24,999	26.7%	215	21.9%	31.5%
$25,000 to $34,999	18.3%	170	14.7%	22.0%
$35,000 to $49,999	14.7%	174	11.6%	17.8%
$50,000 to $74,999	9.4%	132	7.1%	11.7%
Above $75,000	5.9%	139	4.5%	7.2%
White Non-Hispanic	12.6%	1054	11.5%	13.7%
Black/African American	16.1%	50	10.7%	21.5%
Hispanic	23.1%	398	20.1%	26.1%
Asian/Pacific Islander	7.3%	16	2.7%	11.9%
American Indian Non-Hispanic	14.0%	43	8.9%	19.1%
Other	20.7%	62	14.3%	27.2%

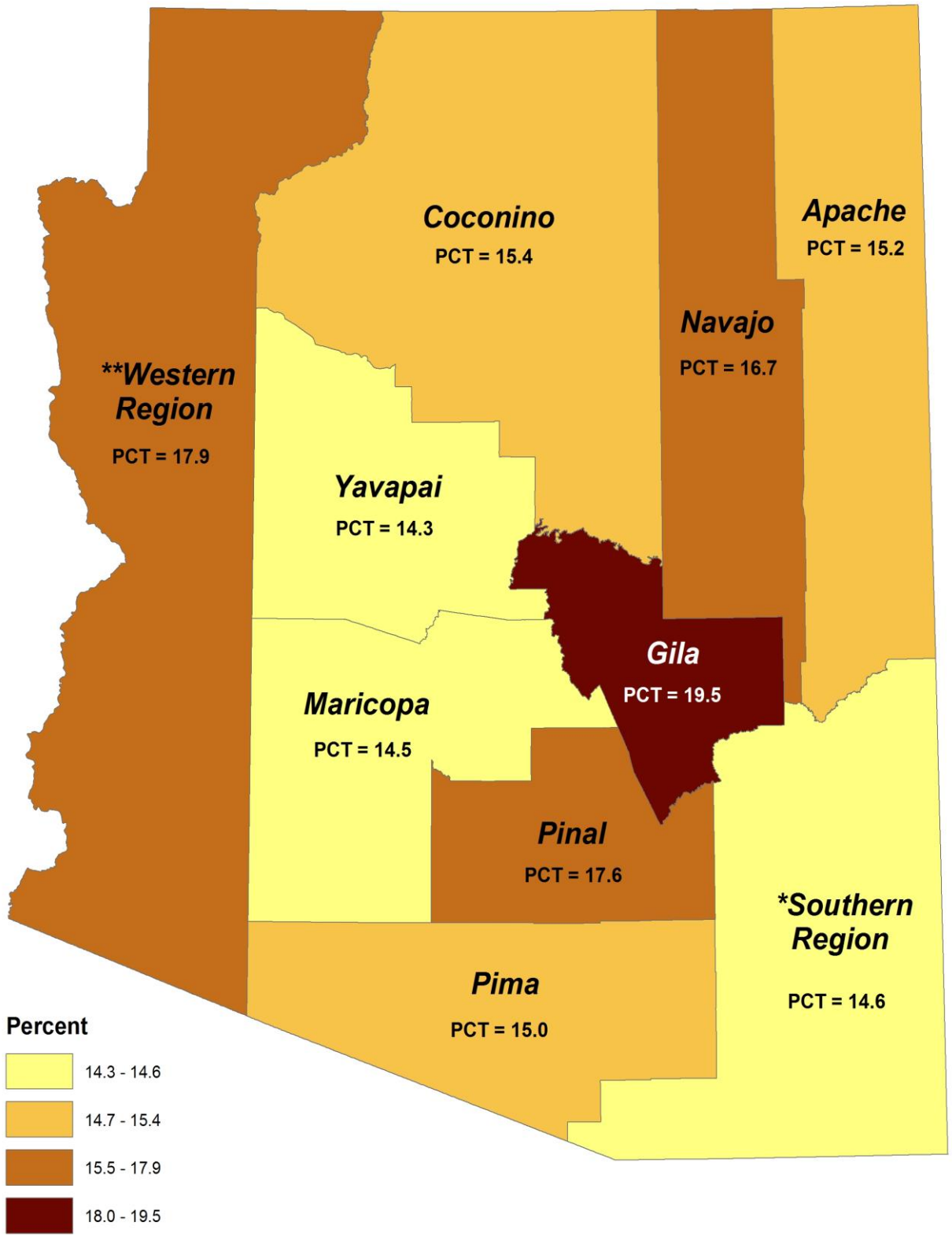
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Barriers to Health Care
Could Not Afford Health Care

The table to the left displays the proportions of Arizona adults who reported that they could not afford needed medical care by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported They Could Not Afford Needed Health Care, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Barriers to Health Care: Usual Source of Health Care

The Committee on Quality of Health Care in America and the Institute of Medicine recommended that health care organizations offer customization of care based on patient needs and become better able to anticipate the needs of the patient rather than reacting to medical events.[54] To do this, health care professionals and patients must build a long term and trusting relationship, ideally with a primary care provider (PCP). A PCP is an individual's main health care practitioner that offers non-emergency care. PCPs can be doctors, physician assistants, or nurse practitioners. PCPs provide preventive care, teach and promote healthy lifestyle choices, and identify and treat common medical conditions.[55] Since 2011, Arizonans surveyed were less likely to report having a usual source of health care than the national median. In 2014, just 72.1% of Arizonans surveyed reported having a usual source of healthcare, lower than the national median of 76.7% (see Figure 14A).

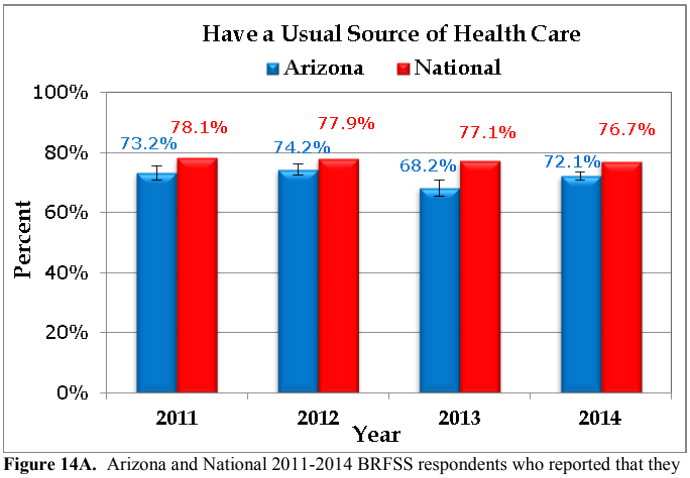


Figure 14A. Arizona and National 2011-2014 BRFSS respondents who reported that they had a usual source of health care.

When compared to other states, Arizona is in the lowest category for percent of respondents who reported they have a usual source of health care (see Figure 14B).

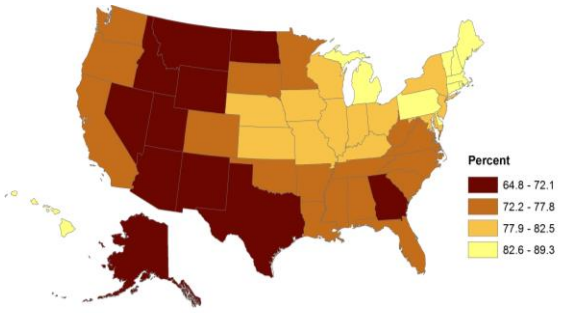


Figure 14B. BRFSS 2014 respondents who reported having a usual source of health care (natural breaks).

The services physicians provide are not identical. There are many different specialties in medicine and an individual may need to see more than one physician. Sixty eight percent of Arizonans surveyed said they had at least one provider, below the national median of 70% (see Figure 14C).

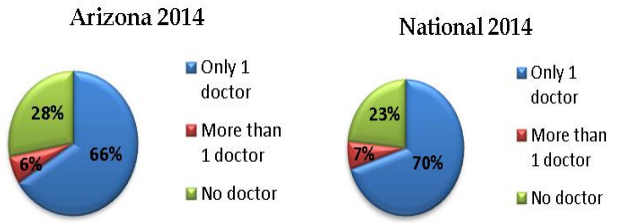


Figure 14C. Distribution of the number of providers respondents see as a usual source of health care in the Arizona and National BRFSS 2014.

Arizona respondents reporting no usual source of health care were found *more* frequently among respondents who were Hispanic, uninsured or impoverished, and *less* frequently among White non-Hispanics, the insured, and those not in poverty (see Figure 14D).

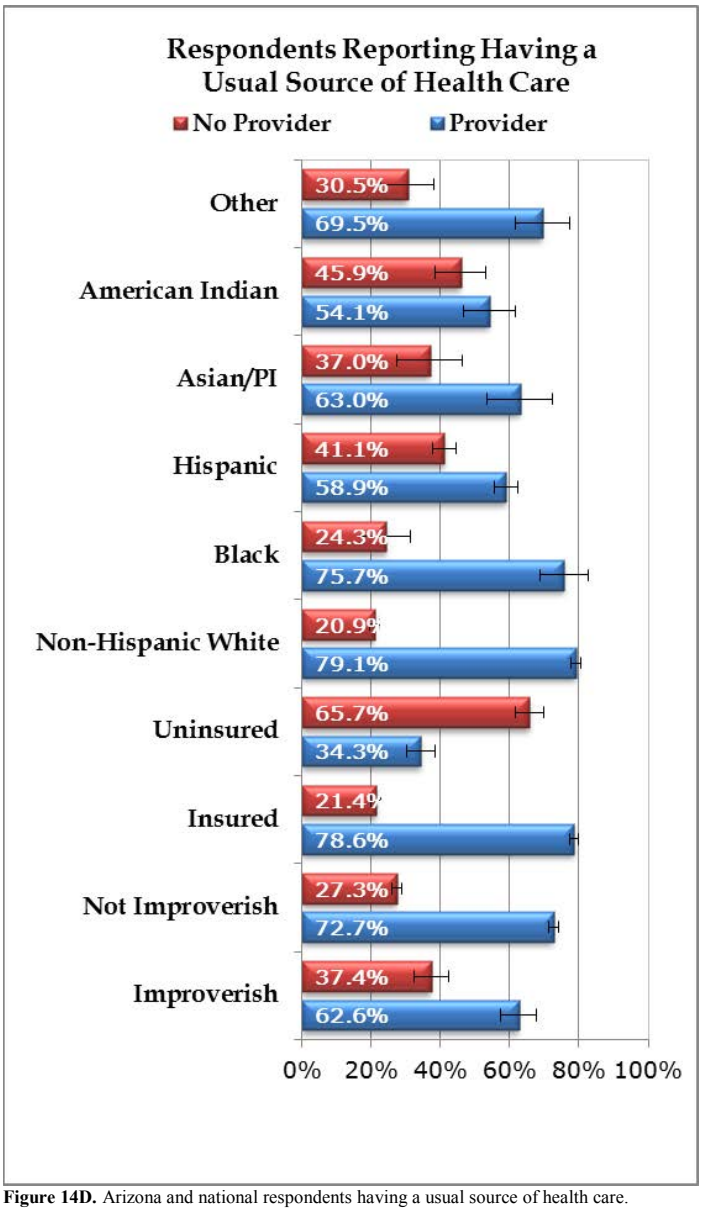


Figure 14D. Arizona and national respondents having a usual source of health care.

54 IOM (Institute of Medicine) Washington, D.C: National Academy Press; 2001. Crossing the Quality Chasm: A New Health System for the 21st Century.
55 "Choosing a Primary Care Provider" Medline Plus. U.S. National Library of Medicine, 12 Aug. 2011. Web. 26 Feb. 2014. http://www.nlm.nih.gov/medlineplus/ency/article/001939.htm>

Arizona Respondents Reported Having a Usual Source of Healthcare

Characteristic	Percent	N*	Confidence Interval Lower Mean	Confidence Interval Upper Mean
National	**76.7%**	53		
Arizona	**72.1%**	12510	70.7%	73.4%
Male	65.7%	4777	63.6%	67.8%
Female	78.3%	7733	76.5%	80.0%
18-24	48.0%	253	42.7%	53.3%
25-34	54.6%	543	50.4%	58.7%
35-44	68.4%	1066	65.0%	71.8%
45-54	75.1%	1689	72.4%	77.8%
55-64	84.8%	2801	82.8%	86.8%
65+	93.0%	6158	92.0%	94.0%
Married	78.8%	6707	77.2%	80.5%
Divorced	75.9%	1910	72.4%	79.3%
Widowed	88.4%	2154	85.6%	91.1%
Separated	48.9%	174	38.7%	59.1%
Never Married	56.0%	1157	52.3%	59.6%
Unmarried Couple	56.9%	277	49.9%	64.0%
Less than high school	58.7%	822	54.1%	63.2%
High School/GED	69.4%	2815	66.7%	72.1%
Some College / Technical School	74.2%	3717	71.9%	76.5%
College/Technical School Grad	80.2%	5028	78.3%	82.0%
Employed for Wages	66.2%	3695	64.0%	68.4%
Self Employed	65.6%	751	60.7%	70.5%
Out of Work	52.5%	439	46.2%	58.8%
Homemaker	72.6%	858	67.9%	77.3%
Student	59.3%	161	51.5%	67.1%
Retired	92.5%	5473	91.3%	93.7%
Unable to Work	87.1%	974	82.9%	91.3%
Less than $10,000	60.8%	490	54.4%	67.2%
$10,000 to $14,999	65.8%	578	59.2%	72.5%
$15,000 to $19,999	61.5%	739	55.8%	67.3%
$20,000 to $24,999	65.6%	1011	60.6%	70.5%
$25,000 to $34,999	64.4%	1157	59.6%	69.2%
$35,000 to $49,999	71.7%	1643	67.7%	75.6%
$50,000 to $74,999	78.1%	1723	74.9%	81.3%
Above $75,000	82.4%	2996	80.1%	84.6%
White Non-Hispanic	79.1%	10021	77.7%	80.4%
Black/African American	75.7%	346	68.7%	82.6%
Hispanic	58.9%	1464	55.4%	62.3%
Asian/Pacific Islander	63.0%	167	53.6%	72.5%
American Indian Non-Hispanic	54.1%	215	46.8%	61.5%
Other	69.5%	297	61.7%	77.2%

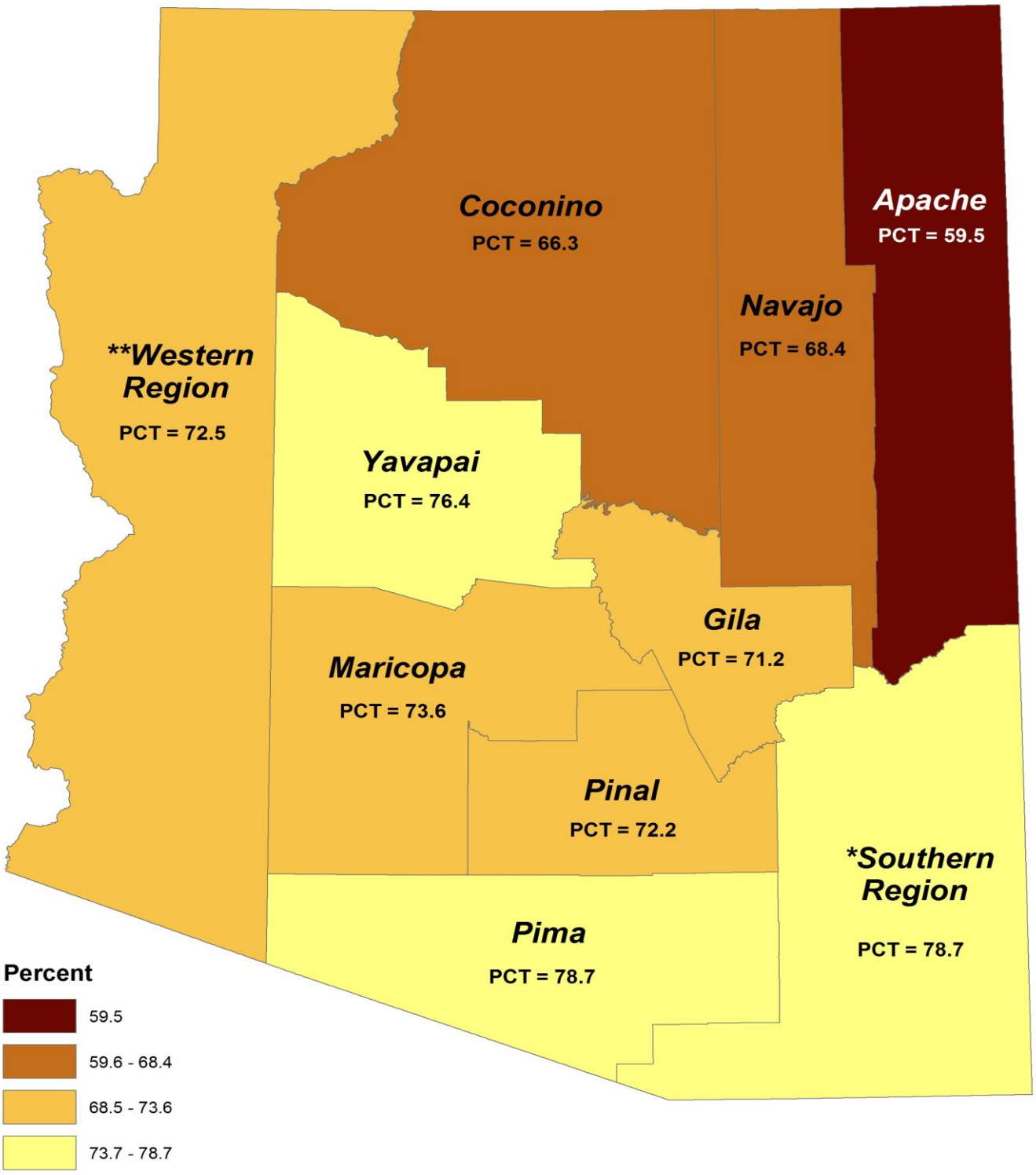
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Barriers to Healthcare: Usual Source of Health Care

The table to the left displays the proportions of Arizona adults who reported that they had a usual source of health care by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Having a Usual Source of Health Care, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Risks and Behaviors

Certain activities or behaviors increase the risk of mortality and morbidity. Promotion of cessation programs, awareness, and policy changes will help reduce the impact of these behaviors. Many programs and policies have been enacted to reduce the burdens associated with participating in these risky behaviors. Continued monitoring of these behaviors will provide Arizona with a tool to assess the impact of these programs and policies. The Health Risks and Behaviors Section of this Annual Report include an analysis of the following:

- **Seat Belt Use (variable SEATBELT) -** Always wearing a seat belt is considered a positive outcome and less frequent use is considered a negative outcome.
- **Cigarette Smoking (variable _SMOKER3) -** Formerly or never smoking are considered a positive outcome and currently smoking is considered a negative outcome.
- **Alcohol Abuse: Heavy Drinking (variable _RFDRHV4) -** Adult men who have more than two drinks a day, and women who have more than one drink per day are considered a negative outcome and less frequent drinking including no drinking is considered a positive outcome.
- **Alcohol Abuse: Binge Drinking (variable _RFBING5) -** A person that has more than five drinks on at least one occasion in the past 30 days is considered a negative outcome and not engaging in this behavior is considered a positive outcome.

Strategic Map Link

By collecting data on seat belt use, smoking status, heavy drinking, and binge drinking, the BRFSS is providing Arizona with a tool to evaluate if its programs are effectively improving internal policy development and implementation, and reducing tobacco and substance use.

The aforementioned indicators are all part of Arizona's Winnable Battles as outlined in A2 and E4 of the ADHS Strategic Map.

(See Page 9)

Health Risks and Behaviors: Seat Belt Use

Motor vehicle crashes are the leading cause of death for people between the ages of 5 and 34. It is estimated that seat belt use can reduce the number of deaths and serious injuries by 50%.[56] There were additional persons injured, such as motorcyclists, bicyclists and pedestrians, who were not in a motor vehicle. In 2014, Drivers of motor vehicles accounted for 42% of all Motor vehicle related hospitalizations. While Drivers of motorcycles accounted for only 18%. For drivers under the age of 18, there were 7 deaths and 416 discharges. They accounted for more than $39 million in medical charges. Motor vehicle-related visits resulted in over $580 million in medical charges, and individuals were hospitalized on average between 5.6 and 6.5 days (see Table 7). Of the 5,467 motor vehicle accidents, 5,566 were alcohol- related crashes as designated by the ICD-9 coding for alcohol abuse and dependency related discharges: alcohol abuse, alcohol dependency, and alcohol-induced disorders out of a total of 43,109 alcohol abuse and dependency related inpatient and emergency department discharges (see Table 7).

Motor Vehicle Accidents Where the Driver or Passenger Were Injured Inpatient & Emergency Department Discharges

Age	Number of Discharges	Died	Charges	Driver	Average Length of Stay (Days)
<18	416	7	$39,050,022	73	5.6
18 - 24	894	18	$100,837,689	522	5.2
25 - 39	1,306	29	$134,327,564	843	5.2
40 - 54	1,198	19	$128,205,784	762	6.2
55+	1,653	71	$178,095,729	1066	6.5
Total	**5,467**	**144**	**$580,516,788**	**3266**	

Table 7. Inpatient and emergency department visits (2012) that contain the following ICD-9 Codes: E810.0, E810.1, E811.0, E811.1, E812.0, E812.1, E813.0, E813.1, E814.0, E814.1, E815.0, E815.1, E816.0, E816.1, E817.0, E817.1, E818.0, E818.1, E819.0, and E819.1.

In 2014, 37% of motor vehicle related hospitalizations in Arizona were among pedestrians, bicyclists or bicyclists, or other persons (Figure 15A).

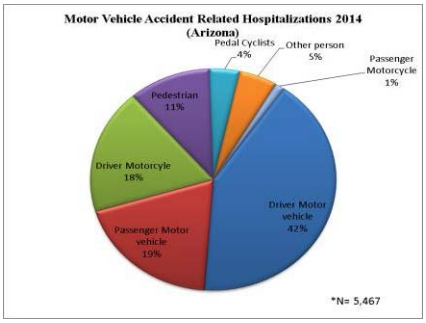


Figure 15A. Distribution of motor vehicle accident related hospitalization in Arizona both emergency department and admissions, which contained the ICD-9 codes: E810.0-E819.9.

Biennially since 2006, the BRFSS survey contained a seat belt use question. In 2014, the majority (85.4%) of Arizonans reported that they always wear their seat belts when they drive or ride in a car; same rate as the national median (see Figure 15B).

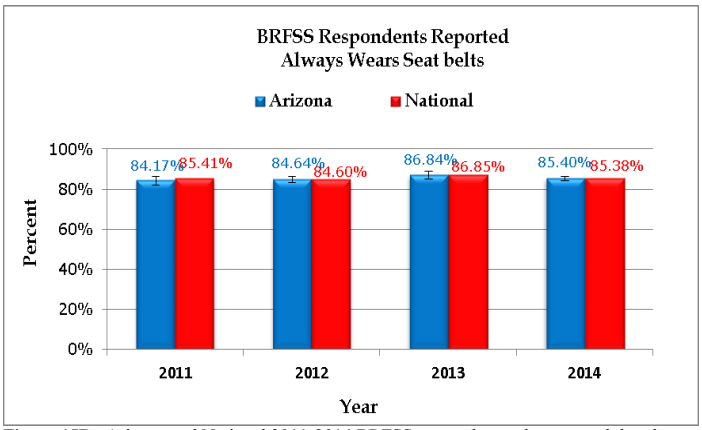


Figure 15B. Arizona and National 2011-2014 BRFSS respondents who reported that they always wore a seat belt when they drove or rode in a car.

Although Arizonans' reported 85.4% rate was the same as the national mean rate as to always wearing a seat belt when they drive or ride in a car; it fell into the second highest class for percent of respondents reporting that they always wear a seat belt when compared to all the states (see Figure 15C).

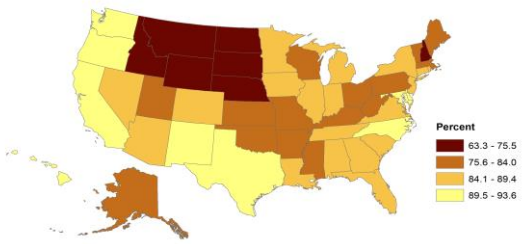


Figure 15C. BRFSS 2014 respondents who always wear seat belts by state, (natural breaks).

Seat belt use may be impacted by a state's laws. States with primary seat belts laws allow police officers to stop vehicles solely for seat belt violations. In states with secondary seat belt laws, such as Arizona, an officer must have another reason to stop the vehicle (see Figure 15D).[57]

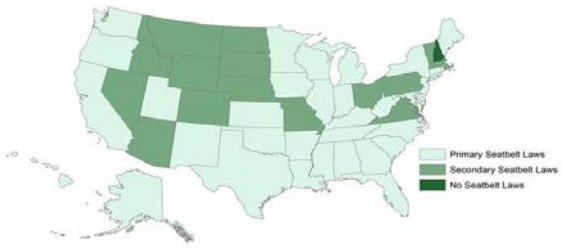


Figure 15D. National Highway Safety Laws by state, (natural breaks)

56 Centers for Disease Control. "Adult Seat Belt Use." CDC Vital Signs.CDC, 04 Jan. 2011. Web. 26 Feb. 2014. <http://www.cdc.gov/vitalsigns/SeatBeltUse/>.

57 " Governors Highway Safety Association. Seat Belt Laws. <http://www.ghsa.org/html/stateinfo/laws/seatbelt_laws.html> Pub 2015. Accessed December 10, 2015.

Arizona Respondents Reported Always Wearing a Seatbelt				
			Confidence Interval	
Characteristic	Per-cent	N*	Lower Mean	Upper Mean
National	**85.4%**	53		
Arizona	**85.4%**	12263	84.3%	86.5%
Male	81.4%	4701	79.7%	83.2%
Female	89.2%	7562	87.9%	90.5%
18-24	71.3%	324	66.1%	76.4%
25-34	81.7%	699	78.5%	85.0%
35-44	87.3%	1207	84.9%	89.8%
45-54	89.3%	1764	87.5%	91.1%
55-64	90.1%	2750	88.5%	91.6%
65+	89.2%	5519	88.0%	90.4%
Married	89.8%	6537	88.7%	90.9%
Divorced	85.0%	1853	82.2%	87.8%
Widowed	89.8%	1980	87.7%	91.9%
Separated	80.7%	197	71.7%	89.7%
Never Married	75.6%	1302	72.3%	79.0%
Unmarried Couple	81.2%	308	75.2%	87.3%
Less than high school	82.9%	893	79.3%	86.5%
High School/GED	83.6%	2735	81.4%	85.7%
Some College/Technical School	83.9%	3610	81.9%	85.9%
College/Technical School Grad	90.9%	4974	89.6%	92.1%
Employed for Wages	84.3%	3950	82.5%	86.1%
Self Employed	82.7%	812	78.5%	86.9%
Out of Work	81.2%	528	75.9%	86.5%
Homemaker	92.6%	892	90.3%	94.9%
Student	75.9%	191	68.8%	83.1%
Retired	90.4%	4986	89.3%	91.6%
Unable to Work	84.0%	848	80.6%	87.4%
Less than $10,000	82.7%	521	77.8%	87.7%
$10,000 to $14,999	80.4%	570	74.8%	86.0%
$15,000 to $19,999	81.8%	745	77.4%	86.2%
$20,000 to $24,999	85.2%	1032	81.6%	88.8%
$25,000 to $34,999	85.3%	1169	81.7%	88.9%
$35,000 to $49,999	84.2%	1643	81.0%	87.3%
$50,000 to $74,999	88.7%	1721	86.2%	91.2%
Above $75,000	88.6%	2957	86.8%	90.5%
White Non-Hispanic	86.6%	9635	85.5%	87.7%
Black/African American	83.4%	325	76.9%	90.0%
Hispanic	83.9%	1593	81.2%	86.7%
Asian/Pacific Islander	85.1%	171	76.6%	93.6%
American Indian Non-Hispanic	80.9%	253	75.1%	86.8%
Other	78.9%	286	71.5%	86.3%

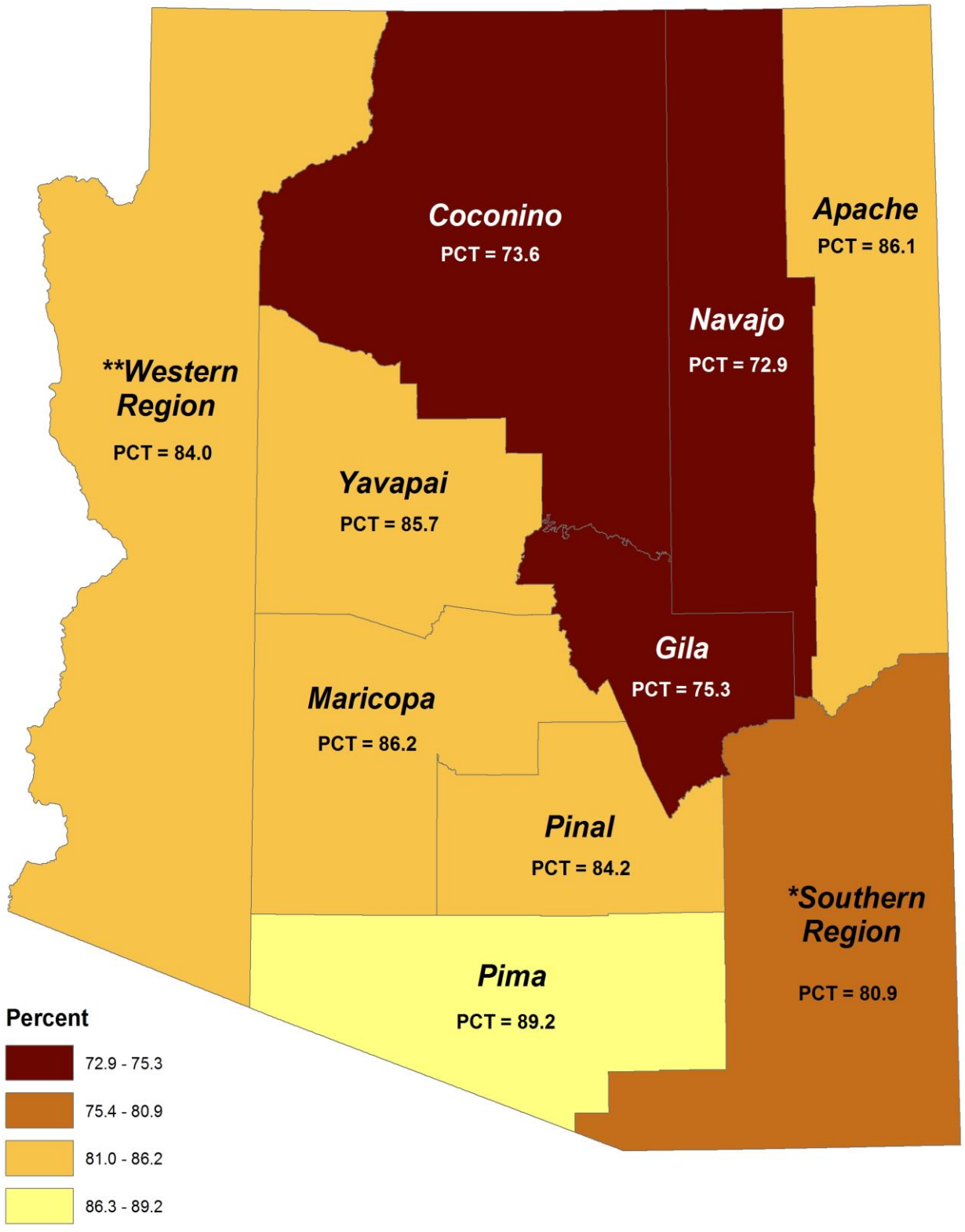
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Risks and Behaviors: Seat belt Use

The table to the left displays the proportion of Arizonans who reported that they "always" wear a seat belt when driving or riding in a car. Data are also presented by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Always Wearing a Seat Belt When Driving or Riding in a Car, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Risks and Behaviors: Cigarette Use

In 1964, the United States Surgeon General released the *Smoking and Health: Report of the Advisory Committee of the Surgeon General of the Public Health Service.* The report was based on the available biomedical articles that related smoking and diseases. At that time there was more than 7,000 articles on the topic. The Advisory Committee's findings were that cigarette smoking is associated with a 70% higher all-cause mortality rate in men. It was a cause of lung cancer and laryngeal cancer in men and it was a probable cause of lung cancer in women. In response to the report, the U.S. Congress passed the *Federal Cigarette Labeling and Advertising Act of 1965* and the *Public Health Cigarette Smoking Act of 1969,* which required health warnings on the packaging and banned broadcast advertising.[58] Since the 1964 report, the Surgeon General's reports have established a long list of health consequences and diseases caused by tobacco use and exposure, and many programs have been implemented to prevent use and encourage cessation. Continued monitoring of tobacco use is a core component of the BRFSS. In 2014, 16.5% of Arizonans surveyed reported that they currently smoke, lower than the national median (see Figure 16A).

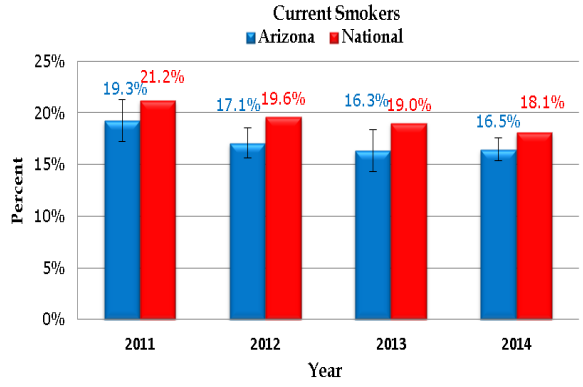


Figure 16A. Arizona and National 2011-2014 BRFSS respondents who reported that they were current smokers.

The proportions of Arizonans who are current smokers, former smokers, or who never smoked are similar to national figures (see Figure 16B)

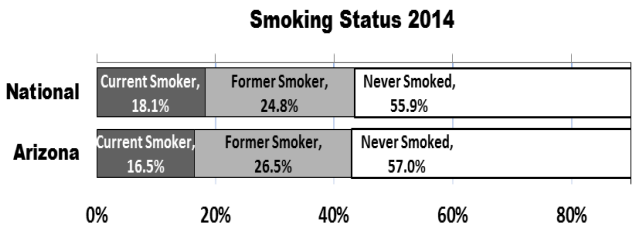


Figure 16B**.** National and Arizona rates for smoking proportioned by current, former, and never smoked.

58 U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Corrections on January 2014.

Due to the nature of the BRFSS, follow-up data are not available. To quit smoking can be a difficult process, and an individual may quit smoking and then relapse in the future. Therefore, it is important to document the distribution of smoking status. The proportion of Arizonans who reported being former smokers in 2014 was higher than the national median. Arizona is in the lowest category among U.S. states for current smoking percentages (see Figure 16C).

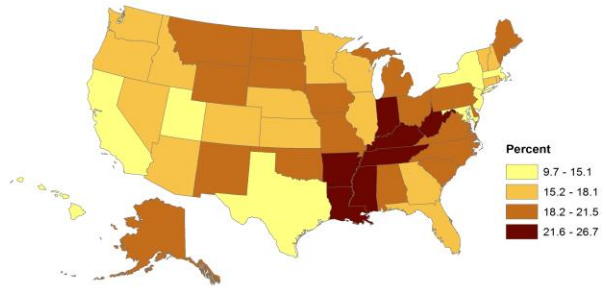


Figure 16C. Distribution of smoking status in the 2014 BRFSS by state, (natural breaks).

Current research has established many more causal link-ages between smoking and diseases/chronic conditions. In the 2014 Surgeon General's Advisory Committee's report on the Health Consequences of Smoking, the current research assessed by the committee established that ten additional diseases are caused by smoking (see Figure 16D).

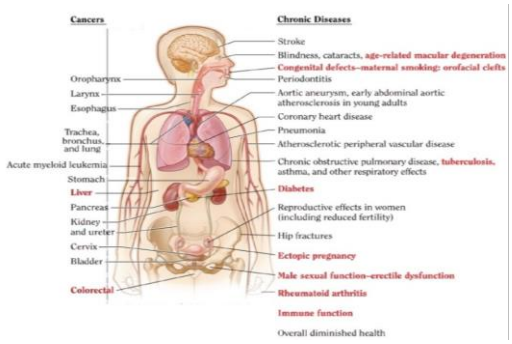


Figure 16D. Taken from the *United States Surgeon General's Report on the Health Consequences of Smoking, 2014*, in red are new diseases the current research has shown smoking to cause.[45]

Payer Type	Number of Discharges	Died	Charges	Average Length of Stay (Days)
Medicaid	445	28	$27,375,009	5.8
Medicare	3,536	221	$221,170,348	5.7
Other	86	7	$6,267,699	5.5
Private Insurance	809	62	$56,425,399	6.1
Self-Pay	69	7	$4,040,483	5.8
Total	**4,945**	**325**	**$315,278,938**	

Table 8. Arizona Hospital 2014 Discharges for inpatient and emergency department visits that contain the following ICD-9 CODES: 162.0, 162.2, 162.3, 162.4, 162.5, 162.8, and 162.9.

Research has shown that people who smoke are 15 to 30 times more likely to get lung cancer. Therefore, monitoring lung cancer is of the utmost importance. In 2014, there were 4,945 hospitalizations for tracheal, bronchial, and lung cancers, in Arizona resulting in 325 deaths while in the hospital and medical charges of more than $315 million (see Table 8)**.**

Arizona Respondents Who Reported That They Are Current Smokers				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**18.1%**	53		
Arizona	**16.5%**	1811	15.3%	17.6%
Male	19.1%	789	17.3%	20.9%
Female	13.9%	1022	12.6%	15.2%
18-24	18.2%	74	13.8%	22.6%
25-34	21.1%	181	17.7%	24.6%
35-44	18.4%	222	15.4%	21.3%
45-54	17.0%	334	14.7%	19.2%
55-64	17.0%	474	15.0%	19.0%
65+	9.0%	526	7.9%	10.1%
Married	10.7%	661	9.6%	11.8%
Divorced	24.0%	432	20.8%	27.3%
Widowed	14.7%	250	11.8%	17.6%
Separated	27.1%	62	18.3%	35.8%
Never Married	23.4%	309	20.1%	26.6%
Unmarried Couple	22.9%	83	16.7%	29.1%
Less than high school	22.5%	194	18.5%	26.5%
High School/GED	20.9%	551	18.6%	23.2%
Some College/ Technical School	17.5%	690	15.6%	19.3%
College/Technical School Grad	6.7%	375	5.8%	7.7%
Employed for Wages	17.5%	672	15.7%	19.3%
Self Employed	17.2%	111	12.8%	21.6%
Out of Work	24.8%	140	19.5%	30.1%
Homemaker	9.4%	84	6.6%	12.1%
Student	14.9%	39	9.1%	20.7%
Retired	10.3%	495	8.9%	11.7%
Unable to Work	27.4%	262	23.0%	31.8%
Less than $10,000	26.0%	139	20.3%	31.7%
$10,000 to $14,999	25.3%	147	19.3%	31.4%
$15,000 to $19,999	17.2%	161	13.0%	21.4%
$20,000 to $24,999	21.6%	211	17.5%	25.7%
$25,000 to $34,999	21.0%	233	17.1%	24.9%
$35,000 to $49,999	17.1%	248	13.9%	20.3%
$50,000 to $74,999	14.4%	210	11.8%	17.0%
Above $75,000	8.8%	227	7.2%	10.3%
White Non-Hispanic	17.5%	1388	16.3%	18.8%
Black/African American	16.2%	64	10.9%	21.6%
Hispanic	14.0%	227	11.5%	16.5%
Asian/Pacific Islander	16.6%	19	7.8%	25.4%
American Indian Non-Hispanic	12.0%	47	7.8%	16.2%
Other	24.0%	66	17.0%	31.0%

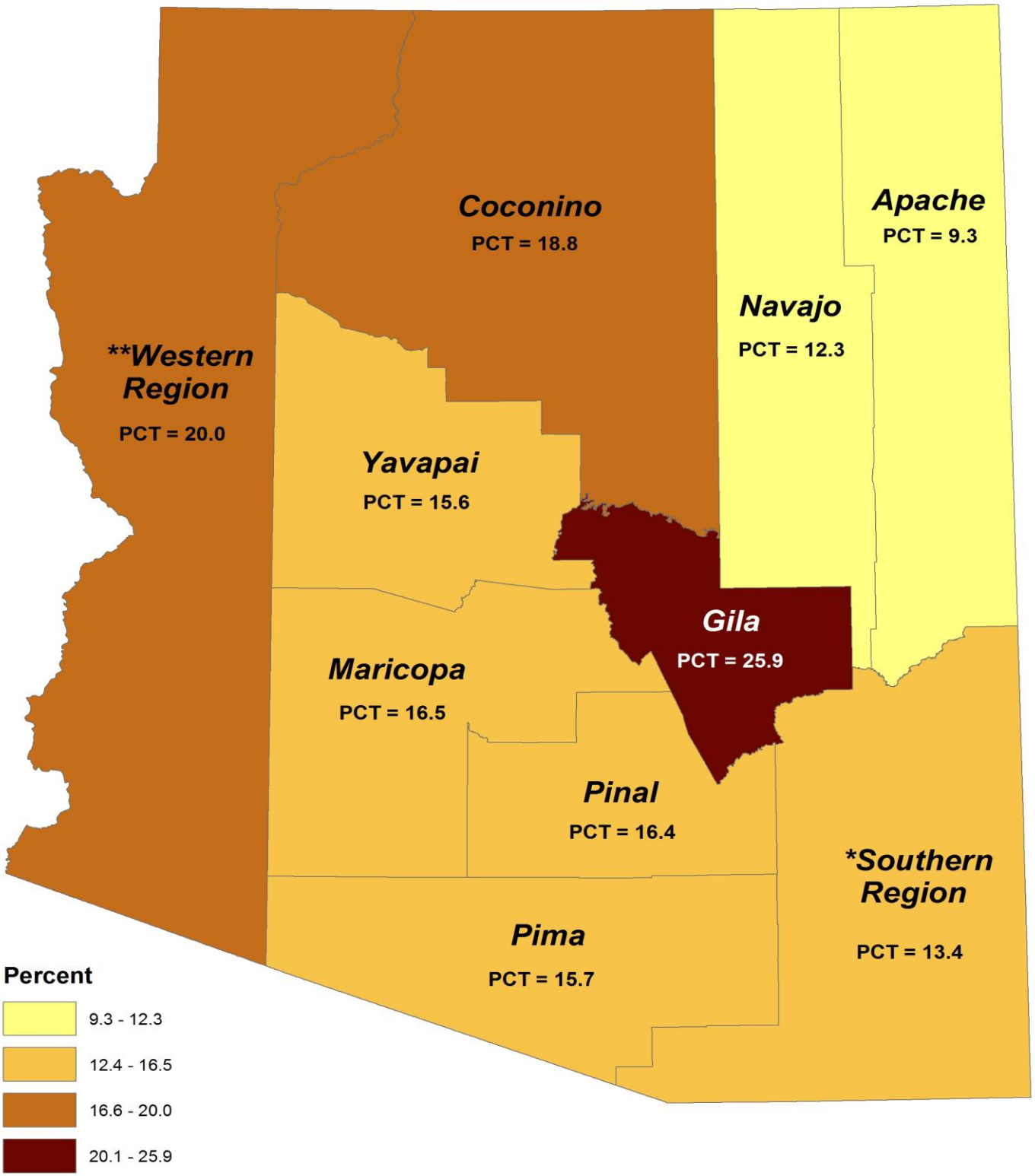
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Risks and Behaviors: Cigarette Use

The table to the left displays the proportions of Arizonans who reported that they currently smoke cigarettes by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported They Are Current Cigarette Smokers, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Risk and Behaviors: Alcohol Abuse - Heavy Drinkers

In adults, alcohol use can be beneficial or detrimental to health. Research has shown that moderate daily consumption of alcohol in middle-aged and older adults reduces the likelihood of cardiovascular events, all-cause mortality, and helps keep cognitive function intact as a person ages. However, moderate alcohol consumption also has been associated with increased risk of breast cancer, violence, drowning, and injuries from falls and motor vehicle crashes. Exceeding moderate alcohol consumption (heavy drinking) provides no health benefit; in fact, heavy drinking has been associated with increased body mass index, impaired cognitive functioning (both long term and short term), liver disease, hypertension, stroke, Type 2 diabetes, injury, and violence. Heavy drinking is defined as having more than two drinks a day for men and more than one serving a day for women.[59] The proportion of Arizona respondents surveyed who reported being a heavy drinker in 2014 (5.8%) is similar to the national median, at 5.9% (Figure 17A).

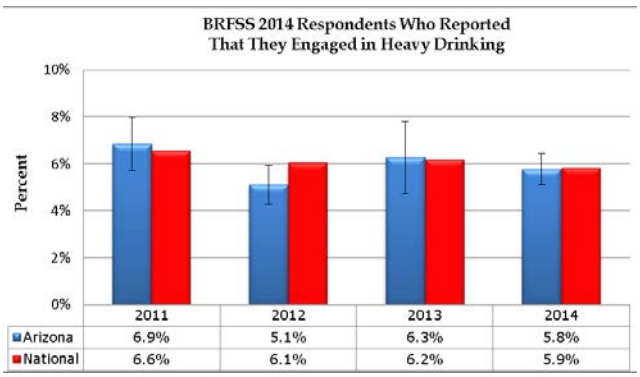


Figure 17A. Arizona and National 2011-2014 BRFSS respondents who were classified as heavy drinkers as per CDC guidelines. Heavy drinking is defined as: Adult men having more than two drinks per day and adult women having more than one drink per day.

"In 2014, 9,967 people were killed in alcohol-impaired driving crashes, accounting for nearly one-third (31%) of all traffic-related deaths in the United States. Of the 1,070 traffic deaths among children ages 0 to 14 years in 2014, 209 (19%) involved an alcohol-impaired driver. •Of the 209 child passengers ages 14 and younger who died in alcohol-impaired driving crashes in 2014, over half (116) were riding in the vehicle with the alcohol-impaired driver."[60]Arizona is in the second-highest category among U.S. states for reported heavy drinking (see Figure 17B).

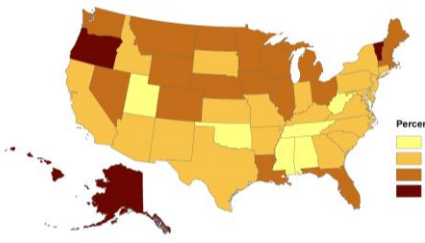


Figure 17B. BRFSS 2014 respondents who were classified as heavy drinkers as per CDC guidelines (natural breaks).

It is estimated that one in four individuals who are heavy drinkers have alcohol dependence or abuse tendencies.[61] Hospitalizations related to alcohol are broken into three categories: alcohol abuse, alcohol dependence, and alcohol-induced disorders. The categories were created under the assumption that alcohol use in the absence of dependence has a variety of unique effects on health. According to the 2014 hospital discharge data, there were 41,865 discharges that were related to alcohol abuse or dependence; of those, 803 died in the hospital. Furthermore, 5,918 of these patients were injured in a motor vehicle crash; however, it is not clear whether the patients were wearing a seat belt. The medical charges associated with alcohol abuse and dependence was more than $1.9 billion, with the average length of stay ranging from 5.2 to 7.6 days The highest number of discharges related to alcohol abuse and dependency appeared among those ages 55+, which were 16,490. The number of crash-related discharges and patients who died was highest in those over 55+ years old, at 466. The hospital data demonstrate the impact that heavy drinking can make. Of those whom were alcohol related discharges, the deaths were not exclusive to car crashes. The crash-related incidents reflect the same prior ICD-9 selected alcohol related discharges but for those whom were selected based upon an E-code reflecting their motor vehicle inpatient and emergency department discharge (see Table 9).

Alcohol Abuse & Dependency Related Inpatient & Emergency Department Discharges

Age	Number of Discharges	Died	Crash Related	Charges	Average Length of Stay (Days)
<18	725	1	58	$12,099,395	8.1
18-24	1,704	6	331	$55,100,613	5.3
25-39	6,392	49	993	$250,237,804	5.6
40-54	11,551	172	1387	$505,941,415	5.7
55+	12,880	367	1602	$731,832,886	6.0
Total	**41,865**	**595**	**4,371**	**$1,555,212,113**	

Table 9. Summary of 2014 inpatient and emergency department discharges that contained the following ICD-9 codes: 303.00, 303.01, 303.02, 303.03, 303.90, 303.91, 303.92, 303.93, 305.00, 305.01, 305.02, and 305.03.

Furthermore, excessive alcohol consumption affects brain function and alters associated chemical and hormonal systems that are known to be involved in the development of many common medical disorders. Psychiatric complaints are often the first problems for which alcoholic patients seek out treatment.[46] In 2014, there were 7,379 hospitalizations had discharges that were related to withdrawal that accounted for 85.1% of the alcohol induced psychoses (see Figure 17C).

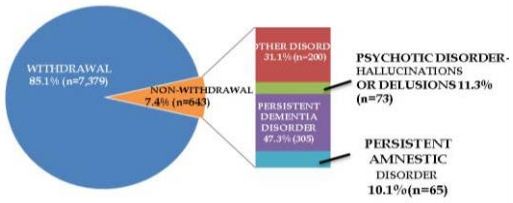


Figure 17C. Arizona Hospital 2013 inpatient and emergency department containing ICD-9 codes 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.81, 291.82, 291.89 and 291.9.

59 U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.

[60]Department of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts 2014 data: alcohol-impaired driving. Washington, DC: NHTSA; 2015 [cited 2016 Feb 5]. Available at URL: http://www-nrd.nhtsa.dot.gov/Pubs/812231.pdf.

61. Shivani, R.; Goldsmith, R.J.; and Anthenelli, R.M. Alcoholism and psychiatric disorders: Diagnostic challenges. *Alcohol Research & Health* 26:90–98, 2002.

Health Risk and Behaviors: Alcohol Abuse - Heavy Drinkers

The table to the left displays the proportions of Arizonans who are heavy drinkers by sex, age categories, marital status, educational attainment, employment status, income and race/ ethnicity.

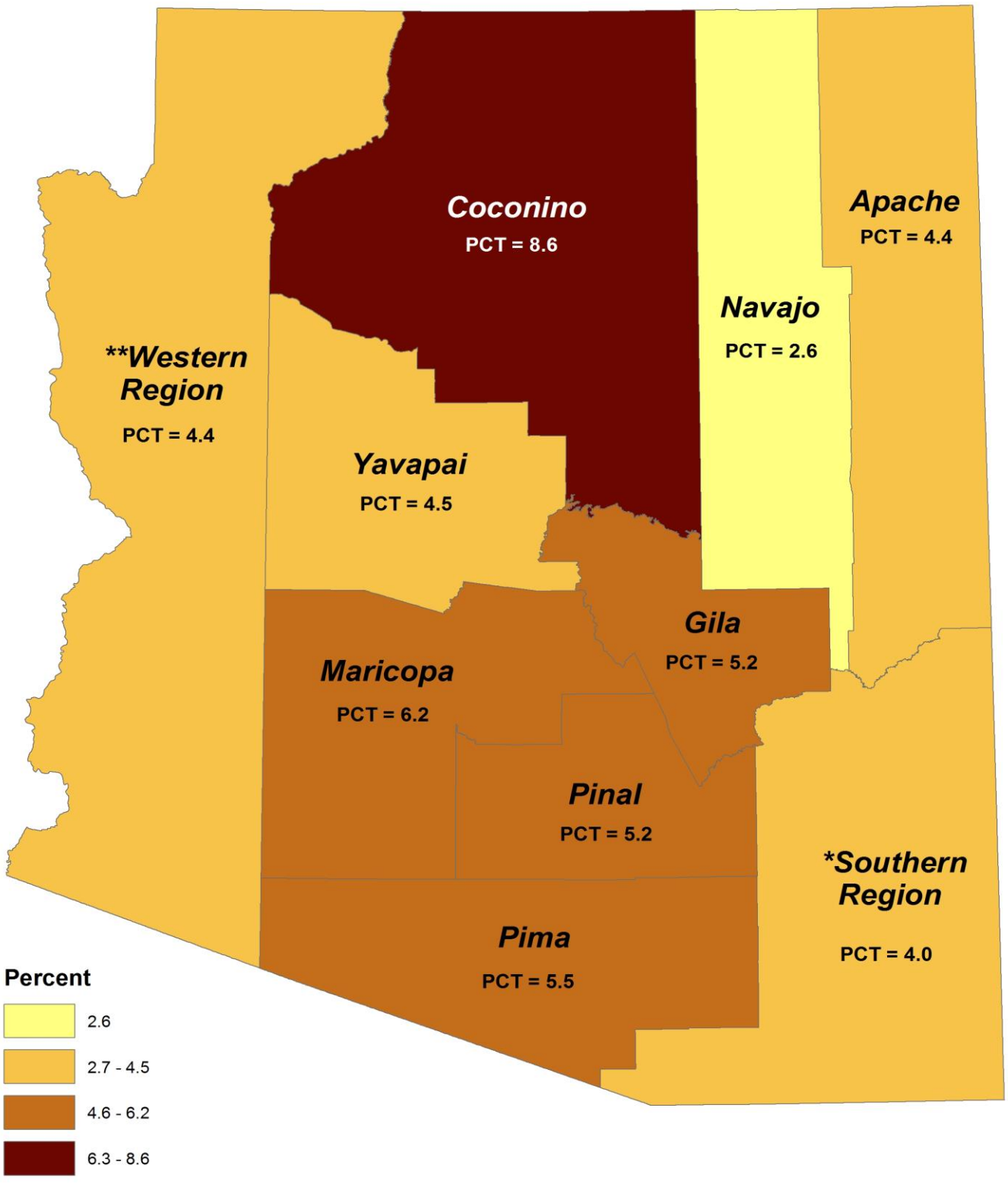
The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Reported That They Are Heavy Drinkers

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**5.9%**	53		
Arizona	**5.8%**	731	5.1%	6.4%
Male	6.1%	293	5.1%	7.1%
Female	5.5%	438	4.7%	6.3%
18-24	5.3%	23	2.8%	7.8%
25-34	7.0%	55	4.9%	9.1%
35-44	6.0%	67	4.3%	7.8%
45-54	5.7%	116	4.4%	7.0%
55-64	5.9%	163	4.6%	7.3%
65+	4.8%	307	4.2%	5.5%
Married	4.6%	335	3.9%	5.4%
Divorced	7.1%	147	5.4%	8.8%
Widowed	5.0%	91	3.0%	7.1%
Separated	8.8%	15	2.1%	15.6%
Never Married	6.8%	97	4.9%	8.7%
Unmarried Couple	9.6%	38	5.5%	13.6%
Less than high school	4.8%	40	2.7%	6.9%
High School/GED	6.5%	178	5.1%	7.9%
Some College/Technical School	5.2%	203	4.1%	6.3%
College/Technical School Grad	6.5%	307	5.5%	7.6%
Employed for Wages	6.3%	252	5.3%	7.4%
Self Employed	6.9%	63	4.2%	9.6%
Out of Work	8.5%	39	4.6%	12.4%
Homemaker	1.8%	32	0.8%	2.8%
Student	7.1%	15	3.0%	11.1%
Retired	5.9%	295	4.9%	6.9%
Unable to Work	2.6%	33	1.4%	3.8%
Less than $10,000	4.7%	19	1.4%	8.0%
$10,000 to $14,999	4.0%	36	2.0%	6.1%
$15,000 to $19,999	3.5%	32	1.8%	5.2%
$20,000 to $24,999	4.0%	51	2.1%	5.9%
$25,000 to $34,999	6.7%	73	4.4%	9.0%
$35,000 to $49,999	6.8%	106	4.7%	9.0%
$50,000 to $74,999	6.5%	117	4.7%	8.3%
Above $75,000	6.8%	214	5.5%	8.1%
White Non-Hispanic	6.8%	623	6.0%	7.7%
Black/African American	5.3%	16	2.0%	8.5%
Hispanic	4.2%	60	2.7%	5.6%
Asian/Pacific Islander	0.2%	1	0.0%	0.5%
American Indian Non-Hispanic	4.6%	13	1.4%	7.9%
Other	5.8%	18	1.8%	9.7%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Arizona Respondents Who Reported They Were a Heavy Drinker, by County & Region, BRFSS 2014

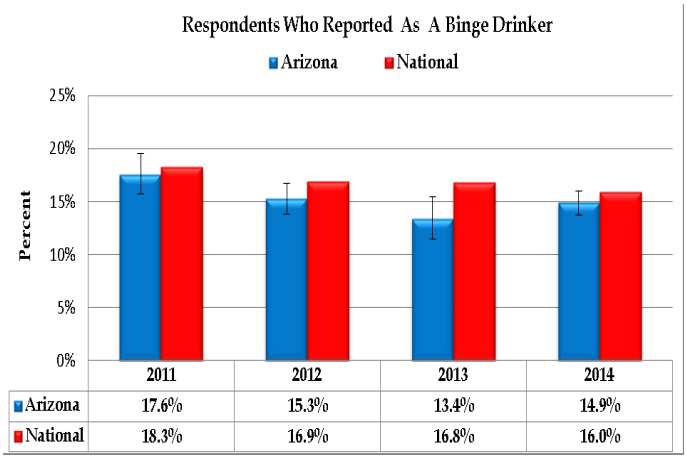


**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Risk and Behaviors: Alcohol Abuse - Binge Drinkers

For men, binge drinking is defined as having five or more drinks on one occasion; for women, binge drinking is defined as having four or more drinks on one occasion. It is the most common form of drinking in the U.S. It is estimated that 1 in 7 adults binge drink about three to four times a month. Furthermore, it is a common risk behavior among all stages of life.[62] Since 2011, Arizonans surveyed who reported any binge drinking was slightly below the national median (Figure 18A).



	2011	2012	2013	2014
Arizona	17.6%	15.3%	13.4%	14.9%
National	18.3%	16.9%	16.8%	16.0%

Figure 18A. Arizona and National 2011-2014 BRFSS respondents who responded that they participate in binge drinking as per CDC guidelines.

When comparing states in the U.S., Arizona is in the lowest category for reported binge drinking among survey respondents (Figure 18B).

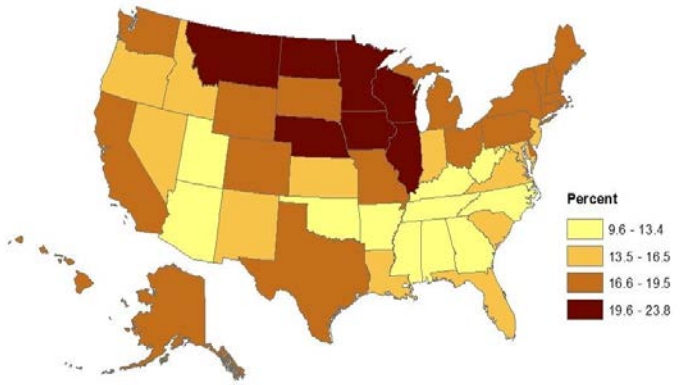


Figure 18B. U.S. map classified respondents who reported on the average, consumed four or more drinks ranked the lowest class in comparison to the nation (natural breaks).

Since 2011, Arizonans reported binge drinking with similar frequency to the national median. Both nationally and in Arizona, men binge drink more frequently than women. In 2014, Arizona male respondents reported binge drinking more often than the national median for men (see Figure 18D).

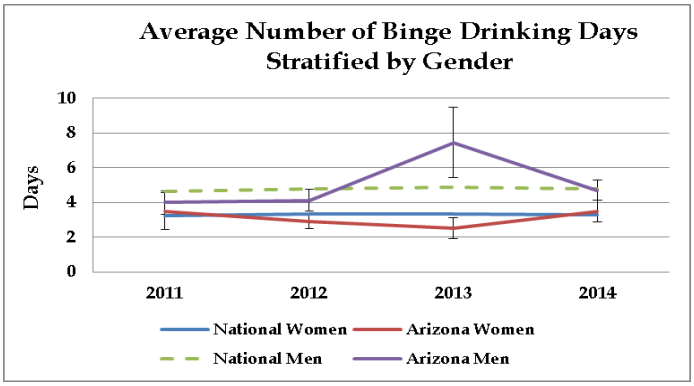


Figure 18C. Arizona versus National (overall, men, women) whom are binge drinkers and the average number of binge drinking days, BRFSS 2014.

In 2014, there were 76 hospitalizations that were associated with alcohol poisoning, 542 cases of alcoholic cardiomyopathy, 224 cases of alcoholic polyneuropathy, 91 cases of fetal alcohol syndrome, and 10,660 cases of alcohol-induced liver damage accounting for a total of 11,593 alcohol-related discharges. Alcohol consumption during pregnancy can cause miscarriages, still births, and fetal alcohol syndrome. Fetal alcohol syndrome is a lifelong affliction that is 100% preventable. The total medical charges associated with alcohol-related conditions were more than $663 million, with an average length of stay ranging from 5.7 to 13.5 days (see Table 10).

Alcohol Related Inpatient & Emergency Department Discharges

Condition	Number of Discharges	Charges	Average Length of Stay (Days)
Fetal Alcohol Syndrome	91	$6,064,731	13.5
Alcohol Poisoning	76	$2,717,465	2.9
Alcoholic Cardiomyopathy	542	$37,167,029	6.6
Alcoholic Polyneuropathy	224	$11,879,058	6.4
Alcohol Induced Liver Damage	10,660	$605,432,011	5.7
Total	**11,593**	**$663,260,294**	

Table 10. Inpatient and emergency department discharges from 2014 that contained the following ICD-9 codes: for Fetal Alcohol Syndrome: 760.71; Alcohol Poisoning: 980.9; Alcoholic Cardiomyopathy: 425.5; Alcoholic Polyneuropathy: 357.5; Alcohol Induced Liver Damage: 571.0 571.1 571.2 and 571.3.

62 Bouchery EE, Harwood HJ, Sacks JJ, Simon CJ, Brewer RD. Economic costs of excessive alcohol consumption in the United States, 2006External Web Site Icon. Am J Prev Med 2011;41:516–24.

Health Risk and Behaviors: Alcohol Abuse - Binge Drinkers

BRFSS 2014 Arizonans Respondents Reported That They Participate in Binge Drinking

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**16.0%**	53		
Arizona	**14.9%**	1224	13.8%	16.0%
Male	21.1%	734	19.2%	22.9%
Female	9.1%	490	7.8%	10.3%
18-24	22.0%	96	17.5%	26.5%
25-34	21.9%	170	18.3%	25.4%
35-44	19.8%	222	16.8%	22.9%
45-54	15.1%	244	12.6%	17.5%
55-64	10.0%	245	8.2%	11.9%
65+	4.2%	247	3.4%	4.9%
Married	11.7%	594	10.4%	12.9%
Divorced	14.7%	198	11.7%	17.7%
Widowed	6.5%	82	3.8%	9.2%
Separated	21.3%	27	11.7%	31.0%
Never Married	22.0%	236	18.8%	25.1%
Unmarried Couple	25.3%	80	18.7%	31.8%
Less than high school	15.2%	91	11.4%	19.0%
High School/GED	14.8%	298	12.7%	17.0%
Some College/Technical School	16.0%	386	14.0%	18.1%
College/Technical School Grad	13.2%	445	11.7%	14.8%
Employed for Wages	20.4%	631	18.5%	22.4%
Self Employed	16.5%	123	12.6%	20.4%
Out of Work	20.6%	88	15.1%	26.2%
Homemaker	5.8%	36	2.8%	8.8%
Student	20.7%	44	14.2%	27.2%
Retired	5.6%	250	4.5%	6.7%
Unable to Work	6.1%	49	3.6%	8.6%
Less than $10,000	14.4%	52	9.4%	19.4%
$10,000 to $14,999	15.1%	63	9.9%	20.4%
$15,000 to $19,999	12.4%	60	8.1%	16.7%
$20,000 to $24,999	18.9%	105	14.1%	23.6%
$25,000 to $34,999	14.7%	112	10.9%	18.5%
$35,000 to $49,999	14.4%	153	11.2%	17.6%
$50,000 to $74,999	16.5%	193	13.6%	19.5%
Above $75,000	16.6%	380	14.6%	18.7%
White Non-Hispanic	14.5%	917	13.3%	15.7%
Black/African American	14.2%	30	8.0%	20.3%
Hispanic	16.6%	207	13.8%	19.4%
Asian/Pacific Islander	5.9%	9	0.1%	11.6%
American Indian Non-Hispanic	17.0%	37	10.3%	23.7%
Other	16.2%	24	8.9%	23.4%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

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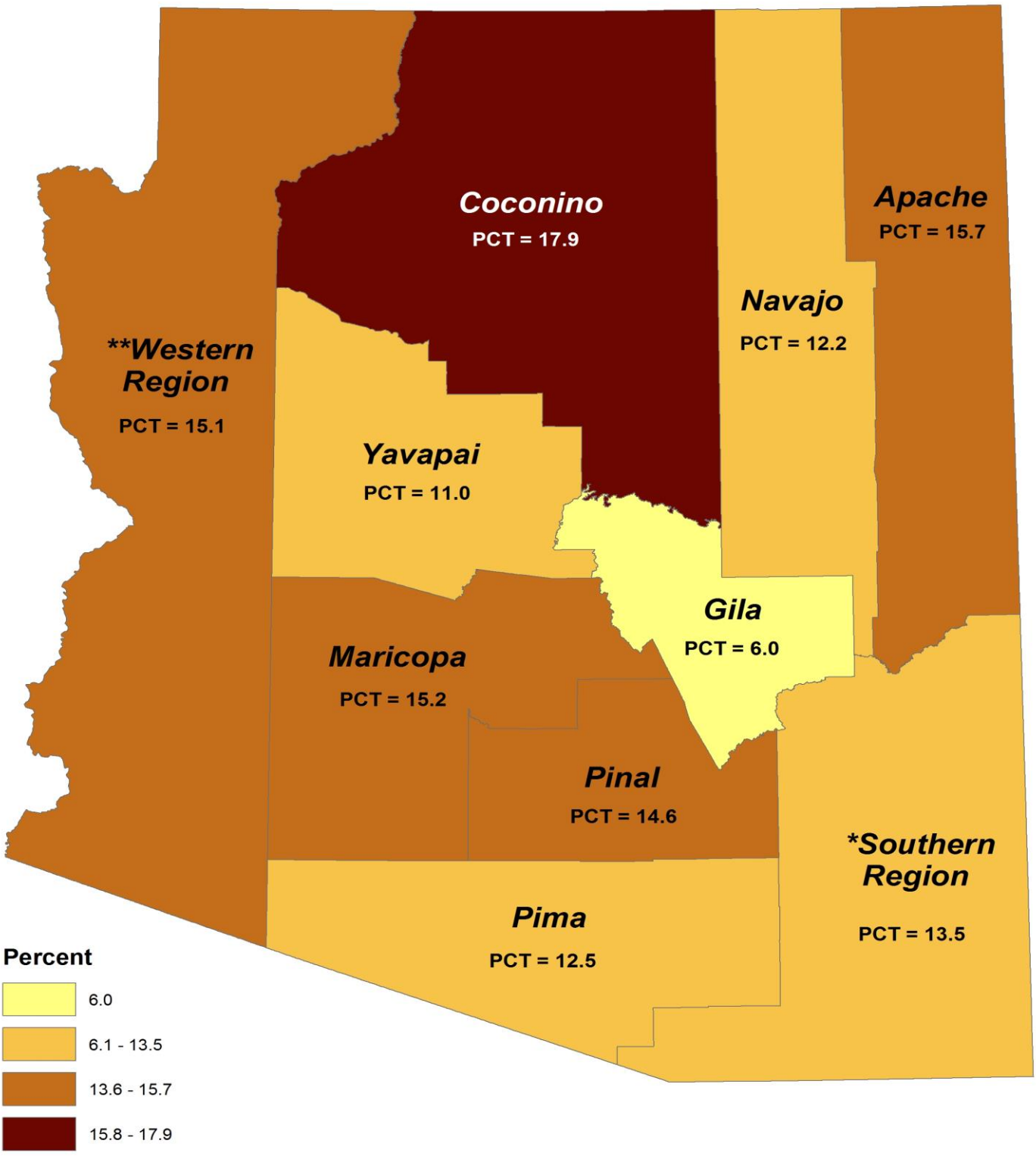
The table to the left displays the proportions of Arizonans who participated in binge drinking by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported That They Participated in Binge Drinking, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Beneficial Health Practices

Certain health practices decrease the risk of morbidity and mortality. Programs promoting awareness and policy changes will benefit the community as a whole. Continued monitoring of these practices will provide Arizona with a tool to assess the impact of these programs and policies. The Beneficial Health Practices Section of the 2014 Arizona BRFSS section includes an analysis of the following:

- **Physical Activity (variables _PAREC1, _PASTAE1)** coded variable measuring a person's level of participation in moderate or vidgorous activities according to established guidelines. Physical activity decreases the risk of heart attack, colon cancer, diabetes and high blood pressure and may decrease the risk of stroke.

- **Folic Acid Awareness (variable AZ6_3) -** binary outcome where women who state that folic acid prevents birth defects are considered a positive outcome. Women who state that folic acid prevents anything other than birth defects are considered a negative outcome.

- **Folic Acid Use (variable AZ6_1) -** binary outcome where women who take a folic acid supplement are considered a positive outcome. Women who do not take folic acid are considered a negative outcome.

- **Fruit and Vegetable Consumption (variables FTJUDA1_, FRUTDA1_, BEANDAY_, GRENDAY_, ORNGDAY_, VEGEDA1_) -** binary outcome where the variables are summed together. If their daily total is at least 2 fruits and 3 vegetables are considered a positive outcome.

Strategic Map Link

By collecting data on folic acid use and awareness and fruit and vegetable consumption, the BRFSS is providing Arizona with a tool to evaluate if its programs are effectively improving internal policy development and implementation, and promoting proper nutrition and physical activity to reduce obesity.
The aforementioned indicators are all part of Arizona's Winnable Battles as outlined in E4 and A1 of the ADHS Strategic Map.
(See Page 9)

Beneficial Health Practices: Physical Activity

In the past, the BRFSS physical activity questions focused on the amount of time a person participated in moderate or vigorous activities. The new physical activity questions remove ambiguity in these categories; the new questions; they ask if the interviewee participates in specific activities.

According to the American College of Sports Medicine's Fitness Advisory Board, Arizona (data are based upon Maricopa and Pinal Counties) is ranked 32nd in the nation in terms of promoting physical fitness. Some areas where Arizona did well included: having a high percentage of state land designated as parkland, higher park-related expenditures per capita, and having lower smoking and heart disease mortality.[63]

To further improve the health of Arizonans it is the goal of ADHS to increase physical activity throughout the state. Physical activity decreases the risk of heart attack, colon cancer, diabetes and high blood pressure, and may decrease the risk of stroke. It also helps with weight control, contributes to healthy bones, muscles and joints; reduces the incidence of falls among the elderly; helps to relieve the pain of arthritis; decreases symptoms of anxiety and depression; and can decrease the need for hospitalizations, physician visits and medications. Moreover, physical activity does not need to be strenuous to be beneficial.[64] Since 2011, Arizona BRFSS respondents reporting physical activity levels that met at least one guideline were comparable to the national median (see Figure 19A).]

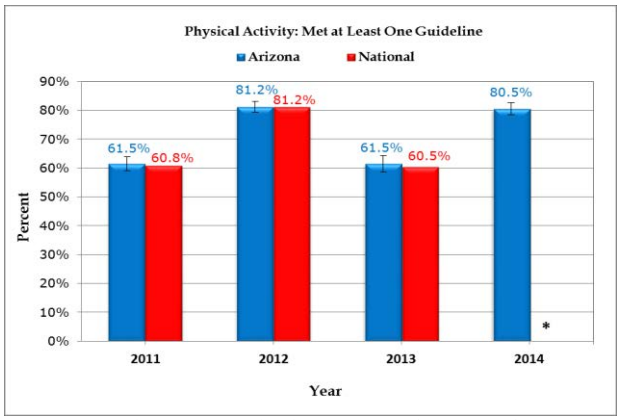


Figure 19A. Arizona versus National BRFSS respondents reported meeting at least one physical activity guideline. In 2014, this was not asked as a National question and was a state-added only question.

Regular exercise also can contribute to the functional independence of the elderly and improve the quality of life for people of all ages.[65]

In 2014, Arizona 29% of survey respondents reported meeting both aerobic and muscle strengthening guidelines physical activity levels (see Figure 19B).

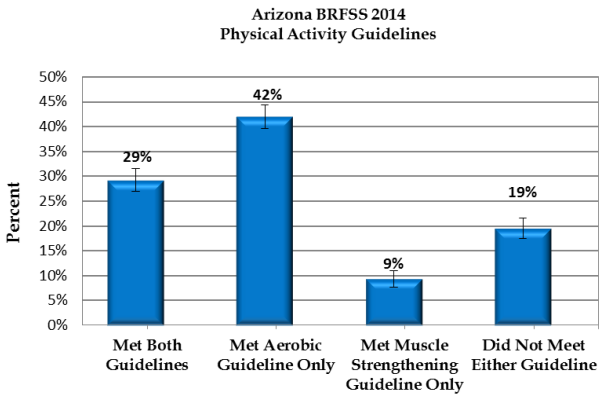


Figure 19B. Arizona 2014 respondents reported physical activity by BRFSS guidelines.

[63] American College of Sports Medicine. Acsm American Fitness Index™ Health and Community Fitness Status of the 50 Largest Metropolitan Areas 2011 Edition. Accessed 2/1/2013. http://www.americanfitnessindex.org/docs/reports/2011_afi_report_final.pdf

[64] U.S. Department of Health and Human Services. Center for Disease Control and Prevention, The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives. CDC. 2004.

[65] Katz S. Branch LG, Branson MH., et al., Active Life Expectancy. N Engl J Med. 1983; 309: 1218-1224.

Arizona Respondents Who Reported Having Met One or More Physical Activity Requirements				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**80.5%**			
Arizona	**80.5%**	3416		
Male	83.6%	1452	80.7%	86.5%
Female	77.5%	1964	74.6%	80.5%
18-24	78.9%	105	70.1%	87.7%
25-34	78.8%	200	72.4%	85.1%
35-44	78.1%	348	73.0%	83.1%
45-54	79.8%	514	75.8%	83.7%
55-64	80.7%	762	77.1%	84.3%
65+	86.2%	1487	83.9%	88.4%
Married	79.8%	1919	77.3%	82.4%
Divorced	84.1%	517	79.0%	89.2%
Widowed	86.8%	489	82.5%	91.1%
Separated	90.5%	37	81.5%	99.5%
Never Married	78.2%	345	72.4%	83.9%
Unmarried Couple	80.8%	97	68.5%	93.2%
Less than high school	73.0%	168	64.2%	81.8%
High School/GED	81.7%	638	77.6%	85.8%
Some College/Technical School	79.2%	988	75.4%	83.0%
College/Technical School Grad	83.5%	1613	80.8%	86.2%
Employed for Wages	79.1%	1152	75.9%	82.4%
Self Employed	78.1%	261	70.4%	85.8%
Out of Work	85.3%	161	78.2%	92.5%
Homemaker	77.9%	222	69.7%	86.2%
Student	77.3%	53	64.4%	90.2%
Retired	86.5%	1440	84.3%	88.7%
Unable to Work	73.5%	119	63.1%	84.0%
Less than $10,000	81.5%	113	72.0%	91.0%
$10,000 to $14,999	78.3%	140	67.8%	88.8%
$15,000 to $19,999	74.5%	164	64.3%	84.7%
$20,000 to $24,999	79.0%	227	70.9%	87.2%
$25,000 to $34,999	78.0%	291	70.2%	85.8%
$35,000 to $49,999	77.9%	452	72.1%	83.7%
$50,000 to $74,999	82.9%	572	77.9%	87.9%
Above $75,000	82.4%	1000	78.9%	85.8%
White Non-Hispanic	82.4%	2758	80.3%	84.6%
Black/African American	74.0%	74	62.7%	85.3%
Hispanic	77.2%	402	71.7%	82.6%
Asian/Pacific Islander	81.6%	45	66.3%	96.9%
American Indian Non-Hispanic	70.3%	65	57.7%	83.0%
Other	87.6%	72	78.4%	96.8%

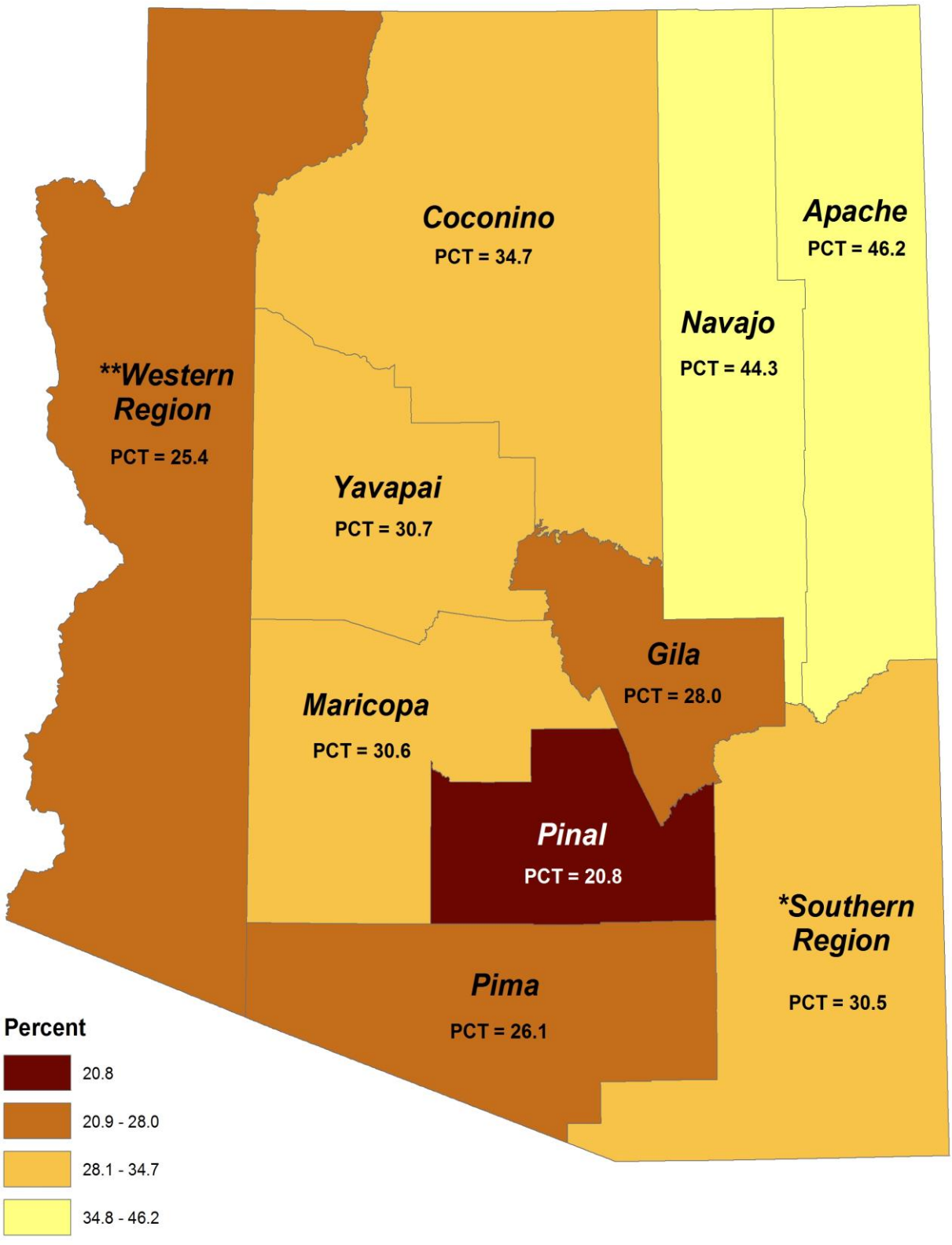
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Beneficial Health Practices: Physical Activity

The table to the left displays the proportions of Arizonans who met one or more physical activity requirements by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported They Met One or More Physical Activity Requirement, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Beneficial Health Practices: Folic Acid Use and Awareness

Neural tube defects (NTD) are among the most serious birth defects that contribute to infant mortality and morbidity. Nationally, NTDs including anencephaly, spina bifida, and encephalocele are estimated to account for 2,660 infants born with a birth defect annually.[66] Research has shown that 50% to 70% of these NTDs can be prevented if women consume 0.4mg of folic acid daily before and during pregnancy. The United States Preventive Services Task Force (USPSTF) recommends that all women who are planning to or can potentially become pregnant take a daily supplement containing folic acid. In 2014, 35.9% of surveyed Arizona women of child-bearing age reported taking a supplement containing folic acid (see Figure 20A).

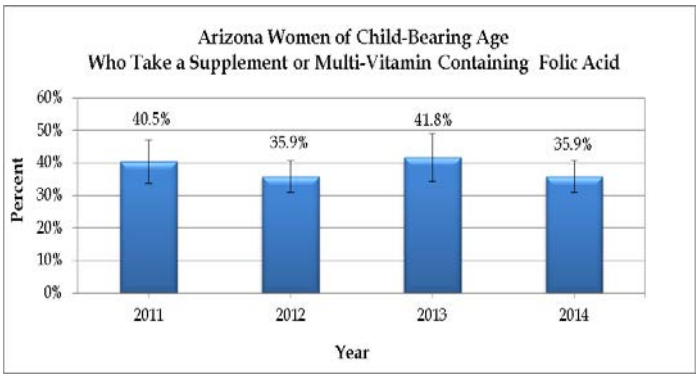


Figure 20A. Arizona 2011-2014 BRFSS female respondents of child-bearing age reported taking a supplement containing folic acid.

The USPSTF recommends daily supplementation due to the fact that approximately 50% of all U.S. pregnancies are unplanned.[67] Less than half (35.9%) of women of child-bearing age knew that folic acid prevents birth defects. However, only 16.9% of women follow the USPSTF guideline of daily supplementation (see Figure 20B).

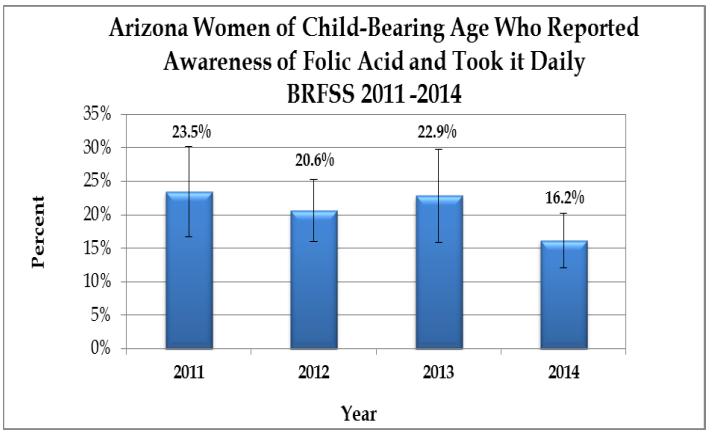


Figure 20B. Arizona 2011 and 2014 BRFSS female respondents of child-bearing age who knew that folic acid prevents birth defects and who took a folic acid

In 1996, the Food and Drug Administration (FDA) began requiring that specific flours, breads, and other grain be fortified with folic acid. The FDA expanded its mandate in 1998 to include other products that use enriched flour and corn flour. Breakfast cereal aside, the foods fortified with folic acid do not provide sufficient folic acid to meet the .4mg recommended; breakfast cereal contain .4mg of folic acid, but the other fortified foods only contain .1 mg per serving. Furthermore, imported corn meal and corn flour products are not required to follow FDA guidelines. Research has shown that Hispanic women are less likely to consume breakfast cereals and are more likely to purchase imported corn flour products.[68] The data indicates that there is a racial disparity when assessing folic acid awareness and supplementation. From 2003-2010 lower percentages of Arizona Hispanic, Black and American Indian women surveyed reported taking a folic acid supplement than White Non-Hispanics (Figure 20C).

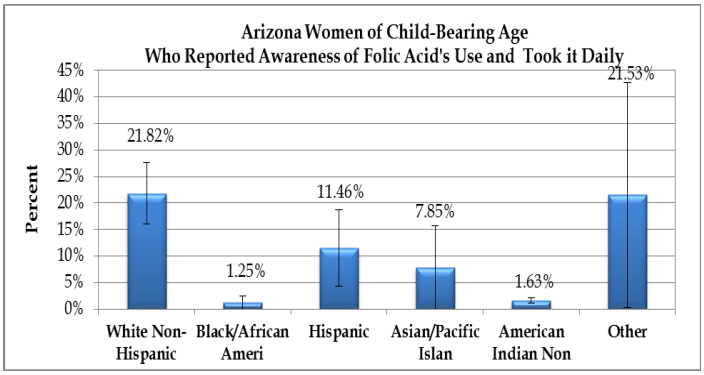


Figure 20C. Arizona BRFSS 2014 data assessing female respondents of child-bearing age who reported that they knew that folic acid prevents birth defects and/or take a supplement by race.

Since 2011, the percent of women surveyed who take a folic acid supplement is higher when they are aware of its benefits than when they are unaware (see Figure 20D).

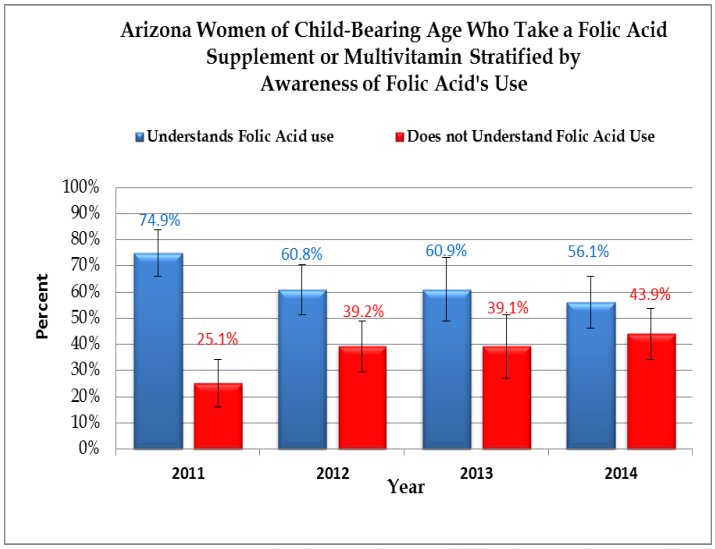


Figure 20D. Arizona BRFSS 2014 female respondents of child-bearing age who reported taking folic acid supplement by awaremenss status. Note: Unknown and refused response

66. Draft Update Summary: Folic Acid for the Prevention of Neural Tube Defects: Preventive Medication. U.S. Preventive Services Task Force. October 2014. http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryDraft/folic-acid-for-the-prevention-of-neural-tube-defects-preventive-medication

67. Division of Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention. Birth Defects Data & Statistics. http://www.cdc.gov/ncbddd/birthdefects/data.html

68. Decline in the Prevalence of Spina Bifida and Anencephaly by Race/Ethnicity: Laura J. Williams, Cynthia A. Rasmussen, Alina Flores, Russell S. Kirby, Larry D. Edmonds. Pediatrics Sep 2005, 116(3)580-586; doi: 10.1542/peds.2005-0592.

Beneficial Health Practices: Folic Acid Use and Awareness

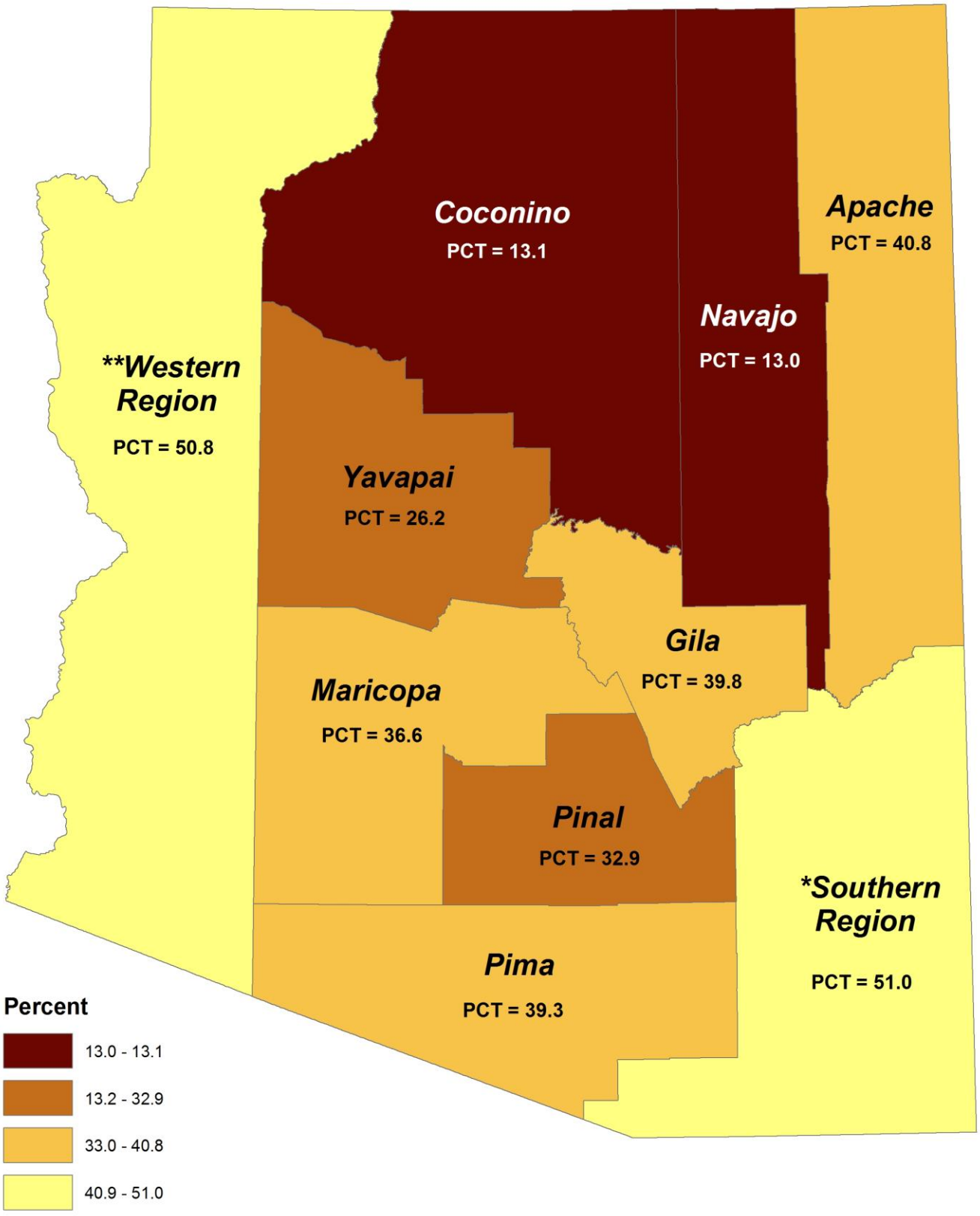
Arizona Women Respondents of Child-Bearing Age Who Take a Supplement Containing Folic Acid				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
Arizona	**35.9%**	263	30.9%	40.9%
18-24	18.0%	21	9.9%	26.1%
25-34	40.6%	79	31.0%	50.3%
35-44	45.5%	163	38.8%	52.2%
Married	47.9%	161	40.4%	55.4%
Divorced	42.6%	30	27.5%	57.8%
Widowed	23.5%	4	0.0%	51.0%
Separated	6.8%	3	0.0%	15.0%
Never Married	22.9%	47	15.4%	30.3%
Unmarried Couple	35.0%	16	16.4%	53.6%
Less than high school	34.5%	20	17.0%	52.0%
High School/GED	37.7%	47	27.2%	48.1%
Some College/Technical School	29.3%	82	22.0%	36.7%
College/Technical School Grad	48.6%	114	40.9%	56.2%
Employed for Wages	35.7%	144	28.8%	42.6%
Self Employed	34.3%	15	16.6%	52.1%
Out of Work	27.9%	14	14.2%	41.5%
Homemaker	47.3%	61	37.2%	57.4%
Student	19.0%	15	9.2%	28.8%
Retired	100.0%	1		
Unable to Work	45.5%	12	14.7%	76.3%
Less than $10,000	35.3%	16	18.9%	51.7%
$10,000 to $14,999	54.4%	10	29.9%	78.9%
$15,000 to $19,999	30.9%	17	18.4%	43.4%
$20,000 to $24,999	26.9%	13	6.4%	47.3%
$25,000 to $34,999	41.7%	27	22.2%	61.2%
$35,000 to $49,999	34.4%	34	21.2%	47.6%
$50,000 to $74,999	39.3%	39	26.3%	52.4%
Above $75,000	41.7%	79	30.7%	52.7%
White Non-Hispanic	37.7%	167	31.6%	43.7%
Black/African American	20.3%	8	4.9%	35.7%
Hispanic	36.2%	64	25.6%	46.9%
Asian/Pacific Islander	52.1%	10	12.3%	91.9%
American Indian Non-Hispanic	10.9%	6	2.5%	19.4%
Other	46.8%	8	15.1%	78.4%

Use caution in interpreting cell sizes less than 50. N* is unweighted

The table to the left displays the proportions of Arizona women of child-bearing age who take a supplement that contains folic acid by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Female Respondents of Child-Bearing Age Who Reported Taking a Supplement Containing Folic Acid, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Arizona Women Respondents of Child-Bearing Age Who Reported that Folic Acid Prevents Birth Defects				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
Arizona	**54.1%**	305	48.0%	60.2%
18-24	47.1%	33	33.5%	60.7%
25-34	56.8%	89	45.6%	68.0%
35-44	56.8%	183	49.1%	64.6%
Married	66.1%	195	57.6%	74.7%
Divorced	49.0%	26	31.0%	66.9%
Widowed	79.3%	5	41.1%	100.0%
Separated	7.1%	3	0.0%	24.5%
Never Married	44.2%	55	33.3%	55.0%
Unmarried Couple	49.5%	21	28.1%	71.0%
Less than high school	37.7%	21	21.6%	53.7%
High School/GED	49.5%	47	36.5%	62.5%
Some College/Technical School	53.0%	93	43.3%	62.7%
College/Technical School Grad	73.9%	144	66.8%	81.1%
Employed for Wages	56.1%	170	47.6%	64.6%
Self Employed	57.2%	20	31.4%	83.0%
Out of Work	41.2%	17	22.9%	59.4%
Homemaker	63.5%	68	52.6%	74.4%
Student	48.3%	21	26.4%	70.2%
Unable to Work	29.1%	8	7.0%	51.3%
Less than $10,000	56.2%	12	30.4%	81.9%
$10,000 to $14,999	8.9%	5	0.0%	20.2%
$15,000 to $19,999	46.7%	20	30.2%	63.2%
$20,000 to $24,999	47.8%	13	25.0%	70.5%
$25,000 to $34,999	53.5%	35	38.1%	68.9%
$35,000 to $49,999	57.3%	36	41.2%	73.5%
$50,000 to $74,999	76.4%	57	65.4%	87.3%
Above $75,000	69.7%	104	57.9%	81.6%
White Non-Hispanic	58.8%	207	51.4%	66.1%
Black/African American	37.1%	7	2.6%	71.6%
Hispanic	49.1%	71	38.0%	60.2%
Asian/Pacific Islander	68.8%	6	38.2%	99.3%
American Indian Non-Hispanic	43.8%	6	15.9%	71.7%
Other	53.8%	8	28.8%	78.9%

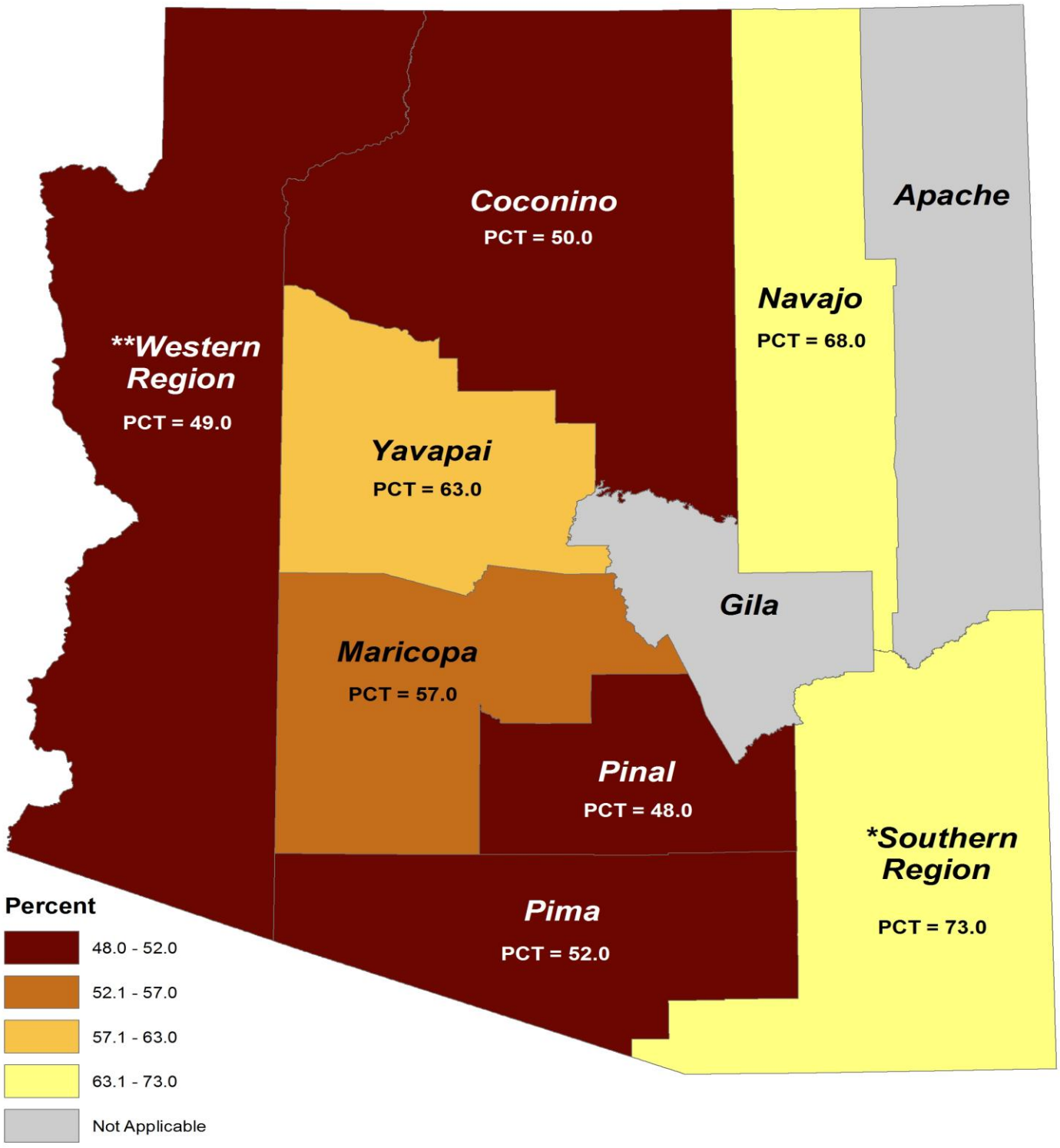
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Beneficial Health Practices: Folic Acid Awareness

The table to the left displays the proportion of Arizona women of child-bearing age who answered that folic acid prevents birth defects by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Female Respondents of Child-Bearing Age Reporting Awareness of Daily Folic Acid Benefits, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Note: Gila and Apache counties were excluded from the map due to a response N<50.

Beneficial Health Practices: Fruits and Vegetables

The 2015-2020 Dietary Guidelines for Americans, 8th edition, reflects the large body of evidence which shows that healthy eating patterns and regular physical activity can help people achieve and maintain good health and reduce the risk of chronic diseases like cardiovascular disease, type 2 Diabetes, and overweight and obesity. Previous edition of the Dietary Guidelines focused on individual dietary components. The current Guidelines reflect the growing body of research that examines the relationship between overall eating patterns, health, and risk of chronic disease. The Guidelines advise that a healthy eating pattern is not a rigid prescription but an adaptable framework that provide individual the choices to enjoy foods to meet their personal, cultural, and traditional preferences as well as fit within their budget.

One of the key recommendations from the Dietary Guidelines is to "Consume a healthy eating pattern that accounts for all foods and beverages within an appropriate calorie level." Specific recommendations regarding vegetables and fruits in a healthy eating pattern include:

- A variety of vegetables from all subgroups – dark green, red and orange, legumes (beans and peas), starches, and others
- Fruits, especially whole fruits

Overall, adults throughout the United States do not meet intake recommendations for vegetables or fruits. For most adults, 2 1/2 to 3 cups of vegetables, with a wide variety chosen from the vegetable subgroups, is recommended and 2 cups of fruit, preferably whole fruits, is recommended.

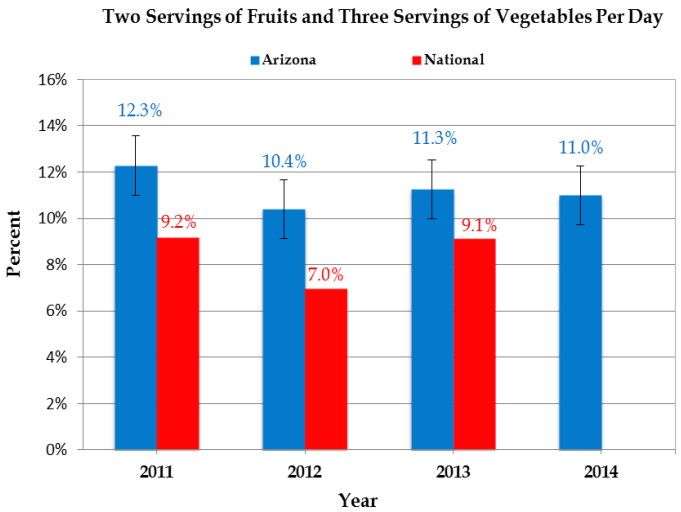


Figure 21A: Arizona BRFSS 2014 Consumption of two fruits and three vegetables per day.

The percent of adults who consumed vegetables at least three times per day as well as fruits at least twice per day did not change much from 2013 (11.3 percent) to 2014 (11.0 percent).

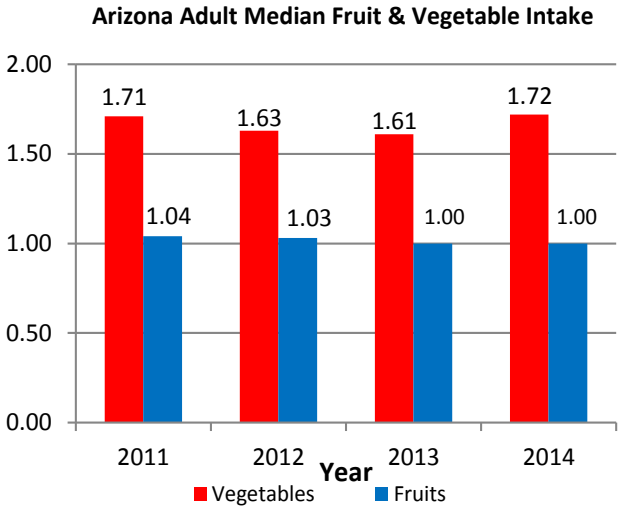


Figure 21B: Arizona BRFSS 2014 Adult Median Vegetable & Fruit Intake.

One of the most noteworthy trends for 2014 has to do with the large proportion of the population who do not consume vegetables and fruits even once per day. Of the total Arizona adults, 21.2 percent reported that they ate fruit less than once per day, and 40.3 percent reported eating vegetables less than once per day in 2014.

Arizonans Who Consumed at Least Two Servings of Fruits and Three Vegetables Every Day				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
Arizona	**11.0%**	723	9.7%	12.3%
Male	9.1%	212	7.1%	11.0%
Female	12.8%	511	11.1%	14.5%
18-24	10.7%	18	5.3%	16.0%
25-34	13.9%	48	9.4%	18.4%
35-44	10.9%	82	8.0%	13.8%
45-54	10.6%	119	8.2%	13.0%
55-64	10.4%	168	8.4%	12.4%
65+	9.5%	288	8.1%	10.9%
Married	11.0%	389	9.5%	12.5%
Divorced	12.3%	119	8.4%	16.2%
Widowed	8.8%	115	6.7%	11.0%
Separated	14.2%	10	0.4%	28.1%
Never Married	11.0%	73	7.4%	14.6%
Unmarried Couple	10.4%	15	4.3%	16.5%
Less than high school	7.6%	38	4.5%	10.6%
High School/GED	12.9%	122	9.5%	16.3%
Some College/Technical School	8.4%	177	6.6%	10.3%
College/Technical School Grad	14.8%	386	12.8%	16.9%
Employed for Wages	11.0%	238	8.9%	13.1%
Self Employed	13.1%	56	8.2%	18.1%
Out of Work	10.2%	36	4.8%	15.7%
Homemaker	15.3%	66	10.4%	20.2%
Student	10.4%	12	3.7%	17.2%
Retired	9.4%	271	8.0%	10.8%
Unable to Work	9.8%	43	4.9%	14.6%
Less than $10,000	9.2%	29	4.0%	14.5%
$10,000 to $14,999	6.1%	33	3.1%	9.1%
$15,000 to $19,999	8.9%	38	4.1%	13.6%
$20,000 to $24,999	9.6%	46	5.1%	14.1%
$25,000 to $34,999	10.7%	69	6.4%	15.0%
$35,000 to $49,999	11.0%	102	7.1%	14.9%
$50,000 to $74,999	13.6%	114	9.8%	17.4%
Above $75,000	12.8%	190	10.3%	15.3%
White Non-Hispanic	10.2%	567	8.9%	11.4%
Black/African American	13.5%	15	7.7%	19.3%
Hispanic	11.7%	94	8.4%	14.9%
Asian/Pacific Islander	12.7%	11	1.9%	23.5%
American Indian Non-Hispanic	14.7%	16	5.0%	24.4%
Other	14.2%	20	5.7%	22.7%

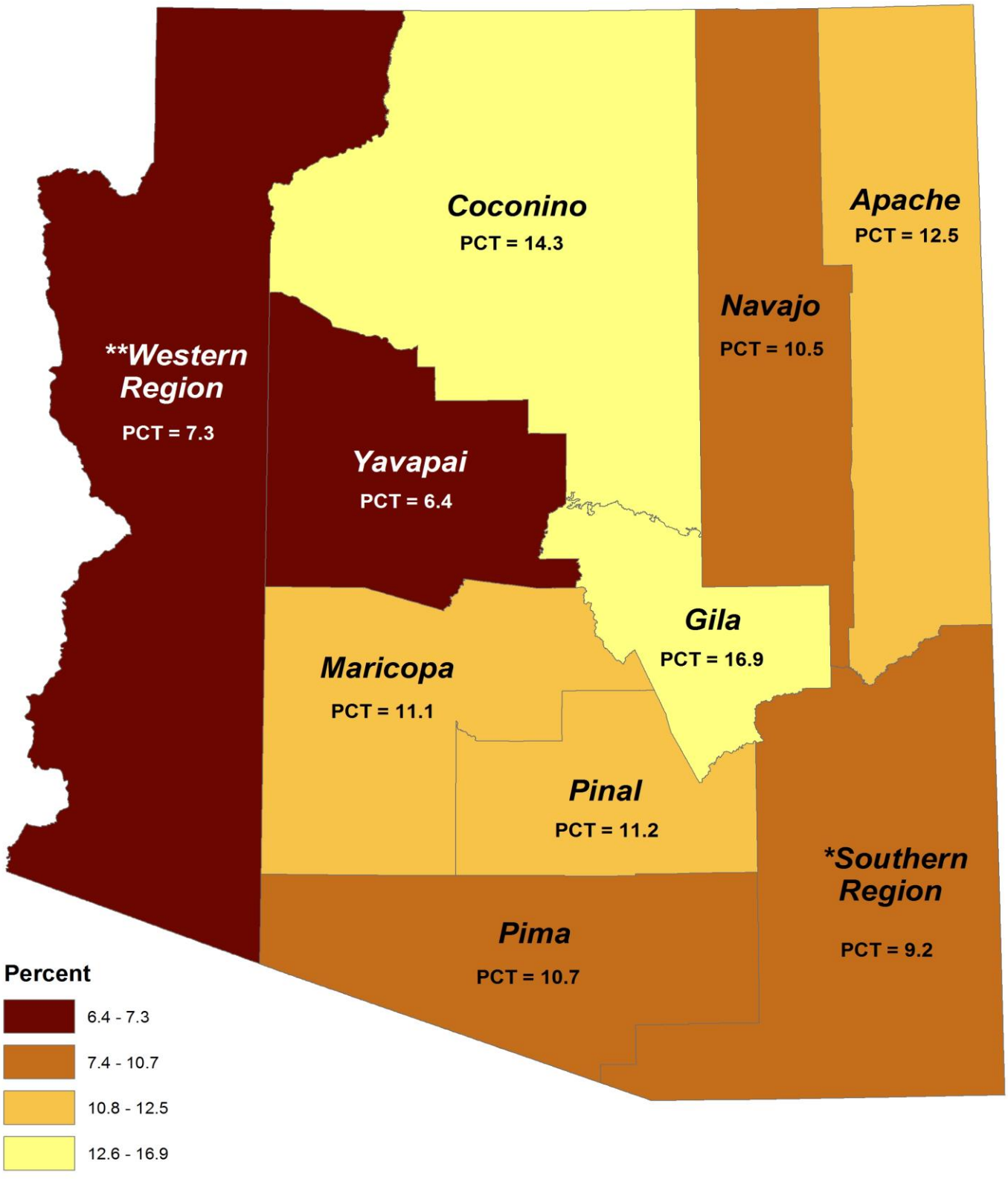
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories

Beneficial Health Practices: Fruit and Vegetables

The table to the left displays the proportions of Arizonans who at least consume two fruits and three vegetables each day. The data are reported by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Consuming Five or More Servings of Fruits and Vegetables Every Day, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations

Chronic health conditions contribute to morbidity and mortality. Furthermore, these conditions reduce an individual's quality of life. The benefits of programs and policies targeting these conditions will be difficult to quantify as data collection on the community's quality of life is not feasible. However, monitoring the prevalence of these diseases will provide Arizona with a tool to assess the impact of these programs and policies. The Health Conditions and Limitations Section include an analysis of the following:

- **High Blood Pressure (variable AZ7 1) –** Never receiving a diagnosis of high blood pressure is considered a positive outcome and receiving a diagnosis of high blood pressure is considered a negative outcome
- **Obesity (variable _BMI5CAT) –** Not being obese is considered a positive outcome and being obese is considered a negative outcome.
- **Pre-diabetes (variable** PREDIAB1**) –** Never receiving a diagnosis for pre-diabetes is considered a positive outcome and receiving a diagnosis of pre-diabetes is considered a negative outcome.
- **Diabetes (variable DIABETE3) –** Never receiving a diagnosis of diabetes is considered a positive outcome and receiving a diagnosis of diabetes is considered a negative outcome.
- **Special Equipment (variable USEEQUIP) –** Never having a health problem or impairment that required special equipment is a positive outcome and having a health problem that required special equipment is considered a negative outcome.
- **Chronic Obstructive Pulmonary Disease (COPD) (variable CHCCOPD1) –** Never receiving a diagnosis of having COPD, emphysema or chronic bronchitis is considered a positive outcome, and receiving a diagnosis of having COPD, emphysema or chronic bronchitis is considered a negative outcome.
- **Cardiovascular Disease: Heart Attack (variable CVDINFR4) –** Never receiving a diagnosis of a heart attack is considered a positive outcome and receiving a diagnosis of a heart attack is considered a negative outcome.
- **Cardiovascular Disease: Angina (variable CVDCRHD4) –** Never receiving a diagnosis of angina is considered a positive outcome and receiving a diagnosis of angina is considered a negative outcome.
- **Stroke (variable CVDSTRK3) –** Never receiving a diagnosis of a stroke is considered a positive outcome and receiving a diagnosis of a stroke is considered a negative outcome.
- **Asthma (variable _LTASTH1) –** Never receiving a diagnosis of asthma is considered a positive outcome and receiving a diagnosis of asthma is considered a negative outcome.

Strategic Map Link

By collecting data on asthma, heart attacks, angina, strokes, obesity and diabetes, the BRFSS is providing Arizona with a tool to evaluate if its' programs are effectively improving internal policy development and implementation and promoting proper nutrition and physical activity to reduce obesity.
(see page 9)

Health Conditions and Limitations: High Blood Pressure

About 70 million American adults (29%) have high blood pressure—that's 1 of every 3 adults in the United States. High blood pressure increases the risk for heart disease and stroke, the first and third leading causes of death in the United States.[69] High blood pressure is called the "silent killer" because it often has no warning signs or symptoms, and many people don't realize they have it[70]. High blood pressure significantly increases the risk for heart disease and stroke, which are among the top three leading causes of death in the United States. That's why it is important to get your blood pressure checked regularly. Measuring your blood pressure is quick and painless, and it is the only way to know whether your pressure is high. You can check your blood pressure at a doctor's office, at a pharmacy or at home.[71]

High blood pressure has been associated with smoking, obesity, lack of physical activity, and too much salt in the diet overconsumption of alcohol, stress, age, genetics, thyroid disorders and chronic kidney disease. [72] Arizonans reported in 2013 having high blood pressure at levels similar to the national median (see Figure 23A).

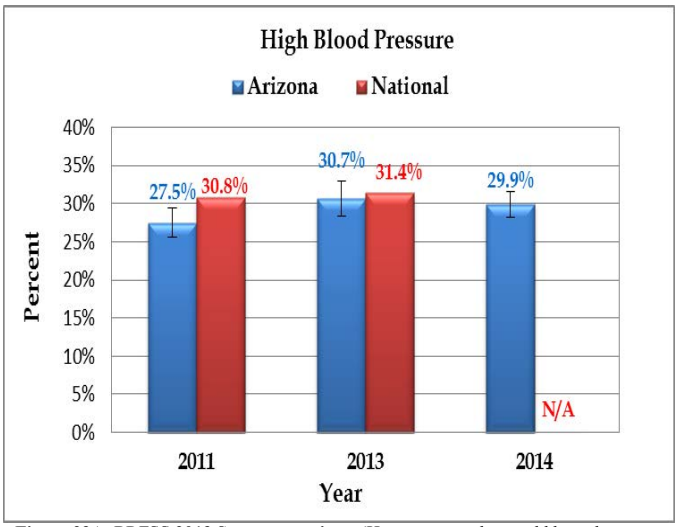


Figure 23A. BRFSS **2013 Survey question:** (Have you ever been told by a doctor, nurse, or other health professionals that you have high blood pressure?)

Arizona survey respondents reported high blood pressure at levels placing them in the second lowest category in the nation (see Figure 23B).

In 2014, similar proportions of Arizonan males and females surveyed reported having high blood pressure (see Figure 23C).

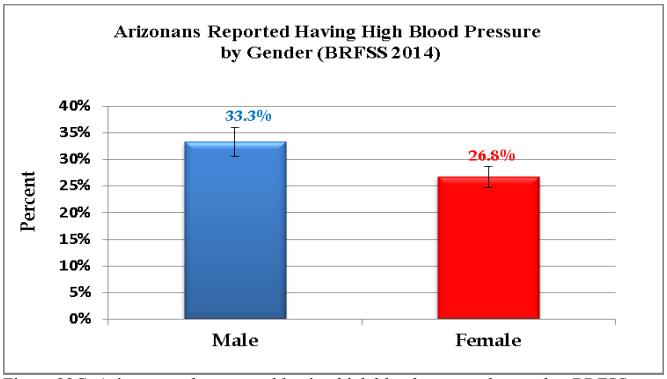


Figure 23C. Arizonans who reported having high blood pressure by gender, BRFSS-2014.

BRFSS 2014 survey Arizona respondents reported having high blood pressure by income category.

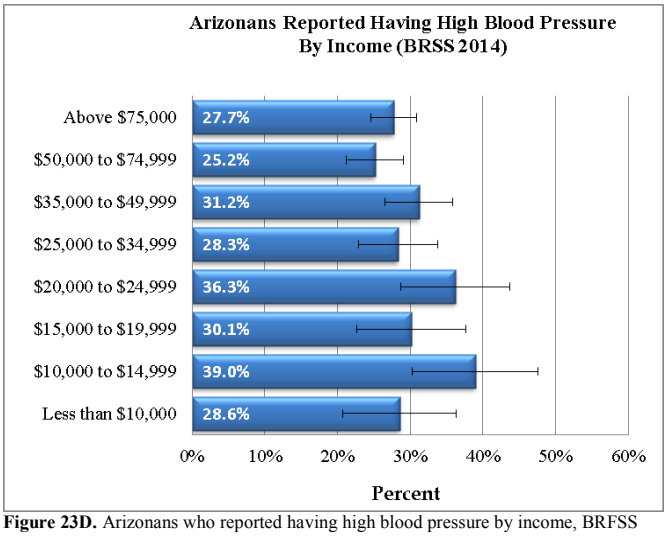


Figure 23D. Arizonans who reported having high blood pressure by income, BRFSS 2014.

[69] Nwankwo T, Yoon SS, Burt V, Gu Q. Hypertension among adults in the US: National Health and Nutrition Examination Survey, 2011-2012. NCHS Data Brief, No. 133. Hyattsville, MD: National Center for Health Statistics, Centers for Disease Control and Prevention, US Dept of Health and Human Services, 2013.

[70] U.S. Department of Health and Human Services, Center for Disease Control and Prevention, High Blood Pressure facts: Internet access: November 14, 2014. http://www.cdc.gov/bloodpressure/measure.htm

[71] U.S. Department of Health and Human Services, Center for Disease Control and Prevention, High Blood Pressure facts: Internet access: November 14, 2014. http://www.cdc.gov/bloodpressure/docs/consumered_hbp.pdf

[72] MayoClinic.org. Diseases and Conditions. High Blood Pressure (Hypertension). Accessed Jan 20, 2013. http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/symptoms/con-20019580.

Arizonans Who Reported Having High Blood Pressure				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**N/A**			
Arizona	**29.9%**	2756	28.2%	31.6%
Male	33.3%	1152	30.5%	36.1%
Female	26.8%	1604	24.8%	28.8%
18-24	9.9%	21	5.2%	14.6%
25-34	8.6%	42	5.3%	12.0%
35-44	17.7%	102	13.6%	21.8%
45-54	28.3%	249	23.8%	32.9%
55-64	44.7%	595	41.0%	48.4%
65+	57.5%	1747	54.9%	60.1%
Married	32.3%	1347	30.0%	34.6%
Divorced	37.9%	471	32.9%	42.9%
Widowed	58.4%	613	53.5%	63.3%
Separated	27.7%	43	15.6%	39.8%
Never Married	14.7%	210	11.3%	18.1%
Unmarried Couple	20.2%	52	12.9%	27.5%
Less than high school	29.1%	199	22.8%	35.3%
High School/GED	33.2%	730	29.7%	36.6%
Some College/Technical School	30.0%	836	27.1%	32.9%
College/Technical School Grad	27.0%	980	24.8%	29.2%
Employed for Wages	21.3%	608	18.8%	23.7%
Self Employed	19.0%	104	14.0%	24.0%
Out of Work	25.5%	90	16.8%	34.1%
Homemaker	22.5%	177	17.2%	27.8%
Student	8.4%	13	2.4%	14.4%
Retired	54.9%	1501	52.1%	57.6%
Unable to Work	53.7%	253	45.2%	62.2%
Less than $10,000	28.6%	115	20.7%	36.4%
$10,000 to $14,999	39.0%	165	30.3%	47.6%
$15,000 to $19,999	30.1%	199	22.6%	37.6%
$20,000 to $24,999	36.3%	278	28.8%	43.8%
$25,000 to $34,999	28.3%	279	22.9%	33.7%
$35,000 to $49,999	31.2%	407	26.6%	35.8%
$50,000 to $74,999	25.2%	323	21.2%	29.1%
Above $75,000	27.7%	556	24.6%	30.8%
White Non-Hispanic	33.1%	2242	31.2%	34.9%
Black/African American	40.1%	88	29.5%	50.8%
Hispanic	22.0%	293	17.9%	26.0%
Asian/Pacific Islander	18.1%	20	9.5%	26.6%
American Indian Non-Hispanic	30.4%	49	20.5%	40.4%
Other	32.8%	64	21.3%	44.3%

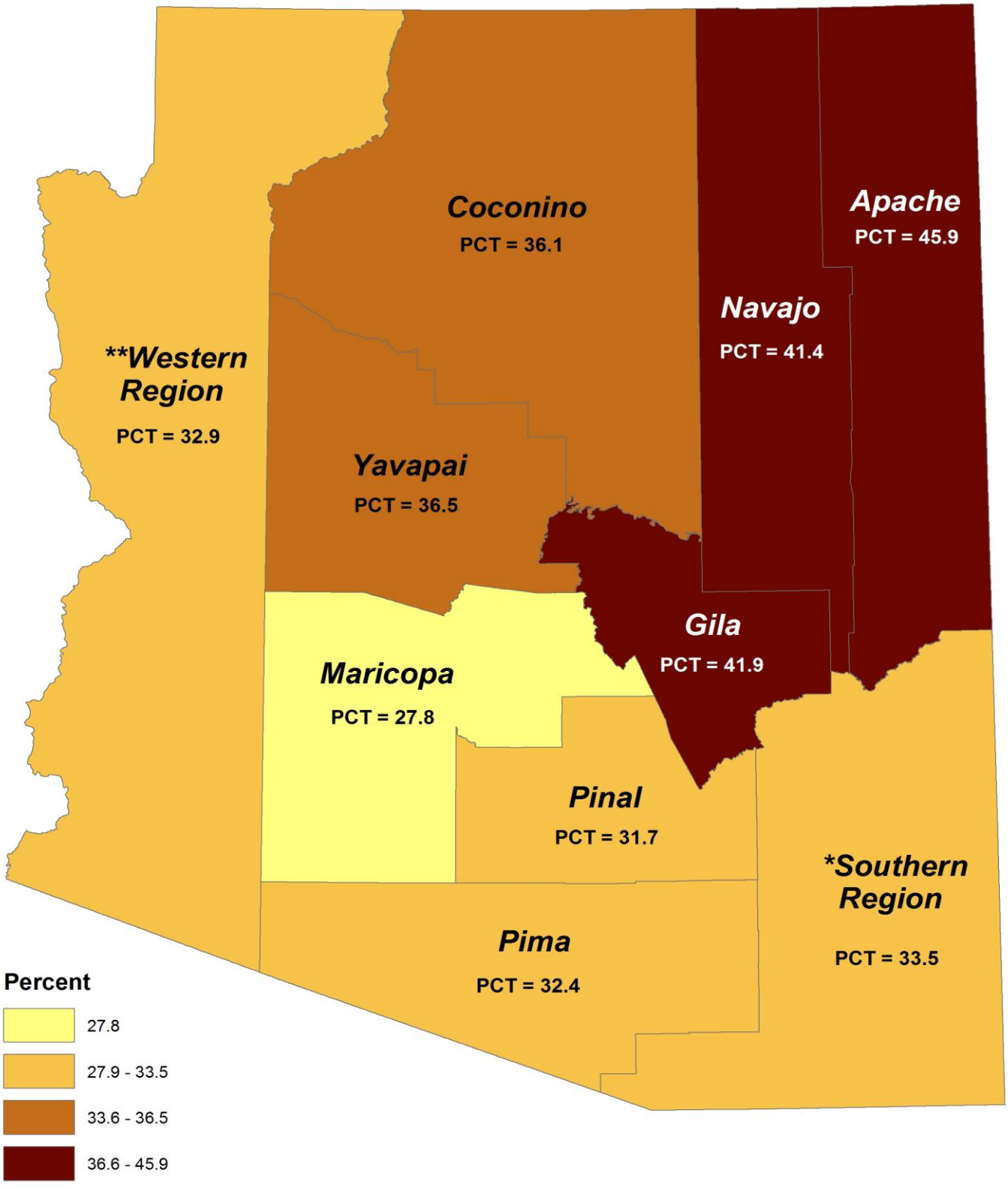
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions and Limitations: High Blood Pressure

The table to the left displays the proportions of Arizonans who reported that they had high blood pressure by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Being Told They Have High Blood Pressure, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Obesity

Current estimates show that more than 25 million Americans have Type II diabetes, 27 million have a form of chronic heart disease and 68 million have hypertension. Additionally, it is estimated that nearly 800,000 people suffer from a stroke each year. Obesity is a risk factor for all of these conditions, plus arthritis-related disabilities. Furthermore, one in three cancer-related deaths can also be attributed to obesity.[73] Obesity has attained epidemic proportions in the United States more than doubling in the past two decades.[74] To assess obesity, the BRFSS collects data on self-reported height and weight; the BMI formula for body mass index ($Kg/m^2 > 30$) is then used to define obesity. Over one in four Arizonans surveyed (28.9% in 2014) were obese, levels similar to or slightly below the national median since 2011 (see Figure 24A).

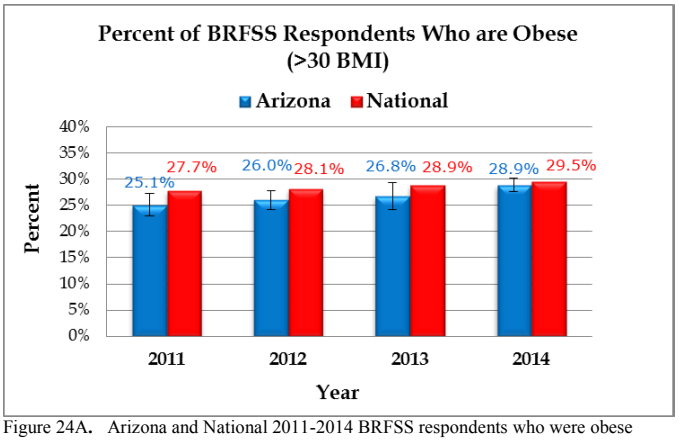


Figure 24A. Arizona and National 2011-2014 BRFSS respondents who were obese based on self-reported height and weight.

Arizona falls into the second lowest class for obesity nationally (see Figure 24B).

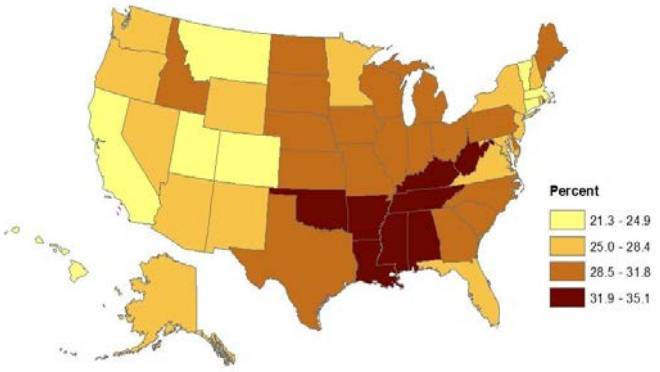


Figure 24B. BRFSS 2014 survey respondents who are categorized as being obese. Figure 24B map displays natural breaks.

Research has shown that low income households are less likely to live in communities that support healthy eating, and that stores in low-income communities are more likely to stock foods that are of lower quality, but are more filling. Furthermore, individuals from low-income households have expressed that fresh fruits and vegetables are desirable but impractical due to cost.[75] The effects of the unavailability of healthy foods can be seen in the rise of obesity in low income households. BRFSS data from 2000-2010 showed that respondents in low-income households were the most likely to report being obese. Recent data since 2011 show similar patterns with highest obesity levels reported by the respondents in the lowest income group, and the lowest levels reported in the highest income groups (see Figure 24C).

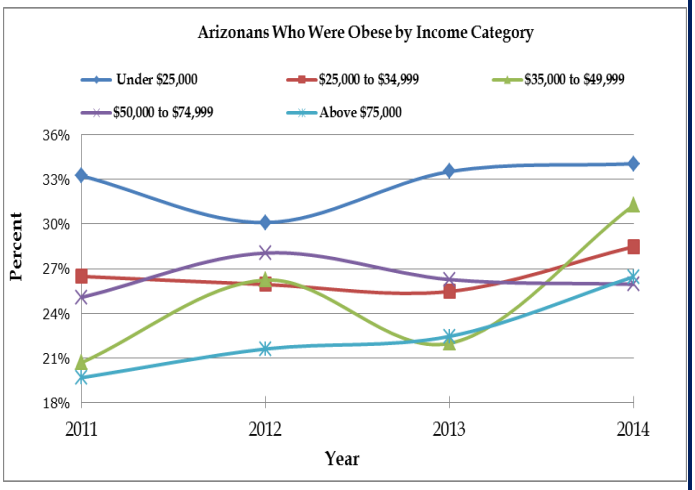


Figure 24C. Arizona 2011-2014 BRFSS respondents were categorized as being obese by income.

Although the disease burden associated with obesity is far reaching, being overweight and underweight can also have detrimental effects on health. In 2014, Arizona BRFSS reported being in the normal BMI range, at 33.8% (see Figure 24D).

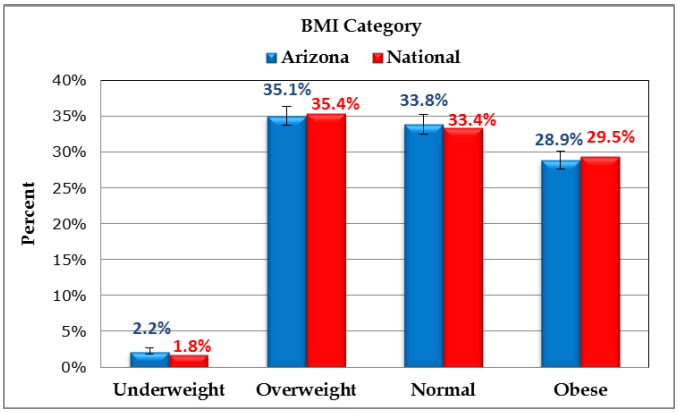


Figure 24D. BRFSS 2014 respondents reported BMI categories, Arizona and National comparisons. The BMI formula for body mass index (Kg/m2 > 30) was used to define obesity.

73. Trust for America's Health. Reports, F as in Fat: How Obesity Threatens America's Future 2012. Published Sep 2012. Accessed Sep 2013. http://healthyamericans.org/report/100/.
74. CDC. State-specific prevalence of obesity among adults---United States, 2009. MMWR 2010;59(30);951-955

75. Hendrickson D., Smith C., Eikenberry N. Fruit and vegetable access in four low-income food deserts communities in Minnesota. Agric. Hum. Values. 2006;23:371–383. doi: 10.1007/s10460-006-9002-8.

Health Conditions and Limitations: Obesity

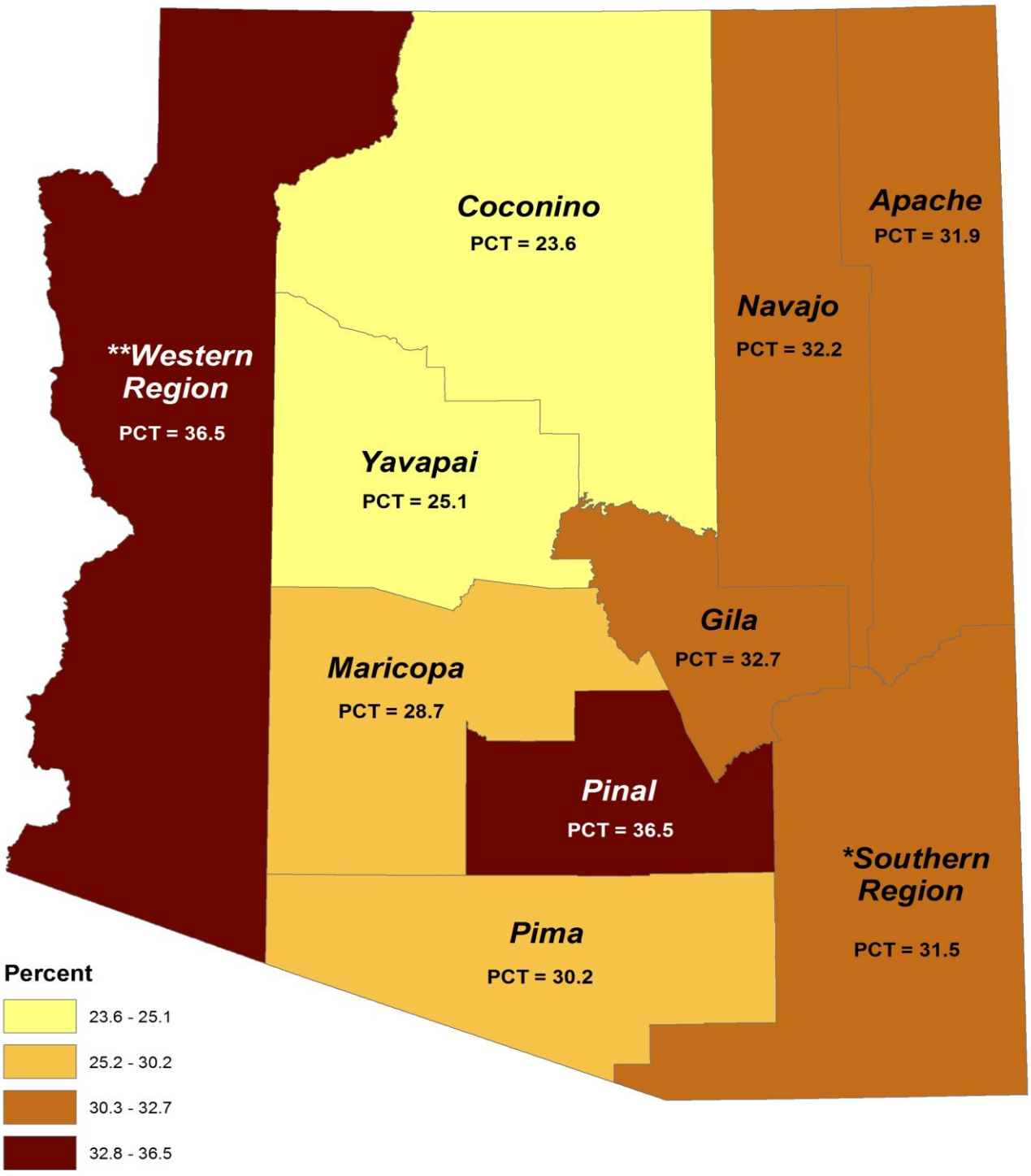
Arizona Respondents Who Were Obese BMI (Kg/m^2>30)				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**29.5%**	53		
Arizona	**28.9%**	3775	27.6%	30.1%
Male	29.0%	1639	27.2%	30.9%
Female	28.7%	2136	27.0%	30.4%
18-24	16.5%	72	12.4%	20.6%
25-34	29.1%	246	25.2%	33.0%
35-44	33.3%	432	29.8%	36.7%
45-54	34.8%	644	31.9%	37.7%
55-64	33.4%	922	31.0%	35.9%
65+	24.6%	1459	23.1%	26.1%
Married	30.1%	1976	28.5%	31.8%
Divorced	33.0%	658	29.6%	36.4%
Widowed	27.8%	505	24.3%	31.2%
Separated	26.1%	71	18.4%	33.8%
Never Married	25.1%	451	22.0%	28.2%
Unmarried Couple	27.4%	100	20.4%	34.3%
Less than high school	31.9%	338	27.6%	36.2%
High School/GED	29.7%	965	27.3%	32.2%
Some College/Technical School	32.1%	1262	29.8%	34.3%
College/Technical School Grad	21.5%	1197	19.9%	23.2%
Employed for Wages	28.8%	1300	26.8%	30.8%
Self Employed	22.9%	217	18.6%	27.1%
Out of Work	28.3%	197	22.9%	33.6%
Homemaker	32.8%	246	27.7%	38.0%
Student	17.0%	54	11.3%	22.6%
Retired	26.0%	1323	24.3%	27.7%
Unable to Work	48.4%	418	43.2%	53.6%
Less than $10,000	36.4%	224	30.4%	42.5%
$10,000 to $14,999	30.3%	200	24.1%	36.4%
$15,000 to $19,999	36.2%	305	31.1%	41.3%
$20,000 to $24,999	33.3%	370	28.5%	38.1%
$25,000 to $34,999	28.5%	388	24.4%	32.5%
$35,000 to $49,999	31.3%	530	27.6%	34.9%
$50,000 to $74,999	26.0%	499	22.9%	29.0%
Above $75,000	26.5%	825	24.1%	28.8%
White Non-Hispanic	26.4%	2719	25.1%	27.7%
Black/African American	36.8%	141	29.6%	44.0%
Hispanic	33.8%	651	30.5%	37.1%
Asian/Pacific Islander	6.6%	14	2.1%	11.0%
American Indian Non-Hispanic	44.9%	145	37.4%	52.5%
Other	30.7%	105	23.5%	37.9%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

The table to the left displays the proportions of Arizona BRFSS survey respondents who were categorized as being obese (based on calculated BMI) by sex, age, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Being Obese, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Pre-Diabetes

Pre-diabetes is the condition that can lead to type 2 diabetes and heart disease.[76] Pre-diabetes is where the blood glucose is higher than normal but not high enough to be diagnosed as diabetes. According to the CDC and the American Diabetes Association (ADA), a person with certain risk factors is more likely to develop pre-diabetes and type II diabetes[77]. Those risk factors include excess weight, high cholesterol, low physical activity, those age 45 years and above, and members of racial/ethnic minority groups. National pre-diabetes prevalence estimates indicate that over 35% of racial/ethnic groups met at least one of the ADA diagnostic criteria and risk factors.[78]

Pre-diabetes is reversible, and through lifestyle modifications, a person can deter the onset of type 2 diabetes. Lifestyle recommendations include a balanced diet of less saturated fats, increase in physical activity with a goal of losing 7% of your total weight, and active screening and monitoring of blood glucose levels with a primary care physician. Other opportunities include enrolling in the National Diabetes Program (DPP), a 16-week evidenced-based program that delivers effective type 2 diabetes prevention lifestyle interventions for people at risk.[79] Arizonans surveyed in the BRFSS 2014 reported being diagnosed with pre-diabetes at levels (9.1%) similar to the national median (8.6%) (see Figure 25A).

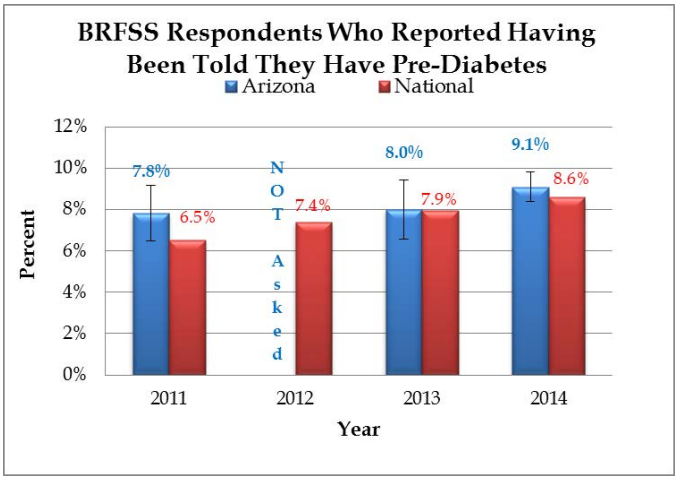


Figure 25A. Arizona 2014 BRFSS survey respondents who reported having been told by a health care provider that they were diagnosed with Pre-diabetes. Arizona did not ask questions regarding pre-diabetes in 2012.

When comparing to the nation, the data shows that Arizona falls into the second lowest class for respondents reporting being diagnosed with pre-diabetes (See Figure 25B).

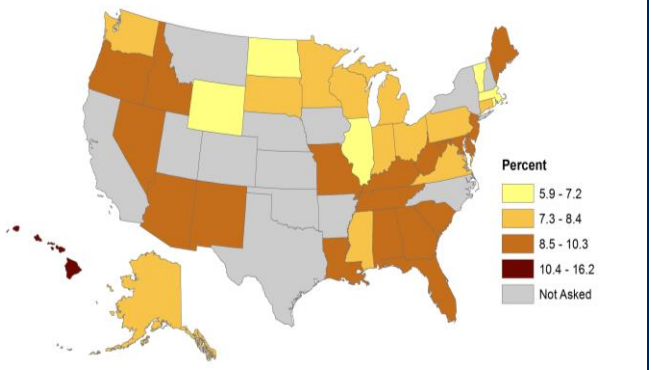
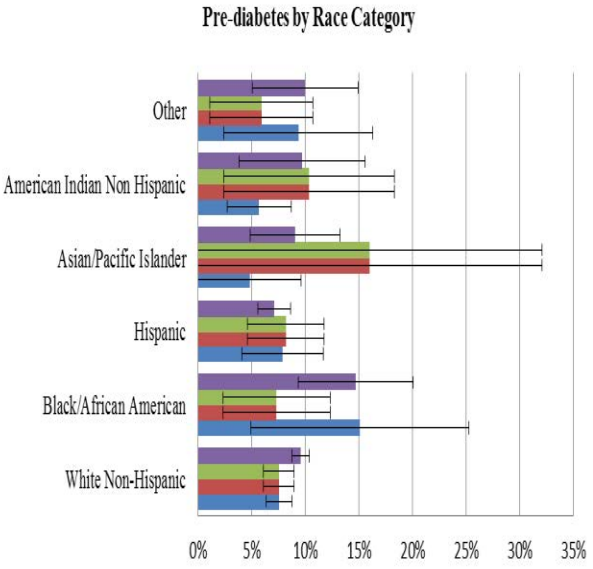


Figure 25B. National map displays natural breaks and results from BRFSS 2014 survey respondents who reported being diagnosed with Pre-Diabetes.

Hispanics in Arizona reported having been diagnosed with pre-diabetes (7.1%) at the highest rates than other race categories. Blacks in Arizona reported second highest for being diagnose with pre-diabetes, at 21.1% (see Figure 25C).



	White Non-Hispanic	Black/African American	Hispanic	Asian/Pacific Islander	American Indian Non Hispanic	Other
2014	9.6%	14.7%	7.1%	9.0%	9.7%	10.0%
2013	7.5%	7.3%	8.2%	16.0%	10.4%	5.9%
2012	7.5%	7.3%	8.2%	16.0%	10.4%	5.9%
2011	7.5%	15.1%	7.9%	4.8%	5.7%	9.4%

Figure 25C. Arizona BRFSS 2011-2014 survey respondents reported having been told that they were diagnosed with pre-diabetes.

[76] American Diabetes Association. (2012) http://professional.diabetes.org/content/PML/All_About_Prediabetes_24dee6ff-cbf0-4a55-80b7-9d5d29de0bd7/All_About_Prediabetes.pdf
[77] Centers for Disease Control and Prevention (CDC)-Prediabetes (2015) http://www.cdc.gov/diabetes/basics/prediabetes.html.
[78] Sentell, T., He, G., Gregg, EW., Schillinger, D. (2012) Racial/ethnic variation in prevalence estimates for United States pre-diabetes under alternative 2010 American Diabetes Association criteria: 1988-2008. *Ethnicity and Disease*. (22) 451-458.
[79] National Diabetes Prevention Program. (2015) http://www.cdc.gov/diabetes/prevention/recognition/about.htm.

Arizonans Who Reported Having Been Told by a Doctor or other Health Professional That They Have Pre-Diabetes or Borderline Diabetes				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**8.6%**	40		
Arizona	**9.1%**	1465	8.4%	9.8%
Male	8.1%	578	7.1%	9.1%
Female	10.0%	887	9.0%	11.0%
18-24	3.7%	17	1.7%	5.7%
25-34	4.4%	41	2.7%	6.1%
35-44	6.7%	96	5.0%	8.4%
45-54	10.0%	201	8.2%	11.8%
55-64	15.1%	372	13.2%	17.1%
65+	14.5%	738	13.2%	15.9%
Married	10.2%	778	9.2%	11.2%
Divorced	10.4%	256	8.5%	12.4%
Widowed	12.8%	236	10.6%	14.9%
Separated	11.7%	29	5.5%	17.9%
Never Married	5.4%	124	3.8%	7.0%
Unmarried Couple	6.7%	27	2.9%	10.5%
Less than high school	8.3%	99	5.8%	10.7%
High School/GED	7.8%	293	6.5%	9.1%
Some College/Technical School	10.7%	503	9.3%	12.0%
College/Technical School Grad	8.9%	555	7.9%	9.9%
Employed for Wages	7.1%	400	6.1%	8.1%
Self Employed	8.2%	85	5.6%	10.7%
Out of Work	8.8%	54	5.3%	12.3%
Homemaker	6.9%	84	5.0%	8.9%
Student	2.1%	8	0.1%	4.1%
Retired	15.2%	675	13.6%	16.7%
Unable to Work	18.2%	141	13.8%	22.6%
Less than $10,000	10.9%	74	6.6%	15.3%
$10,000 to $14,999	9.8%	73	6.0%	13.5%
$15,000 to $19,999	7.1%	81	4.6%	9.6%
$20,000 to $24,999	10.9%	123	8.0%	13.8%
$25,000 to $34,999	8.5%	143	6.4%	10.6%
$35,000 to $49,999	10.1%	225	8.0%	12.2%
$50,000 to $74,999	8.4%	184	6.6%	10.1%
Above $75,000	9.9%	338	8.4%	11.5%
White Non-Hispanic	9.6%	1148	8.8%	10.4%
Black/African American	14.7%	58	9.3%	20.1%
Hispanic	7.1%	178	5.6%	8.7%
Asian/Pacific Islander	9.0%	21	4.8%	13.2%
American Indian Non-Hispanic	9.7%	28	3.8%	15.6%
Other	10.0%	32	5.0%	14.9%

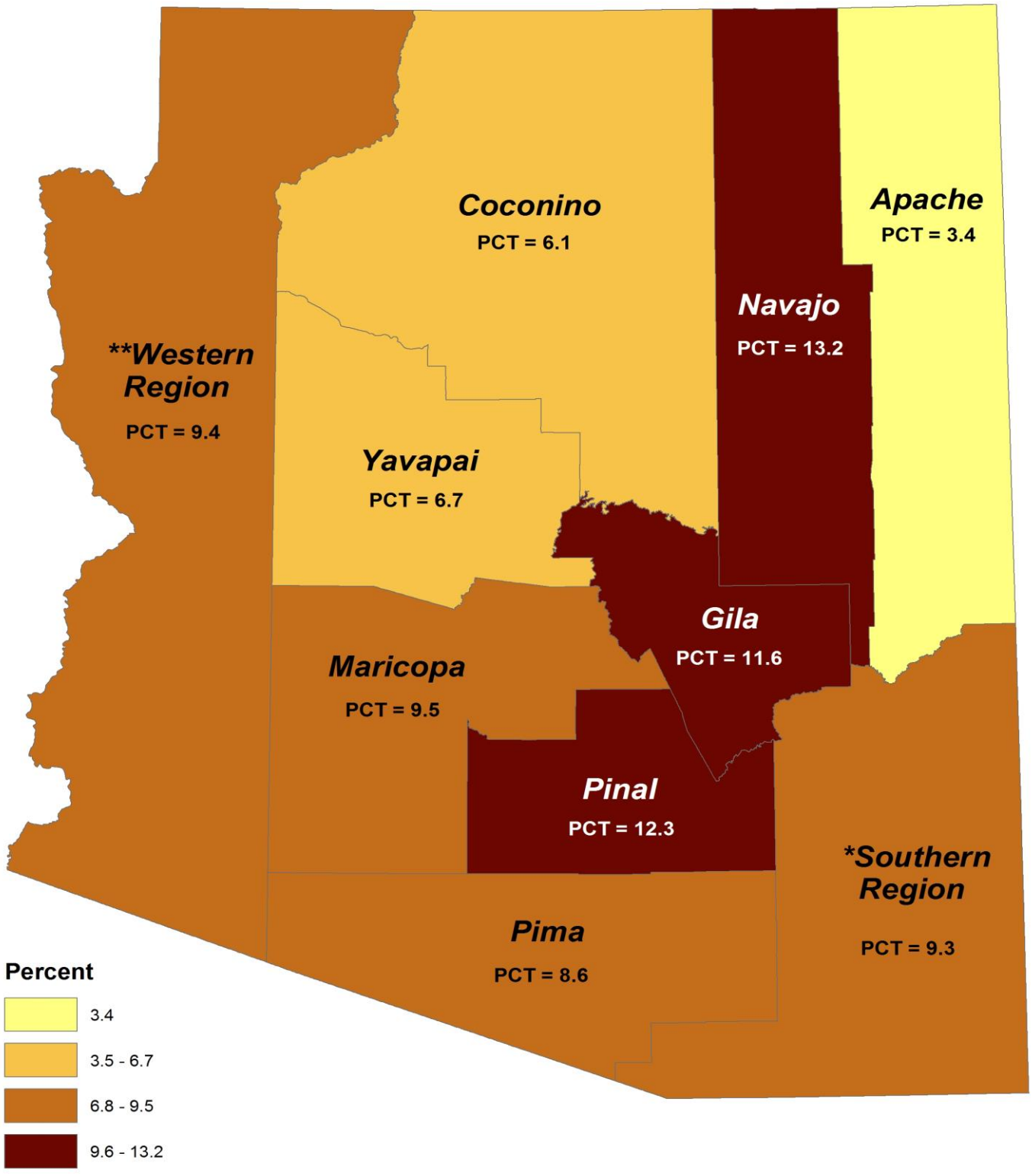
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions and Limitations: Pre-Diabetes

The table to the left displays the proportions of Arizonans reported that they were told by a health professional that they had Pre-Diabetes. The data are reported by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Being Diagnosed with Pre-Diabetes, by County & Region, BRFSS 2014



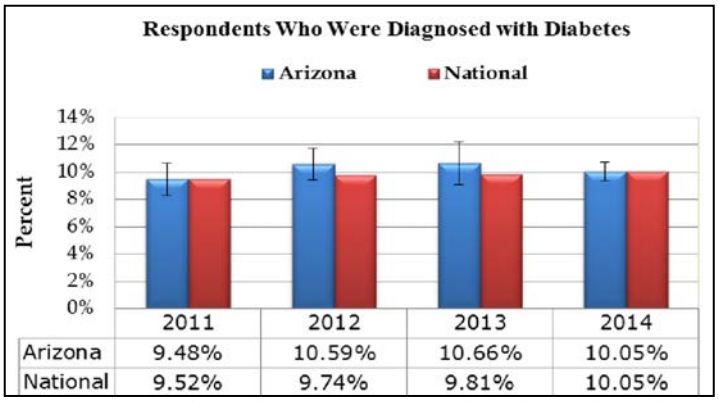
**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Diabetes

Currently, more than 17 million Americans have diabetes. The 2011 national mortality data (the most current available) shows that diabetes mellitus is the seventh leading cause of death in the U.S. Nationally there were 73,282 deaths associated with diabetes.[80] Diabetes can cause heart disease, stroke, blindness, kidney failure, leg and foot amputations, pregnancy complications, and deaths related to flu and pneumonia. Particularly at risk are the 5.9 million Americans who are unaware that they have the disease.[72]

The hormones which appear during pregnancy can cause glucose intolerance. This is known as gestational diabetes. It typically goes away after childbirth.[81] Therefore, individuals who were diagnosed with gestational diabetes are not categorized as diabetics in this summary. In 2014, one in ten (10.7%) Arizonans surveyed reported they had a health professional diagnose them with diabetes; similar to the national median (see Figure 26A).



	2011	2012	2013	2014
Arizona	9.48%	10.59%	10.66%	10.05%
National	9.52%	9.74%	9.81%	10.05%

Figure 26A. Arizona and National 2011-2014 BRFSS respondents who were diagnosed with diabetes.

Arizona is in the second-highest category for proportion of those surveyed who reported a diabetes diagnosis when compared to the other states of the U.S. (see Figure 26B).

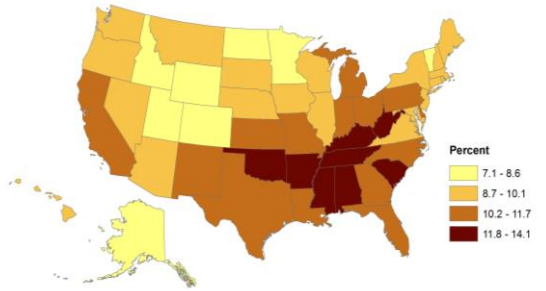


Figure 26B. BRFSS 2014 survey respondents who reported being diagnosed with diabetes. Figure 26B displays U.S. map (natural breaks).

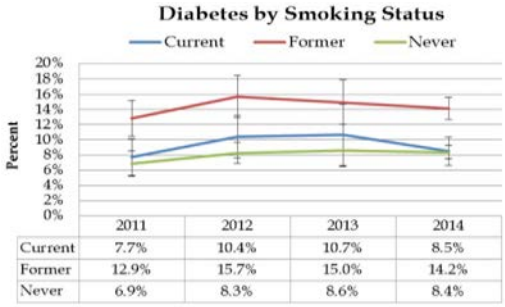
In 2014, there were 151,800 emergency department or inpatient hospitalizations that were directly related to diabetes. The individuals hospitalized for diabetes spent an average length of stay of between 4.8 and 8.9 days in either the emergency room or an inpatient hospital. The visits accrued charges totaling more than $8 billion (see Table 11).

Diabetes Related Inpatient & Emergency Department Discharges

Payer Type	Number of Discharges	Total Charges	Average Length of Stay (Days)
Charity	146	$10,769,285	8.2
Medicaid	27,548	$1,412,112,017	5.3
Medicare	92,416	$5,426,410,078	5.4
Other	4,291	$275,348,399	6.0
Private Insurance	26,961	$1,556,673,751	5.0
Total	**151,362**	**$8,681,313,530**	

Table 11. Arizona's 2014 emergency department and inpatient hospitalizations admissions related to diabetes, which contained the ICD-9 codes 250 (all).

Research has shown that smoking decreases insulin sensitivity, which in turn results in disorders of glucose metabolism. Furthermore, it has been shown that smoking worsens metabolic control when compared to non-smokers. Additionally, nicotine has been shown to increase apoptosis of islet β-cells, which synthesize and secrete insulin.[82,83] Survey data since 2011 indicates that current smokers and former smokers have a similar prevalence of diabetes, while former smokers have higher diabetes prevalence (see **Figure 26C**).



	2011	2012	2013	2014
Current	7.7%	10.4%	10.7%	8.5%
Former	12.9%	15.7%	15.0%	14.2%
Never	6.9%	8.3%	8.6%	8.4%

Figure 26C. Arizona BRFSS 2014 survey respondents who reported having diabetes by smoking status.

Arizona hospital's 2014 data for show that nearly three quarters of all diabetes-related encounters were for Type II diabetes that was not uncontrolled (Figure 26D).

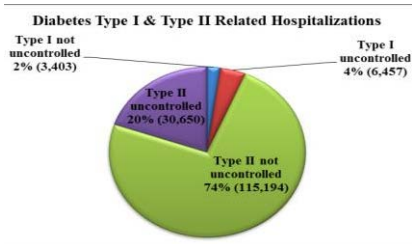


Figure 26D. Arizona's hospital 2014 encounters, both emergency department and admissions, which contained the ICD-9 code 250 (all) with a 5th digit subclassification- 0: type 11 not uncontrolled; 1: Type 1 [juvenile type] not uncontrolled; 2: type II uncontrolled; 3: Type 1 [juvenile type] uncontrolled.

80. Centers for Disease Control and Prevention. National Diabetes Surveillance System website. http://www.cdc.gov/diabetes/pdfs/library/diabetesreportcard2014.pdf Accessed February 26, 2015.
81. U.S. National Library of Medicine. Literature. Gestational Diabetes. http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001898/

82. Xie X, Liu Q, Wu J, Wakuie M. Impact of cigarette smoking in type 2 diabetes development. Acta Pharmacol Sin. 2009. doi: 10.1038/aps.2009.49
83 Rohit N Kulkarni. The islet beta-cell. Int J Biochem Cell Biol. 2004 Mar;36(3):365-71. doi: 10.1016/j.biocel.2003.08.010.

Arizonans Diagnosed with Diabetes

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**10.0%**	53		
Arizona	**10.0%**	2024	9.4%	10.7%
Male	10.8%	960	9.8%	11.8%
Female	9.3%	1064	8.4%	10.2%
18-24	0.5%	4	0.0%	1.0%
25-34	2.6%	25	1.2%	4.0%
35-44	4.8%	68	3.4%	6.3%
45-54	11.3%	221	9.2%	13.3%
55-64	17.0%	483	15.1%	18.9%
65+	20.4%	1223	19.0%	21.8%
Married	11.1%	1010	10.2%	12.1%
Divorced	12.6%	348	10.5%	14.7%
Widowed	19.7%	402	16.7%	22.6%
Separated	12.7%	38	6.4%	19.0%
Never Married	4.7%	169	3.5%	5.8%
Unmarried Couple	4.6%	41	2.7%	6.5%
Less than high school	15.0%	245	12.4%	17.7%
High School/GED	9.3%	518	8.1%	10.4%
Some College/Technical School	10.0%	639	8.9%	11.2%
College/Technical School Grad	7.6%	600	6.8%	8.5%
Employed for Wages	5.4%	376	4.6%	6.2%
Self Employed	4.7%	58	2.6%	6.9%
Out of Work	8.2%	70	5.2%	11.1%
Homemaker	7.3%	109	5.4%	9.2%
Student	1.4%	8	0.1%	2.7%
Retired	19.4%	1061	17.9%	20.9%
Unable to Work	29.5%	316	25.1%	33.8%
Less than $10,000	13.0%	134	9.7%	16.3%
$10,000 to $14,999	14.3%	141	10.3%	18.3%
$15,000 to $19,999	12.5%	176	9.8%	15.2%
$20,000 to $24,999	12.6%	218	10.0%	15.1%
$25,000 to $34,999	12.6%	224	10.0%	15.2%
$35,000 to $49,999	9.5%	266	7.8%	11.2%
$50,000 to $74,999	7.8%	216	6.2%	9.5%
Above $75,000	6.3%	281	5.3%	7.3%
White Non-Hispanic	9.9%	1464	9.2%	10.6%
Black/African American	10.7%	79	7.7%	13.8%
Hispanic	10.4%	336	8.7%	12.0%
Asian/Pacific Islander	3.0%	14	0.7%	5.3%
American Indian Non-Hispanic	14.8%	73	10.2%	19.3%
Other	11.2%	58	6.8%	15.7%

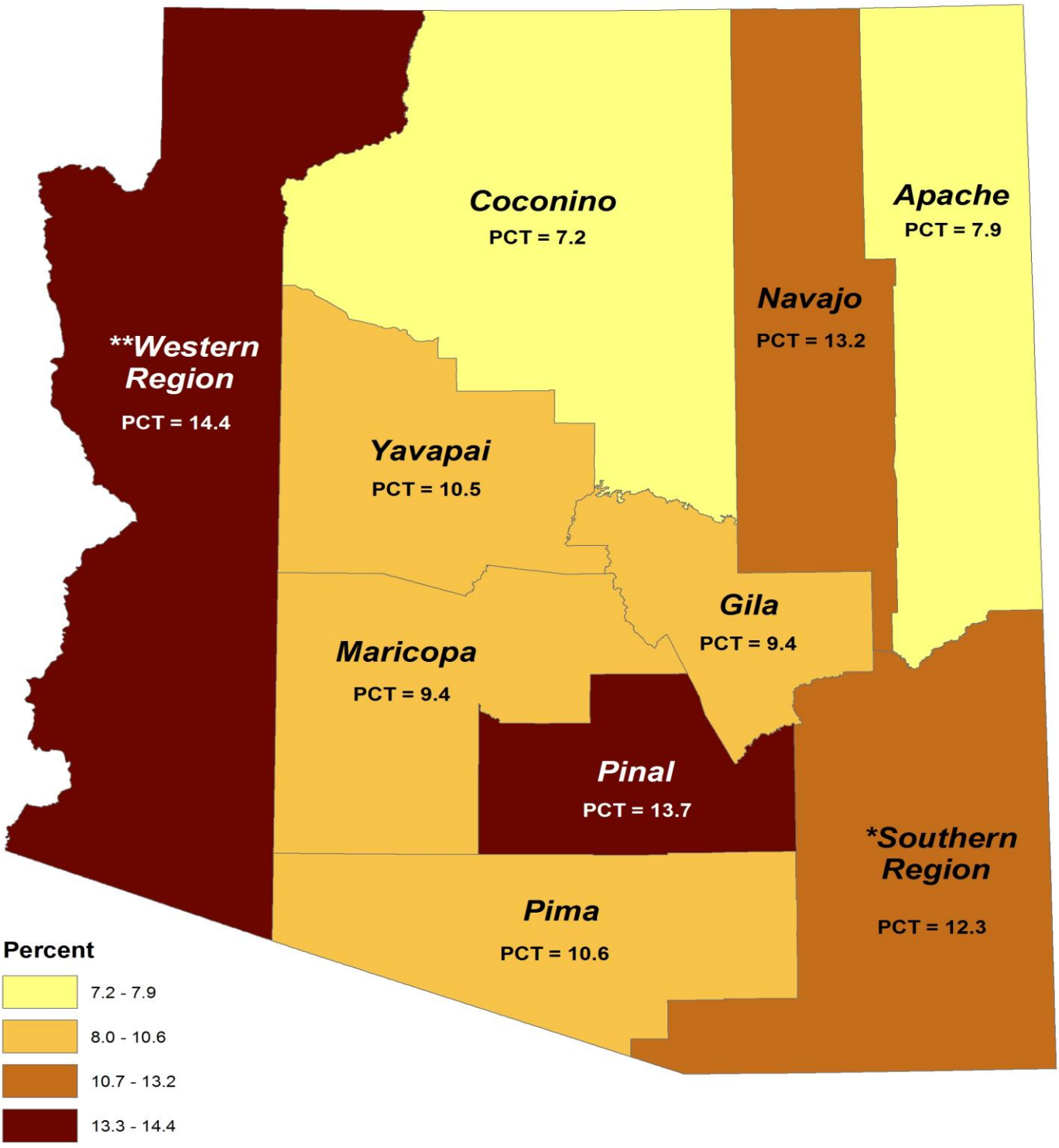
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions and Limitations: Diabetes

The table to the left displays the proportions of Arizonans who were diagnosed with diabetes by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Having Been Diagnosed With Diabetes By A Health Professional, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions & Limitations:
Special Equipment Required

The National Response Framework defines *special needs populations* as follows: ―Populations whose members may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who are transportation-disadvantaged. The proportion of Arizonans surveyed who indicated they needed special equipment for health reasons has been stable at around 8% since 2011, and is similar to the national median (Figure 27A).

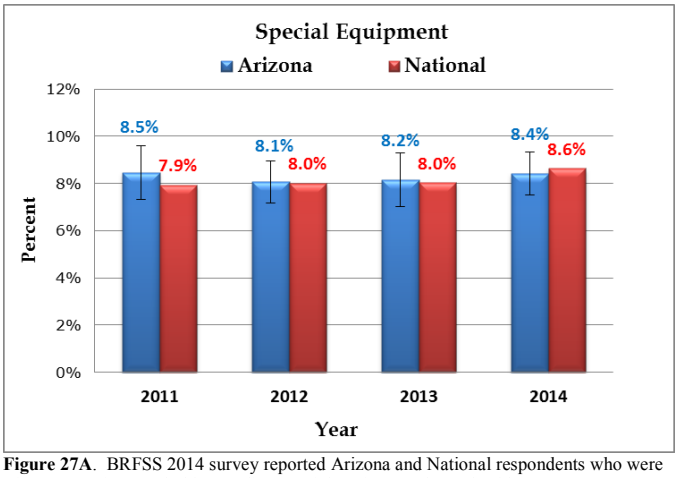


Figure 27A. BRFSS 2014 survey reported Arizona and National respondents who were of 18 years of age and older needing special equipment due to health reasons.

When compared to the nation, Arizona is in the second-lowest category for respondents reporting a need for special equipment (Figure 27B).

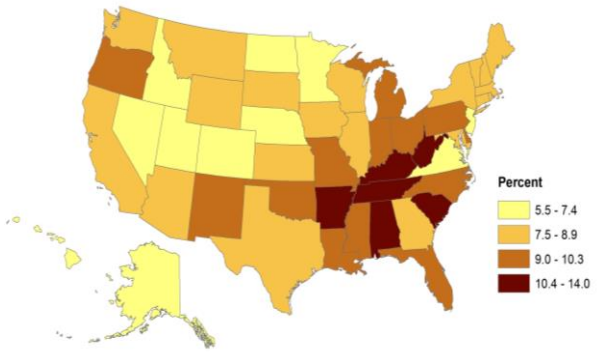


Figure 27B. BRFSS 2014 survey respondents who reported that they needed special equipment due to health reasons. U.S. map displays natural breaks.

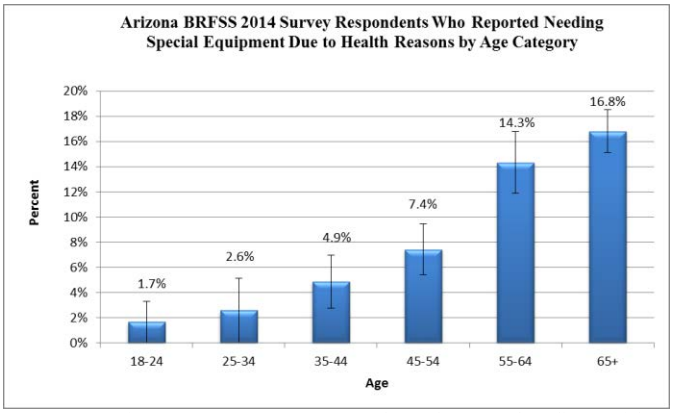


Figure 27C. Arizona BRFSS 2014 survey respondents who reported needing special equipment due to health reasons by age category. The BRFSS 2014 question regarding special equipment: Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?

Understanding the prevalence of disability is important for public health programs to be able to address the needs of persons with disabilities.[84] Figures 27C and 27D present the BRFSS 2014 data results for Arizona respondents who reported needing special equipment for health reasons presented by educational attainment and by gender.

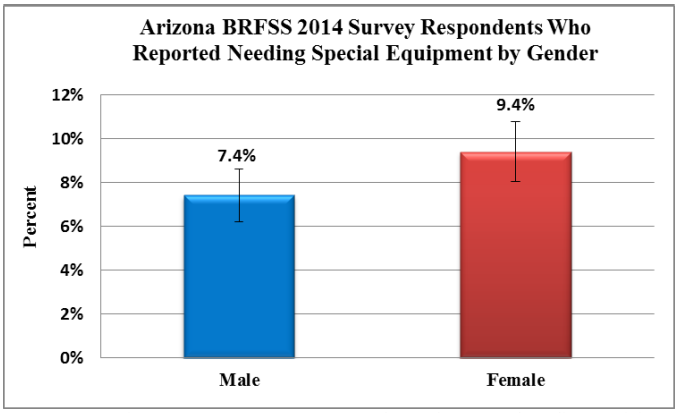


Figure 27D. Arizona BRFSS 2014 survey respondents who reported needing special equipment due to health reasons by gender.

[84]MMR Prevalence of Disability and Disability Type Among Adults — United States, 2013*Weekly* July 31, 2015 / 64(29);777-783
http://www.cdc.gov/mmWR/preview/mmwrhtml/mm6429a2.htm

Arizonans Reported Needing Special Equipment Due to Health Reasons				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**8.6%**	**53**		
Arizona	**8.9%**	**2002**	8.3%	9.6%
Male	8.8%	744	7.8%	9.8%
Female	9.0%	1258	8.2%	9.9%
18-24	1.7%	6	0.3%	3.2%
25-34	2.3%	17	0.8%	3.7%
35-44	5.7%	73	4.0%	7.5%
45-54	7.7%	176	6.1%	9.3%
55-64	14.1%	434	12.4%	15.8%
65+	18.8%	1296	17.5%	20.1%
Married	8.2%	763	7.3%	9.1%
Divorced	13.9%	404	11.8%	16.0%
Widowed	23.7%	583	21.0%	26.5%
Separated	10.4%	40	5.6%	15.2%
Never Married	4.7%	177	3.5%	5.9%
Unmarried Couple	3.8%	25	1.5%	6.0%
Less than high school	10.9%	209	8.5%	13.3%
High School/GED	8.6%	484	7.4%	9.8%
Some College/Technical School	9.9%	669	8.7%	11.1%
College/Technical School Grad	6.7%	636	6.0%	7.4%
Employed for Wages	2.9%	170	2.2%	3.6%
Self Employed	3.8%	52	2.1%	5.5%
Out of Work	5.3%	45	2.8%	7.7%
Homemaker	3.9%	89	2.6%	5.1%
Student	0.5%	7	0.1%	0.9%
Retired	16.8%	1089	15.5%	18.1%
Unable to Work	44.1%	542	39.2%	49.1%
Less than $10,000	12.9%	162	9.7%	16.1%
$10,000 to $14,999	16.3%	192	12.4%	20.2%
$15,000 to $19,999	13.4%	211	10.6%	16.3%
$20,000 to $24,999	10.4%	220	8.2%	12.6%
$25,000 to $34,999	10.3%	222	7.6%	12.9%
$35,000 to $49,999	7.6%	234	6.1%	9.2%
$50,000 to $74,999	7.2%	182	5.4%	9.0%
Above $75,000	4.4%	215	3.5%	5.2%
White Non-Hispanic	10.3%	1632	9.5%	11.1%
Black/African American	8.8%	61	5.9%	11.8%
Hispanic	6.3%	184	4.8%	7.9%
Asian/Pacific Islander	2.5%	6	0.0%	5.2%
American Indian Non-Hispanic	7.1%	44	4.2%	10.0%
Other	14%	75	9%	19%

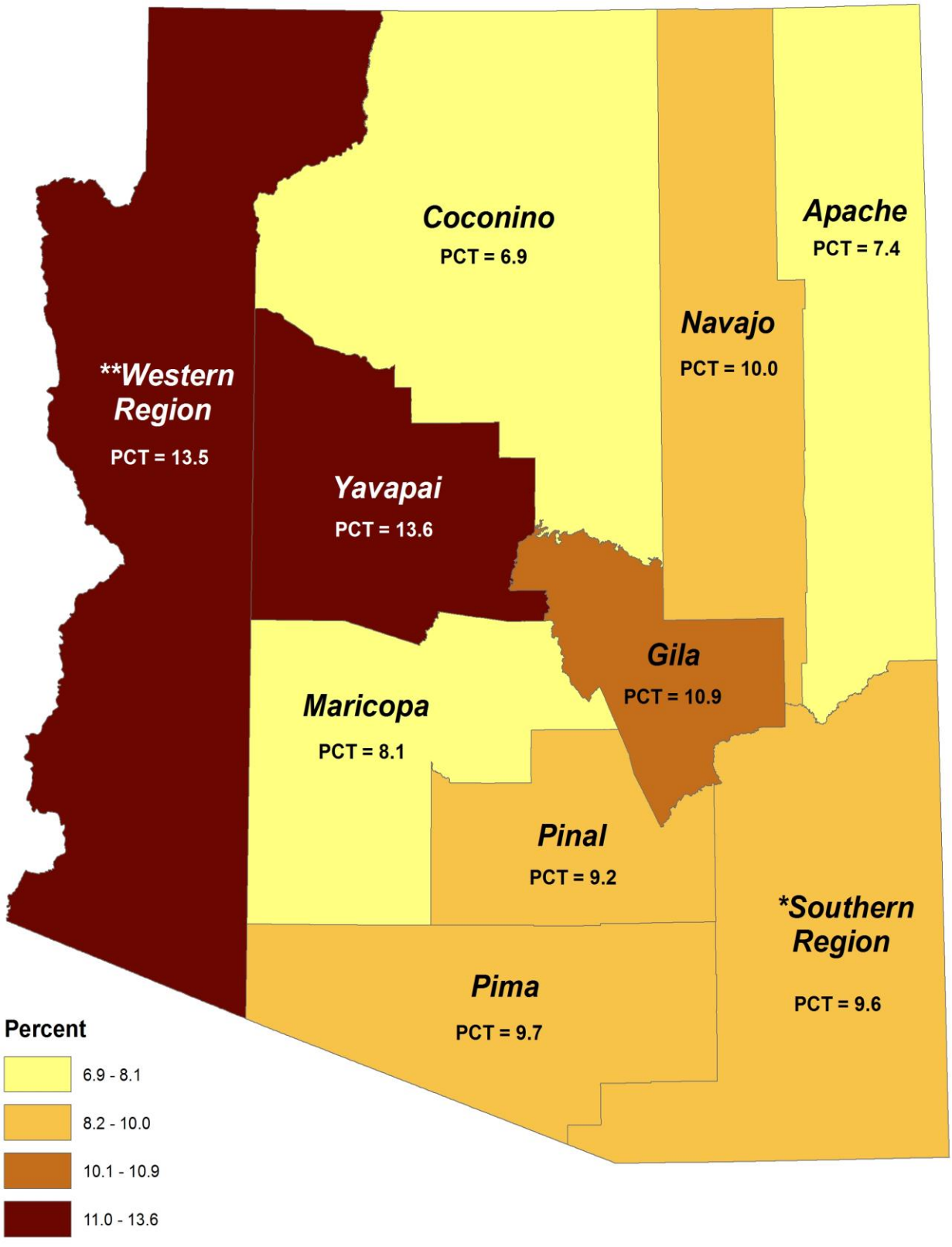
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions & Limitations:
Special Equipment Required

The table to the left displays the proportions of Arizonans who needed special equipment due to health reasons by sex, age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Needing Special Equipment for Health Reasons, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions & Limitations: Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease (COPD) is not one disease; it is an umbrella term that describes chronic lung conditions that cause pathological changes in the lungs. These changes occur in the large (central) airways, the peripheral bronchioles and the lung parenchyma. These changes essentially block airflow as the individual exhales, making it increasingly difficult to breathe. These changes are progressive, they are not fully reversible, and cannot be treated with inhaled steroids/corticosteroids (used to treat asthma). The primary treatment is the use of a bronchodilator; however, steroid inhalers can reduce COPD exacerbations and increase quality of life.[85] COPD is predominantly associated with smoking.[86]

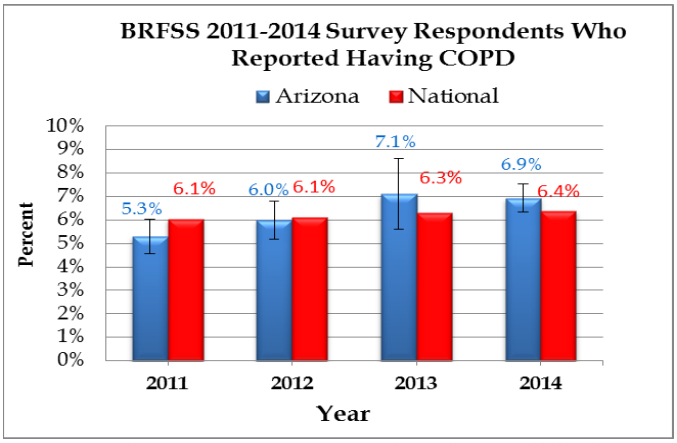


Figure 28A. Arizona BRFSS 2014 survey respondents who were told they have emphysema or chronic bronchitis.

According to the 2014 BRFSS, Arizonans are less likely to report that they have been diagnosed with COPD when compared to the nation as a whole (see Figure 28B).

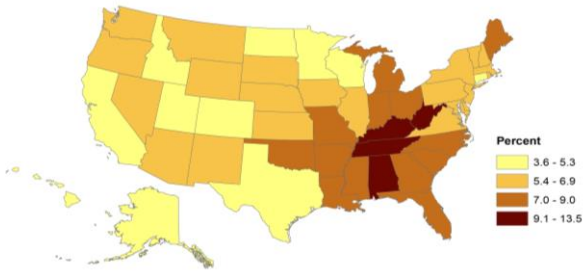


Figure 28B. BRFSS 2014 survey respondents who reported that they were diagnose with COPD (natural breaks). Arizona is the second-highest category for COPD when compared to the nation.

Figure 28C (see below) shows similar levels of COPD among Arizonans by gender for 2014.

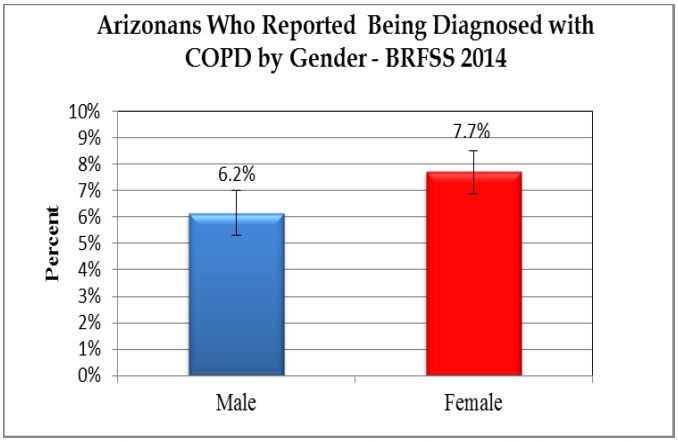


Figure 28C. Arizona BRFSS 2014 survey repondents who reported having COPD by gender.

[85] Cayley WE Jr. Use of inhaled corticosteroids to treat stable COPD. Am Fam Physician. 2008 Jun 1;77(11):1532-3

[86] National Clinic Guideline Centre (UK). Management of Chronic Obstructive Pulmonary Disease in Adults in Primary and Secondary Care. London: Royal College of Physicians (UK); 2010 Jun.

Arizonans Diagnosed with Chronic Obstructive Pulmonary Disease (COPD)				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**6.4%**	53		
Arizona	**6.9%**	1417	6.3%	7.5%
Male	6.2%	500	5.3%	7.0%
Female	7.7%	917	6.9%	8.5%
18-24	1.0%	7	0.2%	1.8%
25-34	3.5%	24	1.8%	5.1%
35-44	5.0%	57	3.4%	6.6%
45-54	6.3%	136	4.8%	7.7%
55-64	11.0%	343	9.5%	12.5%
65+	12.7%	850	11.6%	13.8%
Married	6.1%	556	5.3%	6.9%
Divorced	10.1%	304	8.4%	11.9%
Widowed	16.4%	356	14.0%	18.7%
Separated	11.5%	35	6.0%	17.0%
Never Married	4.0%	116	2.8%	5.2%
Unmarried Couple	6.3%	38	3.2%	9.4%
Less than high school	9.2%	145	6.9%	11.4%
High School/GED	7.4%	390	6.2%	8.6%
Some College/Technical School	7.8%	513	6.8%	8.8%
College/Technical School Grad	4.0%	360	3.3%	4.6%
Employed for Wages	2.8%	169	2.1%	3.4%
Self Employed	5.0%	51	2.5%	7.4%
Out of Work	7.7%	60	4.7%	10.7%
Homemaker	5.7%	76	3.7%	7.7%
Student	1.7%	9	0.1%	3.4%
Retired	12.0%	740	10.9%	13.2%
Unable to Work	24.8%	291	20.8%	28.9%
Less than $10,000	11.0%	117	7.6%	14.5%
$10,000 to $14,999	12.0%	129	8.6%	15.5%
$15,000 to $19,999	8.1%	125	5.9%	10.2%
$20,000 to $24,999	9.8%	178	7.4%	12.1%
$25,000 to $34,999	8.6%	152	6.2%	11.0%
$35,000 to $49,999	6.5%	182	4.9%	8.1%
$50,000 to $74,999	5.2%	142	3.8%	6.5%
Above $75,000	2.7%	136	2.0%	3.4%
White Non-Hispanic	8.6%	1195	7.9%	9.4%
Black/African American	7.7%	45	4.3%	11.1%
Hispanic	3.6%	96	2.4%	4.7%
Asian/Pacific Islander	2.3%	5	0.0%	5.0%
American Indian Non-Hispanic	5.3%	30	2.8%	7.9%
Other	8.8%	46	4.8%	12.8%

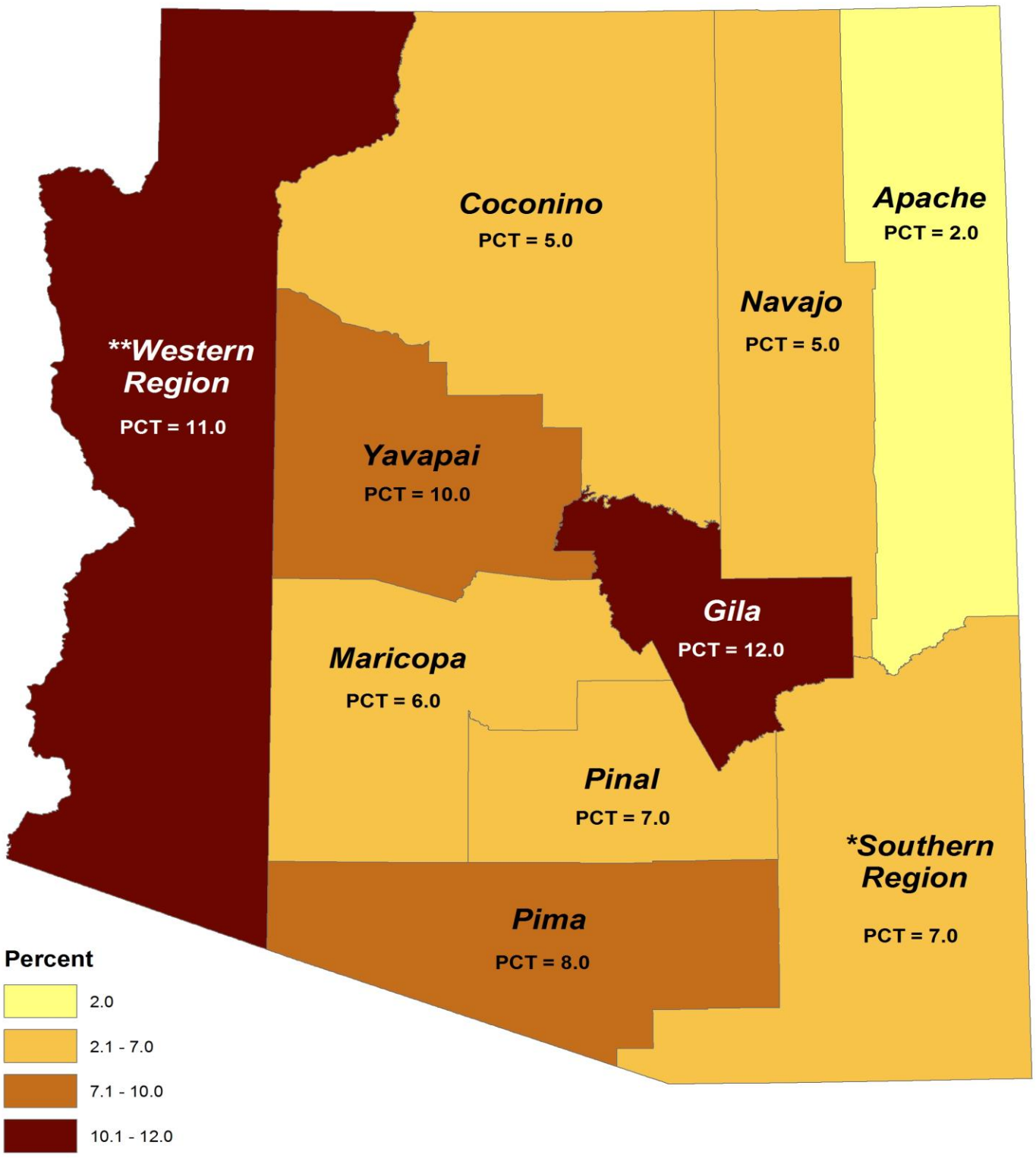
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions & Limitations: Chronic Obstructive Pulmonary Disease (COPD)

The table to the left displays the proportions of Arizonans who reported that someone in the health profession told them that they had COPD. The data are reported by sex, age, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Reporting Being Diagnosed With Chronic Obstructive Pulmonary Disease (COPD), by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Cardiovascular: Heart Attack

Cardiovascular disease remains the leading cause of death in the United States. The 2011 national mortality data (the most current available) shows that heart disease is the leading cause of death in the U.S. There were 596,339 deaths related to heart disease nationwide. It is estimated that 173.7 deaths per 100,000 were attributed to heart disease, after adjusting for age. Myocardial infarctions, also known as heart attacks, contributed to 119,732 deaths nationwide. About 20.1% of all heart disease deaths were due to heart attacks.[87] In 2014, 4.4% percent of Arizonans surveyed reported that a health professional told them they had a heart attack, similar to the national median (see Figure 29A).

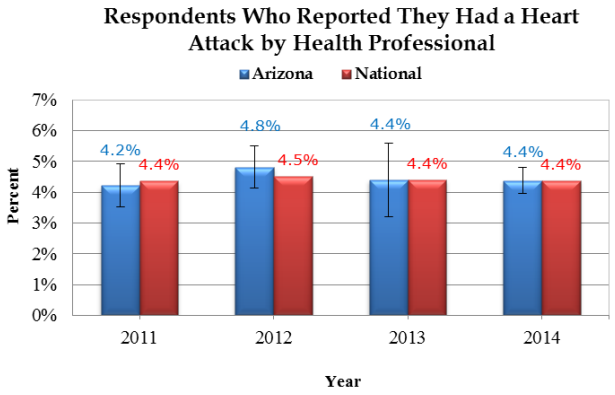


Figure 29A. Arizona and National 2011-2014 BRFSS respondents who reported a health care professional told them they had a heart attack.

Arizona is in the second lowest category for survey respondents reporting they had a heart attack when compared to the nation (see Figure 29B).

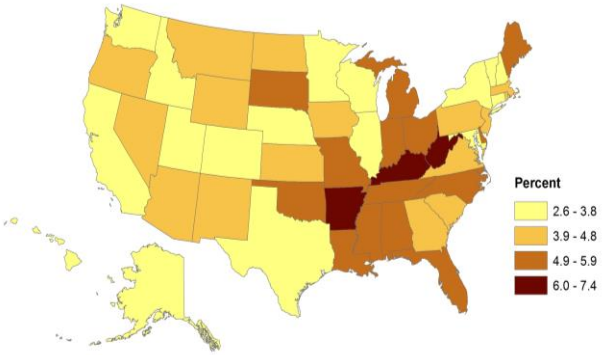


Figure 29B. BRFSS 2014 survey respondents who reported that a health care professional diagnosed told them they had suffered from a heart attack. Figure 29B map displays (natural breaks).

In 2014, there were 20,754 heart attack-related emergency department visits and inpatient hospitalizations, 1,301 of whom died in the hospital. The visits accrued charges totaling more than $1.9 billion. The average length of stay ranged from 4.3 to 5.8 days see (Table 12A).

Arizona Hospital Encounters, both Emergency & Admissions for Heart Attacks				
Payer Type	Number of Discharges	Died	Total Charges	Average Length of Stay (Days)
Charity	18	3	$2,431,862	6.9
Medicaid	2,158	86	$209,181,264	5.4
Medicare	13,162	999	$1,215,007,368	5.3
Other	603	45	$61,051,799	5.0
Private Insurance	4,149	131	$426,314,201	4.5
Self-Pay	871	69	$82,887,835	4.2
Total	**20,961**	**1,333**	**$1,996,874,329**	

Table 12 A. Arizona Inpatient & Emergency Department Hospital Discharge's HDD 2014 Arizona inpatient and emergency department hospital discharges related to heart attacks. Heart attacks were defined by the following ICD-9 codes: 410.00, 410.01, 410.02, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92 411.0, and 411.1.

Hospitalizations due to heart attacks can be specified in three different ways: newly diagnosed (considered an initial episode), subsequent episode if the patient requires additional observation within eight weeks of the initial episode, and unspecified episode of care if there is insufficient data.[88]. Of the 20,754 discharges, 14,892 (71.8%) were initial heart attack episodes, 1,431 (6.9%) were subsequent episodes, and 364 (1.7%) were unspecified episodes. Initial episodes had the greatest economic impact.

The 2014 hospital discharge data shows that the majority of heart attack-related hospitalizations were initial 14,892 episodes (see Figure 29C).

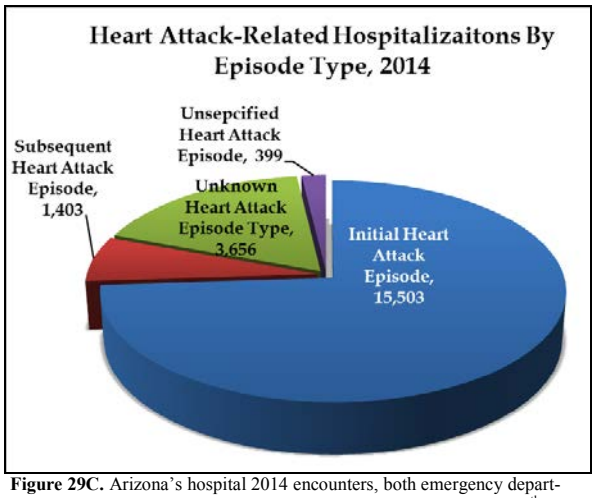


Figure 29C. Arizona's hospital 2014 encounters, both emergency department and admissions, which contained the ICD-9 code 410 with the 5th digit sub-classification of the Episode Specification- Initial: 1, Subsequent: 2, Unspecified: 0. HDD 2014 Arizona inpatient and emergency department hospital discharges related to heart attacks. Heart attacks were defined by the following ICD-9 codes: 410.00, 410.01, 410.02, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92 411.0, and 411.1.

87. Hoyert DL, Xu JQ. Deaths: Preliminary data for 2011. National vital Statistics reports; vol 61 no 6. Hyattsville, MD: National Center for Health Statistics. 2012.

88. Optum. 2013 ICD-9-CM Expert for hospitals and Payers-Volumes 1,2 & 3. OptumInsight, Inc. 2012.

Arizona Respondents Who Reported a Health Care Professional Told Them That They Had a Heart Attack				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**4.4%**	53		
Arizona	**4.4%**	986	3.9%	4.8%
Male	5.4%	565	4.8%	6.1%
Female	3.4%	421	2.8%	3.9%
18-24	1.1%	3	0.0%	2.4%
25-34	0.9%	8	0.1%	1.7%
35-44	1.4%	21	0.7%	2.1%
45-54	3.3%	69	2.2%	4.4%
55-64	6.1%	184	5.0%	7.3%
65+	11.4%	701	10.3%	12.5%
Married	4.9%	516	4.3%	5.5%
Divorced	5.0%	143	3.6%	6.4%
Widowed	11.0%	245	9.0%	13.0%
Separated	5.6%	18	1.7%	9.4%
Never Married	1.3%	42	0.5%	2.2%
Unmarried Couple	2.0%	12	0.4%	3.7%
Less than high school	5.2%	88	3.5%	6.8%
High School/GED	4.7%	266	3.9%	5.5%
Some College/Technical School	4.4%	313	3.7%	5.1%
College/Technical School Grad	3.5%	311	3.0%	4.1%
Employed for Wages	1.6%	97	1.1%	2.2%
Self Employed	2.5%	36	1.2%	3.9%
Out of Work	1.7%	18	0.4%	2.9%
Homemaker	2.1%	44	1.3%	2.9%
Student	0.2%	1	0.0%	0.5%
Retired	10.6%	610	9.5%	11.7%
Unable to Work	14.4%	165	11.3%	17.5%
Less than $10,000	5.0%	48	2.5%	7.5%
$10,000 to $14,999	5.8%	78	3.8%	7.7%
$15,000 to $19,999	5.1%	93	3.7%	6.6%
$20,000 to $24,999	4.9%	99	3.4%	6.4%
$25,000 to $34,999	4.4%	100	3.2%	5.5%
$35,000 to $49,999	5.9%	160	4.4%	7.3%
$50,000 to $74,999	3.8%	102	2.7%	4.9%
Above $75,000	2.5%	130	2.0%	3.1%
White Non-Hispanic	4.9%	805	4.4%	5.3%
Black/African American	4.7%	27	2.3%	7.0%
Hispanic	3.4%	88	2.3%	4.6%
Asian/Pacific Islander	1.0%	3	0.0%	2.2%
American Indian Non-Hispanic	3.1%	25	1.3%	4.8%
Other	9.4%	38	5.1%	13.6%

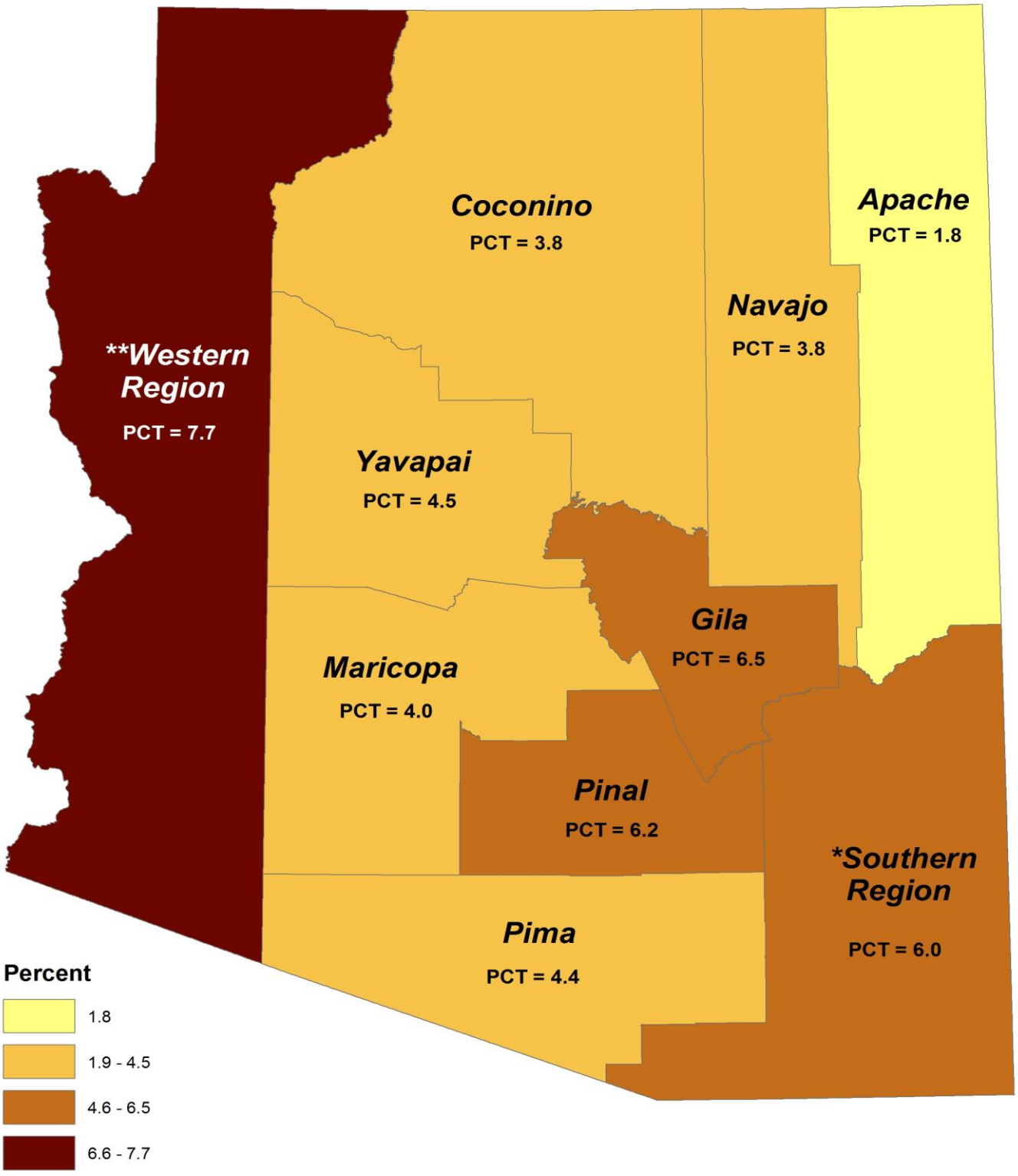
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions and Limitations: Cardiovascular: Heart Attack

The table to the left displays the proportions of Arizonans who reported that a health professional told them that they suffered from a heart attack. The data are reported by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Being Told by a Health Professional That They Suffered a Heart Attack, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Cardiovascular: Angina

Angina is chest pain or discomfort brought on by reduced blood flow to the heart. Angina is not a disease, but rather a symptom of coronary heart disease (CHD). CHD is a disease where plaque, a buildup of cholesterol and white blood cells, restricts blood flow to the heart itself. The reduction in oxygen to the heart results in angina and in the worst case a heart attack. The major types of angina are as follows:[89, 90]

- **Stable Angina:** The most common form of angina. Pain occurs when the heart works harder than usual and follows a regular pattern.
- **Unstable Angina:** Does not follow a pattern and can occur more often and be more severe than stable angina.
- **Variant Angina:** Rare occurrence, brought on by a spasm in the coronary artery.
- **Microvascular Angina:** Also known as Cardiac Syndrome X, it is a small vessel disease and pain can last up to 10 minutes per episode.

Angina is the result of a progressive disease; CHD is a form of atherosclerosis that affects the coronary arteries. Over time a plaque of fat and cholesterol builds up on the artery walls (see Figure 30A). Plaque buildup can begin as early as infancy, and it continues to progress throughout life. Complications tend to develop later in life; the most severe of which is heart attack and stroke. Atherosclerosis has been shown to develop in healthy individuals. However, risk factors such as eating foods high in unhealthy cholesterol, having high blood pressure, having Type I or Type II diabetes, being overweight or obese, and eating an unhealthy diet will accelerate its progression.[91]

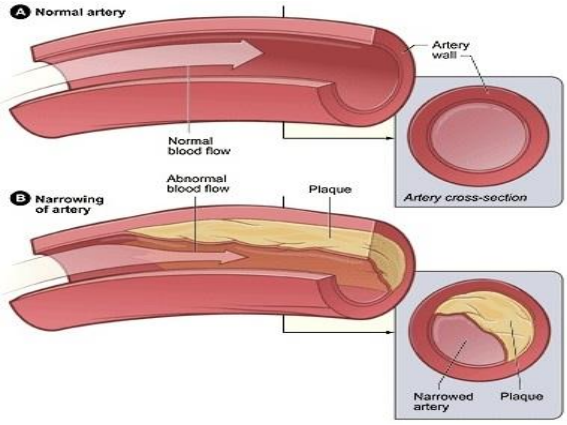


Figure 30A. Difference between a normal artery and an atherosclerotic artery.[94]

Arizona had a lower prevalence or was equal to the national prevalence. In 2014, 4.1% of Arizonans were diagnosed with angina, which was similar to the national (see Figure 30B).

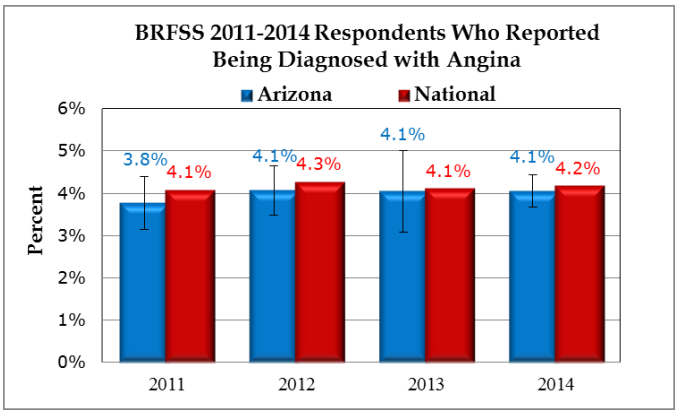


Figure 30B. Arizona and National 2011-2014 BRFSS respondents who reported a health care professional told them they had angina.

When compared to the nation as a whole, Arizona angina levels are in the second lowest class for individuals reporting being diagnosed with angina (see Figure 30C).

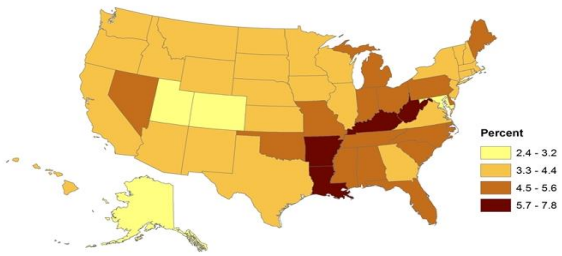


Figure 30C. BRFSS 2014 survey respondents who reported that a health professional told them they had angina. Figure 30C displays U.S. map (natural breaks).

In 2014, there were 2,189 emergency department visits and inpatient hospitalizations related to angina. Total charges accrued were nearly $151.3 million with an average length of stay ranging from 3.7 to 7.0 days (see Table 13).

Angina Related Inpatient & Emergency Department Discharges

Payer Type	Number of Discharges	Charges	Average Length of Stay (Days)
Charity	2	$278,609	7.0
Medicaid	276	$17,374,591	4.4
Medicare	1,407	$98,811,580	4.4
Other	74	$5,087,978	4.1
Private Insurance	378	$26,433,686	4.0
Self-Pay	52	$3,312,326	3.7
Total	**2,189**	**$151,298,770**	

Table 13. Arizona 2014 emergency department and inpatient hospitalizations related to angina. Angina was defined by the following ICD-9 codes: 413.0, 413.1, and 413.9.

89. National Institutes of Health. National Heart, Lung, and Blood Institute. Explore Coronary Heart Disease: What is Coronary Heart Disease? Updated Oct 23, 2015. https://www.nhlbi.nih.gov/health/health-topics/topics/cad/
90. MayoClinic.org. Diseases and Conditions: Small vessel disease. Accessed Jan 20, 2013. http://www.mayoclinic.org/diseases-conditions/small-vessel-disease/home/ovc-20198376
96. National Institutes of Health. National Heart, Lung, and Blood Institute. Health Topics: What is Atherosclerosis? UpdatedAug 22, 2015. https://www.nhlbi.nih.gov/health/health-topics/topics/atherosclerosis/MayoClinic.org. Diseases and Conditions: Small vessel disease. Accessed Jan 20, 2013. http://www.mayoclinic.org/diseases-conditions/small-vessel-disease/home/ovc-20198376

Health Conditions and Limitations: Cardiovascular: Angina

The table to the left displays the proportions of Arizonans who reported that a health professional told them that they suffered from angina. The data are reported by age categories, marital status, educational attainment, employment status, income and race/ethnicity.

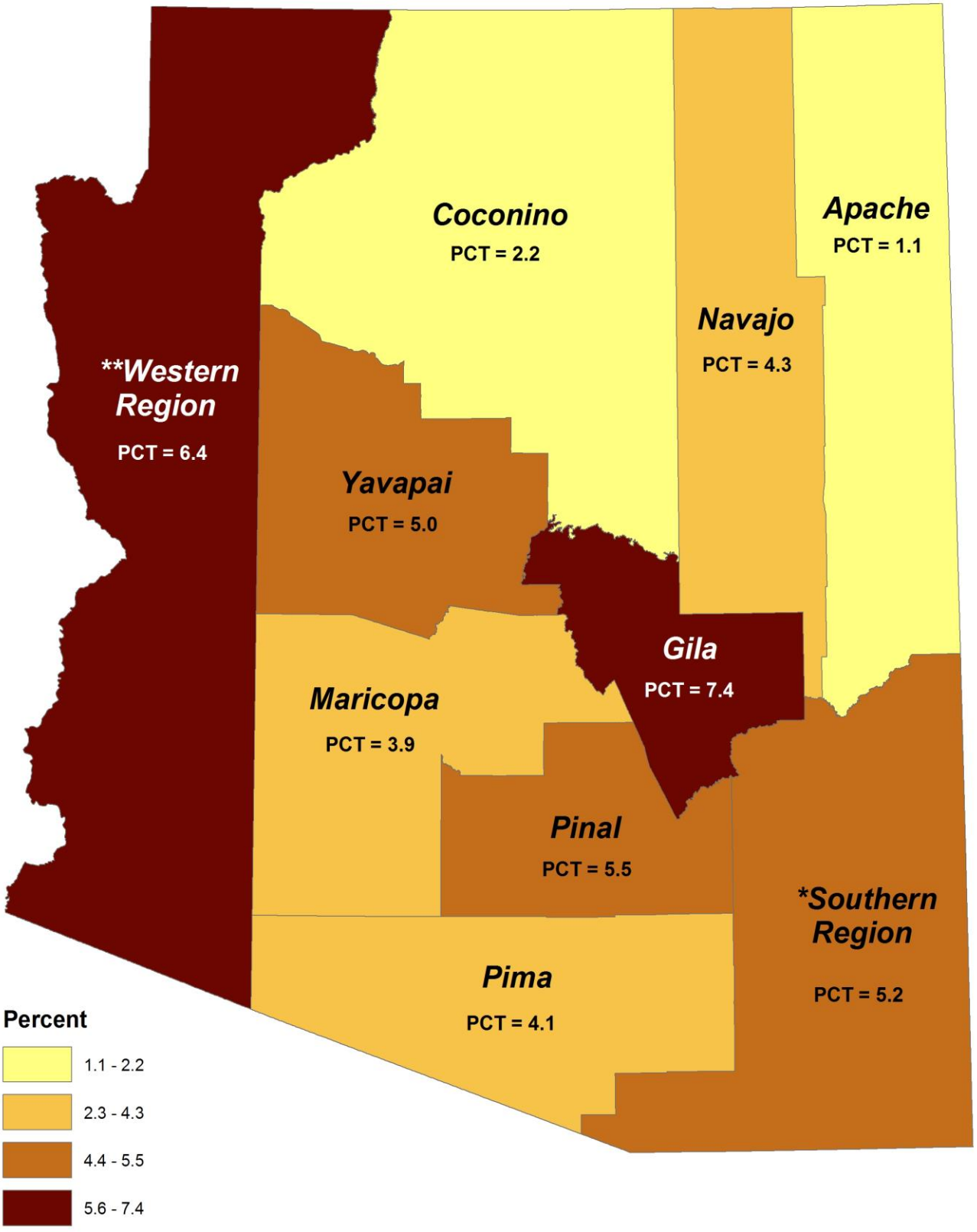
The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizonans Who Reported A Health Care Professional Told Them That They had Suffered From Angina

Characteristic	Percent	N*	Confidence Interval	
			Lower Mean	Upper Mean
National	**4.2%**	53		
Arizona	**4.1%**	1024	3.7%	4.4%
Male	4.7%	545	4.2%	5.3%
Female	3.4%	479	2.9%	3.9%
18-24	0.0%	1	0.0%	0.1%
25-34	0.3%	3	0.0%	0.7%
35-44	1.4%	10	0.4%	2.4%
45-54	2.5%	66	1.7%	3.4%
55-64	7.1%	213	5.8%	8.4%
65+	11.0%	731	10.0%	12.0%
Married	4.8%	534	4.2%	5.4%
Divorced	4.7%	153	3.5%	5.8%
Widowed	8.9%	245	7.4%	10.4%
Separated	3.3%	14	0.3%	6.3%
Never Married	1.2%	57	0.7%	1.6%
Unmarried Couple	2.0%	11	0.4%	3.6%
Less than high school	3.9%	70	2.5%	5.2%
High School/GED	3.9%	252	3.2%	4.6%
Some College/Technical School	4.5%	329	3.8%	5.1%
College/Technical School Grad	3.9%	366	3.3%	4.4%
Employed for Wages	1.7%	120	1.2%	2.1%
Self Employed	1.5%	32	0.8%	2.1%
Out of Work	1.0%	19	0.4%	1.7%
Homemaker	2.6%	48	1.4%	3.8%
Student	0.2%	3	0.0%	0.6%
Retired	10.0%	634	9.0%	11.0%
Unable to Work	12.6%	156	9.7%	15.6%
Less than $10,000	3.5%	53	2.1%	5.0%
$10,000 to $14,999	4.8%	65	3.1%	6.5%
$15,000 to $19,999	4.1%	74	2.5%	5.6%
$20,000 to $24,999	4.5%	101	3.2%	5.8%
$25,000 to $34,999	4.5%	99	3.1%	5.9%
$35,000 to $49,999	5.6%	159	4.2%	7.0%
$50,000 to $74,999	4.0%	124	2.9%	5.1%
Above $75,000	2.9%	167	2.4%	3.5%
White Non-Hispanic	5.0%	867	4.5%	5.4%
Black/African American	3.0%	17	1.1%	5.0%
Hispanic	2.4%	80	1.5%	3.2%
Asian/Pacific Islander	1.0%	5	0.0%	2.2%
American Indian Non-Hispanic	3.4%	20	1.3%	5.6%
Other	6.1%	35	3.0%	9.2%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Arizona Respondents Who Reported That a Health Professional Told Them They Suffered from Angina, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Stroke

"Cerebrovascular diseases, also known as strokes, are medical emergencies. A stroke occurs when blood stops flowing to the brain, which causes the affected portion to die. Strokes are the fourth leading cause of death in the U.S. in adults; strokes are considered a major cause of disability. The most recent national mortality data show that the main types of strokes are:

- **Ischemic Stroke:** an artery that supplies blood to the brain is blocked; 85% of all strokes are ischemic.
- **Hemorrhagic Stroke:** an artery in the brain leaks or ruptures
- **Transient Ischemic Attack (TIA):** blood flow to the brain is blocked for a short period of time (< 5 minutes)
  - Often referred to as a "mini-stroke";
  - Very similar to ischemic strokes as they are often caused by blood clots; and
  - They are a medical emergency." [92]

BRFSS 2014, 3% of Arizonans surveyed reported they have suffered from a stroke; the same as the national median (see Figure 31A).

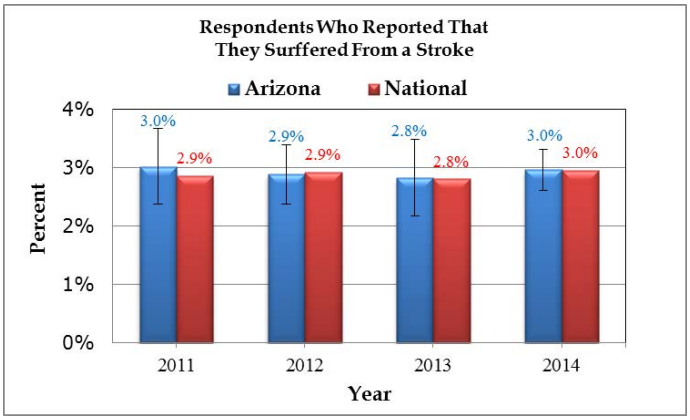


Figure 31A. Arizona and National 2011-2014 BRFSS respondents reported having suffered from a stroke.

Although Arizona had the same prevalence of stroke when compared to the nation, it fell into the second lowest class when examining all the states (see Figure 31B).

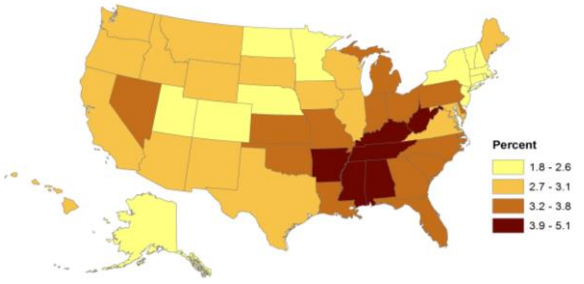


Figure 31B. BRFSS 2014 survey respondents who reported they had a stroke. Figure 31B displays U.S. map (natural breaks).

In 2014, there were 13,557 hemorrhagic or ischemic stroke-related hospital discharges (non-injury), 992 of whom died in the hospital. The stroke-related discharges accrued more than $1 billion in charges and had an average length of stay ranging from 5.3 to 10.3 days (see Table 14).

Stroke Related Inpatient & Emergency Department Discharges

Payer Type	Number of Discharges	Died	Total Charges	Average Length of Stay (Days)
Charity	7	0	$702,051	9.3
Medicaid	1,745	140	$213,937,107	9.3
Medicare	9,469	633	$660,984,873	5.5
Other	377	41	$43,283,773	7.9
Private Insurance	2,583	178	$268,510,345	6.6
Self-Pay	559	72	$53,049,703	7.2
Total	**14,740**	**1,064**	**$1,240,467,852**	

Table 14. Emergency department and inpatient hospitalizations related to strokes in 2014. Strokes were defined by the following ICD-9 codes for Ischemic: 433.01, 433.21, 433.81, 433.91, 434.01, 434.11, and 434.91; Hemorrhagic: 430, 431, 432.0, 432.1 and 432.9.

The majority (70%) of stroke-related hospitalizations incidents were ischemic. Of the stroke related hospitalizations 24% were due to hemorrhage and about 6% were discharged with both ischemic and hemorrhagic stroke (see Figure 31C).

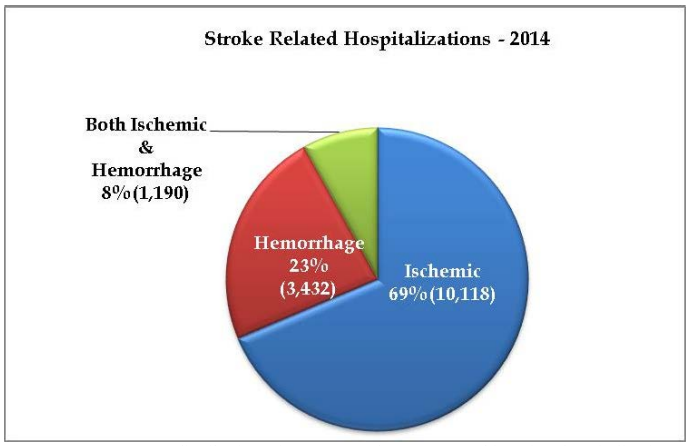


Figure 31C. In 2014, distribution of emergency department and inpatient hospitalizations related to strokes. ICD-9 codes for Ischemic: 433.01, 433.21, 433.81, 433.91, 434.01, 434.11, 434.91 and Hemorrhagic: 430, 431, 432.0, 432.1 and 432.9.

The information provided only offers a glimpse of the prevalence and economic burden caused by strokes. Due to the nature of the BRFSS data, individuals who died from strokes cannot be incorporated into the state and national prevalence. Furthermore, days spent in the hospital are not a sufficient measure to fully describe the impact a stroke can have on an individual's life because strokes can alter a person's ability to think, speak, taste, see, feel, and move.

92 National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke Prevention. CDC: Stroke. Updated Dec 6, 2013. http://www.cdc.gov/stroke/types_of_stroke.htm

Arizona Respondents Who Reported Having Suffered from a Stroke				
			Confidence Interval	
Characteristic	Percent	N*	Lower Mean	Upper Mean
National	**3.0%**	53		
Arizona	**3.0%**	695	2.6%	3.3%
Male	3.1%	293	2.5%	3.6%
Female	2.8%	402	2.4%	3.3%
18-24	0.2%	1	0.0%	0.6%
25-34	0.7%	9	0.1%	1.4%
35-44	1.1%	16	0.4%	1.8%
45-54	2.2%	51	1.3%	3.1%
55-64	3.4%	98	2.5%	4.3%
65+	8.4%	520	7.4%	9.4%
Married	2.8%	296	2.4%	3.3%
Divorced	3.7%	115	2.7%	4.7%
Widowed	9.0%	210	7.2%	10.9%
Separated	2.9%	14	0.5%	5.2%
Never Married	1.1%	40	0.5%	1.6%
Unmarried Couple	3.2%	14	0.8%	5.6%
Less than high school	3.9%	69	2.5%	5.3%
High School/GED	3.0%	180	2.3%	3.6%
Some College/Technical School	2.8%	210	2.3%	3.4%
College/Technical School Grad	2.6%	228	2.1%	3.1%
Employed for Wages	0.8%	57	0.5%	1.1%
Self Employed	0.9%	17	0.3%	1.6%
Out of Work	0.8%	13	0.3%	1.4%
Homemaker	1.7%	31	0.8%	2.5%
Student	0.2%	2	0.0%	0.5%
Retired	7.4%	432	6.5%	8.4%
Unable to Work	11.8%	132	8.7%	14.8%
Less than $10,000	4.2%	44	2.2%	6.2%
$10,000 to $14,999	5.7%	63	3.3%	8.2%
$15,000 to $19,999	4.2%	71	2.8%	5.7%
$20,000 to $24,999	3.5%	69	2.3%	4.7%
$25,000 to $34,999	2.3%	62	1.6%	3.1%
$35,000 to $49,999	2.9%	96	2.0%	3.7%
$50,000 to $74,999	2.7%	75	1.7%	3.7%
Above $75,000	1.3%	76	0.8%	1.7%
White Non-Hispanic	2.9%	544	2.6%	3.3%
Black/African American	6.9%	29	3.2%	10.6%
Hispanic	2.2%	66	1.5%	3.0%
Asian/Pacific Islander	1.0%	3	0.0%	2.4%
American Indian Non-Hispanic	4.4%	22	2.1%	6.8%
Other	6.8%	31	3.1%	10.4%

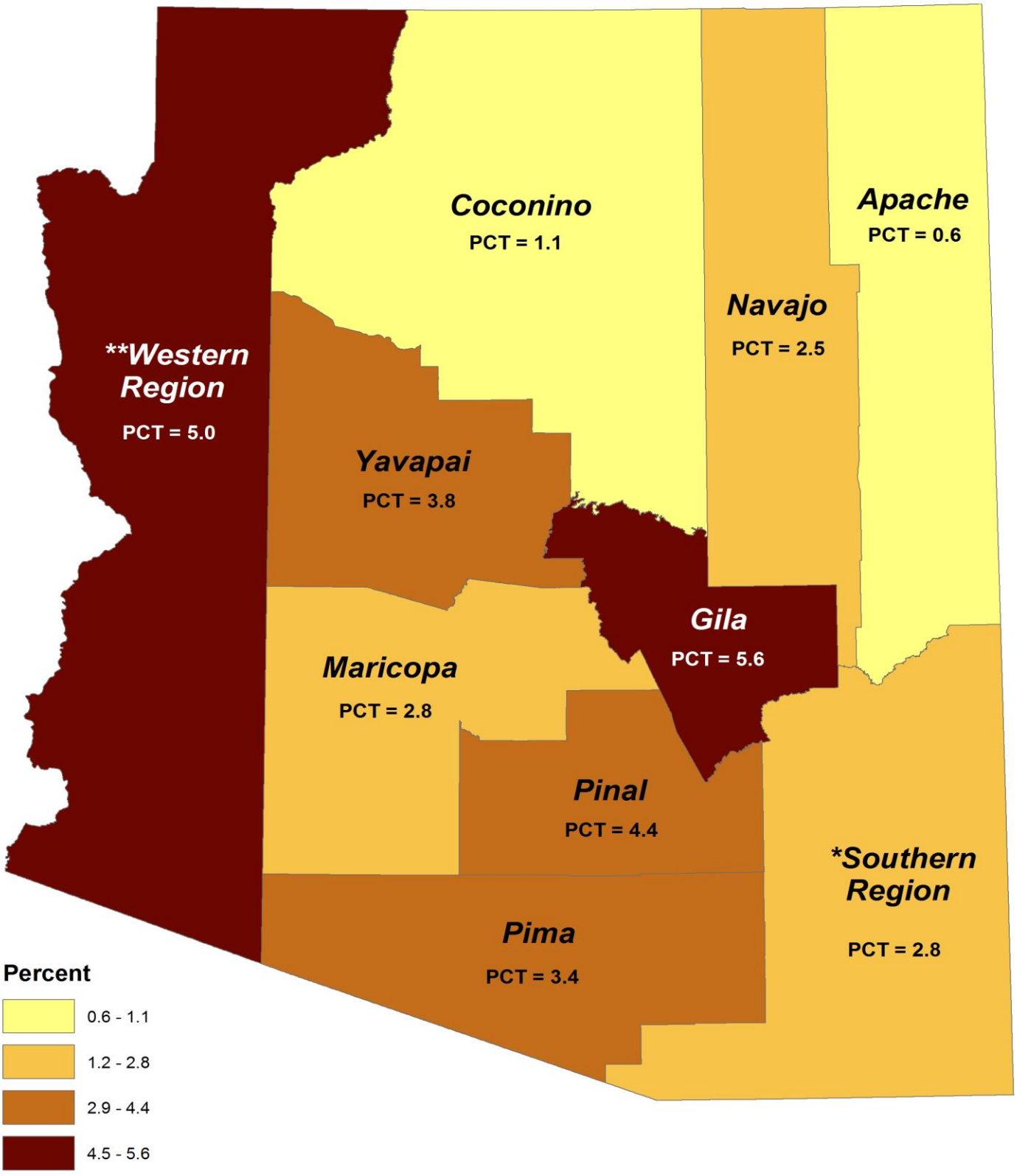
Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Health Conditions and Limitations: Stroke

The table to the left displays the proportions of Arizonans who reported that a health professional told them that they suffered from a stroke. The data are reported by sex, age, marital status, educational attainment, employment status, income and race/ethnicity.

The "Nationwide" estimates shown are median values across all states, not means.
"National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizona Respondents Who Reported Being Told They Had Suffered a Stroke, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Health Conditions and Limitations: Asthma

Asthma is a chronic respiratory disease characterized by episodes or attacks of impaired breathing. Symptoms are caused by inflammation and narrowing of small airways and may include shortness of breath, coughing, wheezing, and chest pain. Disease severity ranges from mild with occasional signs to severe with persistent symptoms that impact quality of life. However, even people with mild disease may suffer severe attacks. Common attack triggers include airway irritants (e.g. tobacco smoke and air pollution), allergens, respiratory infections, stress, and exercise.[93] Therefore, continued monitoring of asthma prevalence is of great importance. In 2014, 14.3% of Arizonans surveyed reported being diagnosed with asthma, which is .5% higher than the national prevalence. (see Figure 32A).

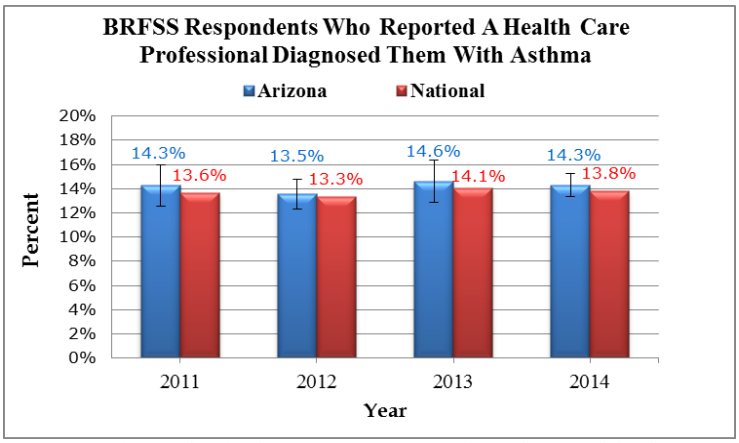


Figure 32A. Arizona and National 2011-2014 BRFSS respondents who reported that they have been diagnosed with asthma.

Although, Arizona had a higher prevalence of asthma when compared to the nation, it was not the state with the highest prevalence. When comparing Arizona to all the states in the U.S. the data shows that Arizona falls into the third highest class for individuals reporting that a health care professional has diagnosed with them asthma (see Figure 32B).

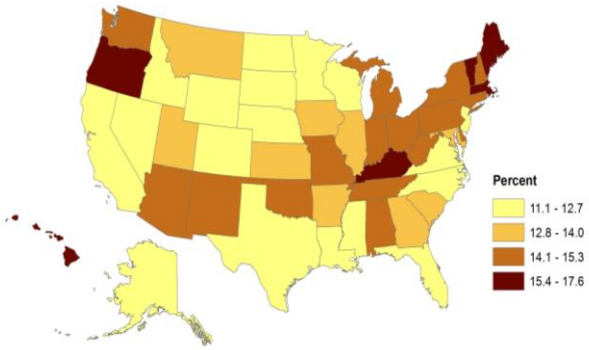


Figure 32B. BRFSS 2014 survey respondents who reported that a health care professional diagnosed them with asthma. Figure 32B displays U.S. map (natural breaks).

Asthma is estimated to cost the U.S. more than $ 56 billion a year. The direct costs are estimated to be $50.1 billion and $5.9 billion for indirect costs. In 2014, there were 58,438 asthma-related emergency department visits and inpatient hospitalizations in Arizona. The average length of stay increased as age increased. The range was 4.1 days to 4.9 days. The asthma related discharges accounted for more than $2.6 billion dollars in charges (see Table 15).

Asthma Related Inpatient & Emergency Department Discharges

Age	Number of Discharges	Charges	Average Length of Stay (Days)
<18	5,794	$174,363,565	4.1
18-24	4,391	$140,017,719	4.2
25-39	10,112	$348,502,841	4.5
40-54	11,423	$528,869,083	4.8
55+	26,718	$1,469,135,796	4.9
Total	**58,438**	**$2,660,889,004**	

Table 15. In 2014, emergency department and inpatient hospitalizations related to asthma reported 58,438 total discharges. Asthma was defined using the following ICD-9 codes: 493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.20, 493.21, 493.22, 493.81, 493.82, 493.90, 493.91, and 493.92.

On May 31, 2012, the U.S. President's Task Force on Environmental Health Risk and Safety Risks to Children released the Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities. The document outlines the racial and socioeconomic disparities that exist in the U.S. regarding asthma burden. The disparities listed by the Task Force shows that minority children and children from impoverished families are disproportionately affected by asthma. Furthermore, minority children are less likely to be prescribed or receive the appropriate treatment.[94] In the Arizona BRFSS 2014 survey, reported asthma among survey respondents was significantly lower among Hispanics and Asians when compared to the state mean. Other race/ethnicity groups and risk factor groups such as poverty were not significantly different from the state mean (see Figure 32C).

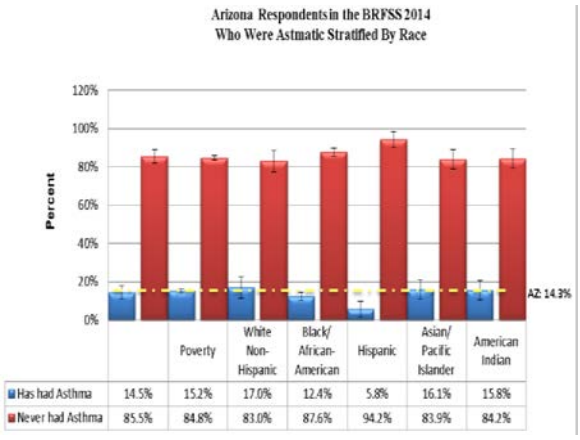


Figure 32C. BRFSS 2014 respondents who reported having asthma stratified by race.

93. National Asthma Education and Prevention Program, Third Expert Panel on the Diagnosis and Management of Asthma. Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. Bethesda (MD): National Heart, Lung, and Blood Institute (US); 2007 Aug. Available from: http://www.ncbi.nlm.nih.gov/books/NBK7232/

94. EPA. President's Task Force on Environmental Health Risks and Safety Risks to Children: Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities. May 2012. https://www.epa.gov/sites/production/files/2014-08/documents/federal_asthma_disparities_action_plan.pdf

Health Conditions and Limitations: Asthma

The table to the left displays the proportions of Arizonans who reported that they were diagnosed with asthma by age categories, marital status, educational attainment, employment status, income and race.

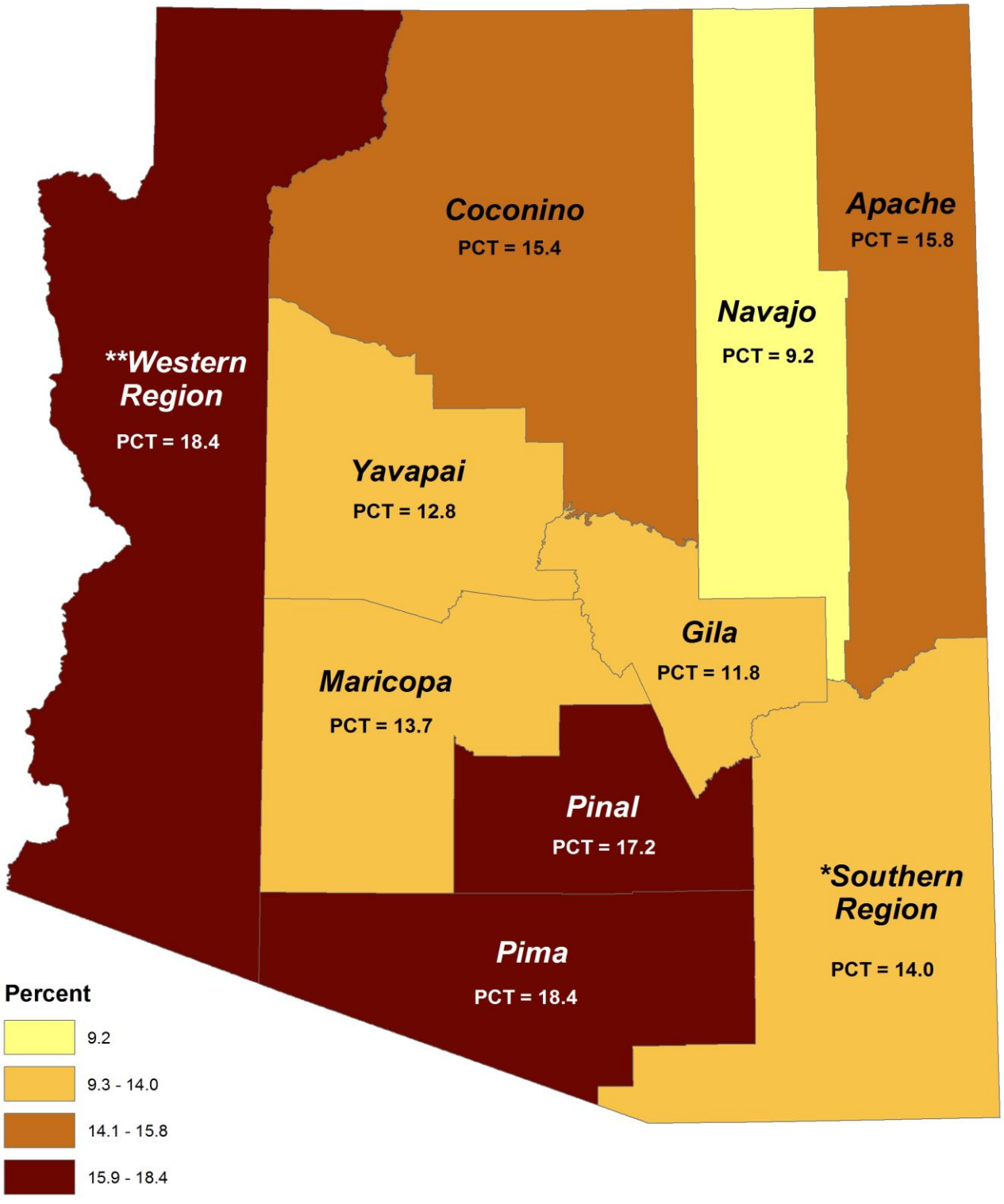
The "Nationwide" estimates shown are median values across all states, not means. "National" level estimates reported here use medians because no national stratum was defined in the 2014 BRFSS survey. Survey results at the national level were not adjusted or weighted to produce a national mean result.

Arizonans BRFSS Respondents Who Reported That They Have Been Diagnosed With Asthma

Characteristic	Percent	N*	95% Confidence Interval	
			Lower Mean	Upper Mean
National	**13.8%**	53		
Arizona	**14.3%**	2102	13.3%	15.3%
Male	12.0%	643	10.6%	13.4%
Female	16.6%	1459	15.2%	17.9%
18-24	17.4%	89	13.6%	21.3%
25-34	16.0%	140	12.8%	19.1%
35-44	15.3%	229	12.8%	17.8%
45-54	12.5%	322	10.8%	14.3%
55-64	13.1%	472	11.5%	14.6%
65+	12.4%	850	11.3%	13.5%
Married	12.5%	985	11.3%	13.6%
Divorced	14.3%	352	12.0%	16.6%
Widowed	15.6%	341	13.3%	18.0%
Separated	18.5%	49	11.3%	25.8%
Never Married	17.8%	296	14.9%	20.6%
Unmarried Couple	13.0%	56	8.3%	17.6%
Less than high school	12.8%	155	9.8%	15.8%
High School/GED	14.3%	470	12.3%	16.2%
Some College/Technical School	16.0%	671	14.2%	17.7%
College/Technical School Grad	13.3%	790	12.0%	14.6%
Employed for Wages	13.3%	616	11.8%	14.8%
Self Employed	10.5%	112	7.4%	13.5%
Out of Work	18.4%	110	13.6%	23.2%
Homemaker	12.1%	143	9.0%	15.2%
Student	18.2%	42	11.7%	24.7%
Retired	12.0%	750	10.8%	13.1%
Unable to Work	27.5%	301	23.1%	31.8%
Less than $10,000	19.9%	139	15.0%	24.9%
$10,000 to $14,999	14.1%	125	10.2%	18.1%
$15,000 to $19,999	14.4%	149	10.7%	18.2%
$20,000 to $24,999	15.7%	205	12.2%	19.1%
$25,000 to $34,999	16.1%	204	12.5%	19.7%
$35,000 to $49,999	15.3%	248	12.2%	18.3%
$50,000 to $74,999	12.7%	262	10.4%	15.1%
Above $75,000	12.4%	420	10.7%	14.1%
White Non-Hispanic	15.2%	1649	14.1%	16.3%
Black/African American	17.0%	71	11.3%	22.7%
Hispanic	12.4%	232	10.1%	14.7%
Asian/Pacific Islander	5.8%	14	1.8%	9.7%
American Indian Non-Hispanic	16.1%	64	11.2%	21.0%
Other	15.8%	72	10.7%	20.8%

Use caution in interpreting cell sizes less than 50. N* is unweighted
National N is 53 = all 50 states, DC and Territories.

Arizona Respondents Who Reported Being Told They Suffered From Asthma, by County & Region, BRFSS 2014



**Western Region contains: Mohave, La Paz and Yuma Counties

*Southern Region contains: Santa Cruz, Cochise, Graham and Greenlee Counties

Arizona BRFSS 2014 Respondent Profile

ARIZONA 2014 RESPONDENT PROFILE					
GROUPS	**PERCENT****	**N***	**GROUPS**	**PERCENT****	**N***
TOTAL	100	14869	**EMPLOYMENT**		
SEX			Employed for wages	43.9	4772
Male	49.3	5985	Self-employed	8.0	1005
Female	50.7	8884	Out of work	6.6	647
AGE			Homemaker	8.2	1043
18-24	13.0	485	Student	5.3	256
25-34	17.7	935	Retired	19.7	5870
35-44	16.6	1462	Unable to work	7.4	1076
45-54	16.5	2164	**INCOME**		
55-64	15.6	3238	<$25,000	28.0	3575
65+	20.6	6585	$25,000-$34,999	9.6	1412
MARITAL STATUS			$35,000-$49,999	12.8	1943
Married	51.0	7740	$50,000-$74,999	13.4	2000
Divorced	11.7	2272	$75,000 or more	21.5	3369
Widowed	6.7	2341	**RACE/ ETHNICITY**		
Separated	2.3	250	White, Non-Hispanic	61.2	11514
Never married	22.5	1711	Black	3.9	413
Unmarried couple	5.2	395	Asian/ Pacific Islander	3.1	221
EDUCATION			American Indian	3.7	339
Less than High School	15.3	1130	Hispanic	26.3	2011
High School Graduate/GED	25.1	3464	Other	1.4	371
Some College/Tech School	34.8	4417			
College Grad	23.6	5707			

Source: Arizona 2014 BRFSS Respondent Profile. The weighted number is a percent of weighted sample.
*N is unweighted. Column Percent may not equal 100 percent.

Appendices

Arizona BRFSS Questionnaire, 2014

http://azdhs.gov/documents/preparedness/public-health-staistics/behavioral-risk-factor-surveillance/questionnaires/2014-BRFSS-questionnaire.pdf

Arizona BRFSS Landline and Cell Phone Codebook Report, 2014

http://azdhs.gov/documents/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/code-book/az13code-llcp.pdf

Arizona BRFSS Calculated Variable Data Comparison Report, 2014

http://azdhs.gov/documents/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/additional-resources/AZ13CDCR.pdf

Arizona BRFSS Core Variable Report, 2014

http://azdhs.gov/documents/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/additional-resources/2014-core-variables-report.pdf

Arizona BRFSS Module Questions Data Report, 2014

http://azdhs.gov/documents/preparedness/public-health-statistics/behavioral-risk-factor-surveillance/additional-resources/2014-module-variables-reports.pdf

BRFSS Risk Factors/ Chronic Disease Glossary of Terms

Arthritis Burden

While the word *arthritis* is used by clinicians to specifically mean joint inflammation, it is used in public health to refer more generally to more than 100 rheumatic diseases and conditions that affect joints, the tissues which surround the joint, and other connective tissue. The pattern, severity, and location of symptoms can vary. http://www.cdc.gov/arthritis/basics/general.htm

Alcohol Consumption

According to the *Dietary Guidelines for Americans*,[1] moderate alcohol consumption is defined as having up to one drink per day for women and up to two drinks per day for men. This definition is referring to the amount consumed on any single day and is not intended as an average over several days. http://www.cdc.gov/alcohol/faqs.htm#whatAlcohol

All-Cause Mortality

All-cause mortality is a term used by epidemiologists, or disease-tracking scientists, to refer to death from any cause.

Asthma

The National Heart, Lung, and Blood Institute defines asthma as "…a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role, in particular, mast cells, eosinophil, T lymphocytes, airway macrophages, neutrophils, and epithelial cells. In susceptible individuals, this inflammation causes recurrent episodes of wheezing, breathlessness, chest tightness and coughing, particularly at night or in the early morning. These episodes are usually associated with widespread but variable airflow obstruction that is often reversible either spontaneously or with treatment. The inflammation also causes an associated increase in the existing bronchial hyper-responsiveness to a variety of stimuli" (NHLBI 2003).
http://www.atsdr.cdc.gov/csem/csem.asp?csem=18&po=4

Binge Drinking

Respondents who reported having five or more drinks on an occasion, one or more times in the past month.

Cancer

Respondents who reported having been told by a doctor, nurse, or other health care professional that they had cancer. In addition, cancer survivors reported on the type of cancer they had and if they were in clinical trials. For more than 30 years, excess weight, lack of physical activity, and an unhealthy diet have been considered second only to tobacco use as preventable causes of disease and death in the United States. Since the 1960s, tobacco use has decreased by a third while obesity rates have doubled. http://www.cdc.gov/Features/dsCancerAnnualReport/

Cancer

The special feature section explains how being overweight and not getting enough physical activity increase cancer risk. The following six cancers are associated with being overweight or obese:

- Breast cancer among postmenopausal women
- Colorectal cancer
- Endometrial cancer
- Esophageal adenocarcinoma
- Kidney cancer
- Pancreatic cancer

Several of these cancers also are associated with not getting enough physical activity.

Cardiovascular Disease	Respondents who reported a doctor told them they had a heart attack, angina or stroke. Coronary artery disease can cause a heart attack. If you have a heart attack, you are more likely to survive if you know the signs and symptoms, call 9-1-1 right away, and get to a hospital quickly. People who have had a heart attack can also reduce the risk of future heart attacks or strokes by making lifestyle changes and taking medication. http://www.cdc.gov/heartdisease/
Cholesterol Awareness	Cholesterol is a waxy substance that is found in the fats (lipids) in your blood. While your body needs cholesterol to continue building healthy cells, having high cholesterol can increase your risk of heart disease. http://www.mayoclinic.com/health/high-blood-cholesterol/DS00178 Behavioral Risk Factor Surveillance System respondents who had had their blood cholesterol checked were asked about high blood cholesterol: "Have you EVER been told by a doctor, nurse or other health professional that your blood cholesterol is high?" Responses were grouped into two categories: Yes and No. Analyses excluded respondents younger than 20 years of age and those who did not report ever having had their cholesterol checked. http://dhds.cdc.gov/guides/healthtopics/indicator?i=HighCholesterol
Chronic obstructive pulmonary disease (COPD)	One of the most common lung diseases. There are two main forms of COPD—Chronic Bronchitis (long-term cough with mucus), and emphysema (Involves the destruction of the lungs over time). Most people have a combination of the two forms. http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001153/
Current Smoking	Respondents who reported smoking at least 100 cigarettes during their lifetime and who smoke now (regularly or irregularly).
Diabetes	Respondents who reported a doctor them they had diabetes. Diabetes is a serious disease that affects almost every part of your body and can shorten your life. Some complications with diabetes are kidney disease, heart disease, stroke, eye disease, and having to have a leg or foot amputated. If you already have diabetes, you can still do a lot to keep from getting complications from diabetes. http://www.cdc.gov/Features/LivingWithDiabetes/
Disability	Disability is called a secondary conditions and can include pain, depression, and a greater risk for certain illnesses. To be healthy, people with disabilities require health care that meets their needs as a whole person not just as a person with a disability. http://www.cdc.gov/ncbddd/disabilityandhealth/healthyliving.html
Influenza Vaccination	Respondents 65 years or older who reported not receiving a flu shot in the past 12 months. Influenza illness can include any or all of these symptoms: fever, muscle aches, headache, lack of energy, dry cough, sore throat, and possibly a runny nose. http://www.cdc.gov/flu/professionals/diagnosis/labrolesprocedures.htm
Immunization	Immunizations work by stimulating the immune system, the natural disease-fighting system of the body.

Folic Acid Awareness	Female respondents 18 to 44 years of age reported a reason other than preventing birth defects as the reason experts recommend that women take folic acid. Folic acid is a B vitamin. If a woman has enough folic acid in her body before and during pregnancy, it can help prevent major birth defects of the baby's brain and spine. Women need 400 micrograms (mcg) of folic acid every day
Fruits/Vegetables	Respondents who reported that they consumed fewer than five servings of fruits and vegetables daily. To increase fruit and vegetable consumption of community members, it is important to improve access to, and increase the availability of high quality, affordable fruits and vegetables. A diet high in fruits and vegetables can reduce the risk for many leading causes of death and can play an important role in weight management. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5935a1.htm
HCUP	Healthcare Cost http://hcupnet.ahrq.gov/HCUPnet.jsp?Id=6A4B1124FA223267&Form=SelQUERYTYPE&JS=Y&Action=%3E%3ENext%3E%3E&_QUERYTYPE=DxPr
Heart Attack	The death of heart muscle due to the loss of blood supply. The loss of blood supply is usually caused by a complete blockage of a coronary artery, one of the arteries that supplies blood to the heart muscle. Death of the heart muscle, in turn, causes chest pain and electrical instability of the heart muscle tissue. http://www.medterms.com/script/main/art.asp?articlekey=3669
Health Care Coverage	Respondents who reported that they did not have health care coverage.
Hypertension Awareness	Hypertension, also known as high blood pressure, affects one out of every three American adults. But more than half don't have their blood pressure under control. Left untreated, high blood pressure raises your risk for heart disease, stroke, kidney failure, and other conditions. Prevention is your best defense, but lifestyle changes and medications can help get your blood pressure numbers to a healthy level. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6040a1.htm
Heavy Drinking	Adult men having more than two drinks per day and adult women having more than one drink per day. Excessive drinking, either in the form of heavy drinking or binge drinking, is associated with numerous health problems, including chronic diseases such as liver cirrhosis (damage to liver cells), pancreatitis (inflammation of the pancreas), various cancers, including liver, mouth, throat, larynx (the voice box), esophagus, high blood pressure, and psychological disorders. Heavy drinking can cause unintentional injuries, such as motor-vehicle traffic crashes, falls, drowning, burns, and firearm injuries. It also can cause violence, such as child maltreatment, homicide, and suicide.
HIV/AIDS	HIV is the human immunodeficiency virus. It is the virus that can lead to acquired immune deficiency syndrome, or AIDS. http://www.cdc.gov/hiv/topics/basic/index.htm
Limited Activities	Respondents who reported they were limited in any activities due to any impairment or health problems.

No Leisure-Time Activity	Respondents who reported that they did not participate in physical activity in the past month outside of normal work-related activities.
Pre-Diabetes	The condition of having a hereditary tendency or high probability for developing diabetes mellitus, although neither symptoms nor test results confirms the presence of the disease. http://dictionary.reference.com/browse/prediabetes?s=t
Pre-conception Health	Pre-conception care and interventions are designed to reduce perinatal risk factors and, for optimal effectiveness, must be successfully implemented before the start of pregnancy. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1592248/
Respondent	Arizona residents 18 years of age or older. In some cases various subset(s) of this group may be used.
Seat belt Use	Respondents who reported that they "sometimes", "seldom", or "never" wear seat belts when driving or riding in a car.
Special Equipment	Respondents reported having a health problem or impairment that required special equipment.
Special needs population	Populations whose members may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who are transportation-disadvantaged.
Stroke	Stroke is the stoppage of blood flow to the brain due to a sudden blockage or rupture of a blood vessel in the brain resulting in the loss of consciousness, partial loss of movement, or loss of speech. http://www.bing.com/Dictionary/search?q=define+stroke&qpvt=DEFINE+STROKE&FORM=DTPDIA
Tobacco Use	Smoking causes cancer, heart disease, stroke, and lung diseases (including emphysema, bronchitis and chronic airway obstruction).[1] For every person who dies from a smoking-related disease, 20 more people suffer with at least one serious illness from smoking.[2] Centers for Disease Control and Prevention. **Cigarette Smoking-Attributable Morbidity—United States, 2000**. Morbidity and Mortality Weekly Report 2003; 52 (35):842–4 [accessed 2012 Jun 7].

Behavioral Risk Factor Surveillance System Methods

SAMPLE DESIGN

The Arizona BRFSS is a random digit dialing and a Computer Assisted Telephone Interviewing (CATI) system of gathering Health Statistics. The number of completed BRFSS interviews in 2014 was 14,869 with around 80 percent coming from landline interviews and a targeted 20 percent of interviews coming from cell phone only households. Interviews are conducted over a 12-month period. The estimated prevalence of a given risk factor can be reliably projected across the total population of Arizona residents. Prevalence estimates of individual demographic variables, especially those that yield smaller sample sizes, do not achieve the same level of accuracy as the total sample. Special attention should be paid to confidence intervals of specific variable results when making inference about the Arizona general population based upon survey results. Whatever specific category survey results may be, the confidence interval provides a range within which the true measure of the Arizona population is 95% statistically certain to be found. The CDC has stated that County-level analysis will not produce reliable values, as the sample size may be too small. Arizona BRFSS reports county-level results only when response numbers meet the required minimum for reliability. The CDC has emphasized the use of Regions in analyses of geographies smaller than State-level. Arizona consists of 6 survey regions. Survey regions are combinations of contiguous counties. See Appendix.

Traditionally, BRFSS relied solely on calling landlines. However, with the progressive increase in cell-phone only households, the BRFSS would be unable to fully capture disease and prevalence trends by continuing to rely solely upon landlines. Current estimates shows that cell phone-only households have increased by 700 percent from 2003-2009; 3 out of 10 households in the U.S. only have cell phones. Cell phone-only households are especially prevalent among younger families and among certain racial/ethnic groups. Therefore, to capture data that is more representative of the U.S. population; in 2011 Arizona BRFSS determined that at least 20 percent of all completed interviews would come from cell phones. A demographic profile of the Arizona population surveyed is reported in Appendix: 2014 Arizona Respondent Profile.

NEW METHODOLOGY - RAKING

Sampling weights are needed to correct for imperfections in the sample that might lead to bias. It can include the selection of units with unequal probabilities, non-coverage of the population and non-response. Data weights incorporate characteristics of the population and the sample.

In the past, the CDC has used post stratification to weight BRFSS data. Post stratification is based on the known demographics of the population. Essentially, post stratification forces the sum of the weighted frequencies to be equal to the known population estimates.

In 2011, a new weighting methodology, iterative proportional fitting (or “raking”), replaced the post stratification weighting methodology. Raking adjusts the data so that groups that are underrepresented in the sample can be more accurately represented in the final dataset. Raking incorporates additional demographic characteristics and more accurately matches sample distributions to known population demographics. Furthermore, the use of raking reduces non-response bias and has been shown to reduce within-error estimates. BRFSS raking integrates a multitude of categories such as age by gender, detailed race and ethnicity groups, educational levels, marital status, regions within states, gender by race and ethnicity, telephone source, renter/owner status, and age groups by race and ethnicity. In 2014, 50 states, the District of Columbia, Guam, and Puerto Rico collected samples of both landline and cell phone interviews; the Virgin Islands only collected data via landlines.

BRFSS ANNUAL QUESTIONNAIRE DEVELOPMENT

The State BRFSS Coordinators Working Group meets three times a year with the Behavioral Risk Factor Surveillance Branch Management. The questionnaire for landlines and cell phones is the same except for when the respondent is screened for the asthma follow-up question. The asthma follow-up questions are only asked on the land-line. One task of this group is to develop a 5-year, long-term plan for the BRFSS core instrument. The 2011 BRFSS questionnaire was the first year of a 5-year plan. Before the beginning of the calendar year, CDC provides states with the text of the core component and the optional modules that will be supported for the coming year.

States select their optional modules and choose any state-added questions. Each state then constructs its questionnaire. The order of the questioning is always the same. The core component is asked first; optional modules are asked next and state-added questions last. This ordering ensures comparability across states and follows CDC guidelines. Generally, the only changes allowed are limited insertions of state-added questions on topics related to core questions. Such exceptions are to be agreed upon in consultation with CDC.

Once the questionnaire content (core, modules, and state-added questions) is determined by a state, a hard-copy or electronic version of the instrument is constructed and sent to CDC. For states with Computer-Assisted Telephone Interview (CATI) systems, this document is used for CATI programming and general reference. The questionnaire is used without changes for one calendar year. The questionnaire is available at http://www.cdc.gov/brfss/questionnaires/questionnaires.htm. If a significant portion of the state population does not speak English, states have the option of translating the questionnaire into other languages. At the present time, CDC also provides a Spanish version of the core questionnaire and optional modules.

ADMINISTRATION OF THE QUESTIONNAIRE

The ADHS has contracted with a private survey research firm since August, 2000 to contact randomly selected Arizona residences from 9 a.m. until 9 p.m. weekdays and from 11 a.m. until 7 p.m. on weekends. All telephone numbers released in each month's sample received at least 15 attempts over a minimum 14- day period, including at least three attempts during weekends, and at least three attempts during a weekday. Furthermore, selected respondents who were not able to complete the interview at the time of selection received a minimum of 10 call-backs during the interview period. A pre-notification letter was mailed out to alert potential participants that their household was randomly selected from all adults residing in the household to be interviewed.

DATA ANALYSIS

All analyses presented are based on cell size counts of at least eight cases. The demographic information that was collected and presented in these results includes sex, age, education, household income, race, and ethnicity. Comparisons between responses within demographic categories were analyzed for statistical significance at the alpha = .05 level. Throughout the report, statistical difference is noted when analysis provides 95 percent confidence that the categories described are different and interpret confidence intervals with caution when they overlap the percent reported and when cell sample sizes are less than 50. Note: The BRFSS 2014 data set was a "split survey" because the goal was to limit the length of time at 25 minutes. In order to abide by the rules and regulations set forth by HIPPA and to protect the identity of any of the BRFSS respondents, below are the steps we are taking to limit disclosure of potential identifiers. Particular attention will be devoted to information that can lead directly to an individual or their family (e.g., name, address, telephone number) AND other information that is useful in narrowing the possibilities that information may refer to a particular individual (e.g., zip code, county, exact date of birth) Therefore, the below variable names were suppressed from the data file.

Split ONE or Split TWO survey instructions
Weighted Variable Name: **_LLCPWT** is used when:
1. Those State-Added /Module questions were asked of everyone throughout the State
And the questions were asked on Survey versions 1 and 2.
2. All Core questions – these questions were on Survey versions 1 and 2.
Weighted Variable Name: **_LCPWTV1** is used when:
1.Data set Name : LLCP14V1 combine landline telephone and cellular telephone Survey version 1
Weighted Variable Name: **_LCPWTV2** is used when:
1.Data set Name : LLCP14V2 combine landline telephone and cellular telephone Survey version 2
Weighted Variable Name: Seek assistance on analyzing the below list of Optional Modules.
1. Sodium or Salt-Related Behavior- Date set Name: LLCP14V2
2. Reactions to Race- Date set Name: LLCP14V2
Here is an example of the SAS syntax that might be used when analyzing modules -
Example:

```
data llcpv2; *observation number=3,901;

*originally downloaded data selecting states that collected data for the Colorectal Cancer
Screening Module from combined landline and cell phone data, multiple versions;
set in.llcp13v2 (where=(_state=36)); *State FIPS code: 36(New York);
*rename final weight variable to be consistent across new data sets;
_finalwt=_lcpwtv2;
drop _lcpwtv2;
                    run;
```

Attachments:
1. Instructions for Analysis of Modules when using a split survey-
(The information provided in this file is for 2013, but can also be a guide for 2014 data)
2. The User Guide –dated June 2013 – this guide can also be used for 2014 data
3. AZ 14 Code book for both Landline and Cell Phone (LLCP)
4. AZ 14 Code book for LLCP Version 1
5. AZ 14 Code book for LLCP Version 2
6. Spreadsheet summarizes the questions asked in AZ split survey design for Survey version 1 and version 2
7. AZ 14 final SAQ data file with suppressed variable names.
Below are the variables names that were suppressed.

VARIABLE NAME	DESCRIPTION
_GEOSTR	Stratum/Region COUNTIES 1 013 (Maricopa) 2 019, 003, 023 (Pima, Cochise, Santa Cruz) 3 001, 005, 017, 025 (Apache, Coconino, Navajo, Yavapai) 4 027, 012, 015 (Yuma, La Paz, Mohave) 5 021, 007, 009, 011 (Pinal, Gila, Graham, Greenlee)
CTYCODE1 _IMPCTY	What county do you live in? FIPS CODES COUNTY 001 Apache (South/North) 003 Cochise 005 Coconino 007 Gila 009 Graham 011 Greenlee 012 La Paz 013 Maricopa 015 Mohave 014 Navajo 019 Pima 021 Pinal 023 Santa Cruz 025 Yavapai 027 Yuma 777 Don't know/Not sure 999 Refused
ZIPCODE	What is your zip code where you live? _ _ _ _ _ ZIP Code RANGE = 85000-87399 7 7 7 7 7 Don’t know / Not sure 9 9 9 9 9 Refused

<table>
<tr><th>VARIABLE NAME</th><th>DESCRIPTION</th></tr>
<tr><td>_MSACODE</td><td>Metropolitan Statistical Area Code
The list of MSA codes (not zip codes) are listed below. These are found on the Census Bureau website (http://www.census.gov/population/metro/data/metrodef.html) which is where the information in the table is from:
<table>
<tr><th>CBSA Code</th><th>CBSA Title</th><th>County</th><th>State</th><th>FIPS</th></tr>
<tr><td>22380</td><td>Flagstaff, AZ</td><td>Coconino County</td><td>Arizona</td><td>4005</td></tr>
<tr><td>29420</td><td>Lake Havasu City-Kingman, AZ</td><td>Mohave County</td><td>Arizona</td><td>4015</td></tr>
<tr><td>35700</td><td>Nogales, AZ</td><td>Santa Cruz Coun-ty</td><td>Arizona</td><td>4023</td></tr>
<tr><td>37740</td><td>Payson, AZ</td><td>Gila County</td><td>Arizona</td><td>4007</td></tr>
<tr><td>38060</td><td>Phoenix-Mesa-Scottsdale, AZ</td><td>Maricopa County</td><td>Arizona</td><td>4013</td></tr>
<tr><td>38060</td><td>Phoenix-Mesa-Scottsdale, AZ</td><td>Pinal County</td><td>Arizona</td><td>4021</td></tr>
<tr><td>39140</td><td>Prescott, AZ</td><td>Yavapai County</td><td>Arizona</td><td>4025</td></tr>
<tr><td>40940</td><td>Safford, AZ</td><td>Graham County</td><td>Arizona</td><td>4009</td></tr>
<tr><td>43320</td><td>Show Low, AZ</td><td>Navajo County</td><td>Arizona</td><td>4017</td></tr>
<tr><td>43420</td><td>Sierra Vista-Douglas, AZ</td><td>Cochise County</td><td>Arizona</td><td>4003</td></tr>
<tr><td>46060</td><td>Tucson, AZ</td><td>Pima County</td><td>Arizona</td><td>4019</td></tr>
<tr><td>49740</td><td>Yuma, AZ</td><td>Yuma County</td><td>Arizona</td><td>4027</td></tr>
</table></td></tr>
<tr><td>_REGION</td><td>Stratum/ Region COUNTIES
1 013 (Maricopa)
2 019, 003, 023 (Pima, Cochise, Santa Cruz)
3 001, 005, 017, 025 (Apache, Coconino, Navajo, Yavapai)
4 027, 012, 015 (Yuma, La Paz, Mohave)
5 021, 007, 009, 011 (Pinal, Gila, Graham, Greenlee)</td></tr>
<tr><td>1- AZ14_1a
2- AZ14_1b
3- AZ14_2</td><td>Nearest Cross-Streets</td></tr>
</table>

Disclaimer for 2014

Due to significant changes in the BRFSS methodology as described above, Arizona's BRFSS estimates for 2011, 2012, 2013, and 2014 data SHOULD NOT be compared to estimates provided from previous years. Thus, Arizona's 2011 through 2014 data present a new baseline for Arizona BRFSS survey results. The new methodology changes will cause breaks in the BRFSS trends, but going forward, will also greatly improve the accuracy, coverage, validity, and repetitiveness of the Arizona BRFSS. Additional information regarding the new BRFSS METHODS is available at:

http://www.cdc.gov/brfss/annual_data/2011/2011_weighting.htm