AZ Health Zone Gap Analysis:

Assessing Equity in SNAP-Ed Reach in Arizona

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Prepared on behalf of the Arizona Department of Health Services by

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In Arizona, AZ Health Zone allocates SNAP-Ed funds to local implementing agencies (LIAs) in each county. While work never reached all eligible sites or populations, beginning in 2020, LIAs were instructed to identify fewer communities in which to work so that they could best focus on deep, coordinated, multi-level intervention. The hope is that LIAs reach areas of high need with a variety of programming, thereby making a more substantial impact in these areas. However, a potential side effect of "going deeper, not broader" is that fewer eligible communities may receive any kind of service. This gap analysis aims to understand how communities that are currently served by SNAP-Ed compare with those not selected for programming in each Arizona county and statewide, including whether there are any systematic demographic differences between these communities.

In this analysis, we take a spatial approach to understanding the populations AZ Health Zone is and is not serving through current activities. The analysis uses community-level sociodemographic data, SNAP-Ed programmatic data, and SNAP enrollment data at the tract-level. These datasets were merged in order to make comparisons between the social and demographics groups residing in qualifying and non-qualifying tracts, as well as tracts with varying levels of SNAP-Ed activity compared with qualifying tracts with no activity. The goal is to identify counties where SNAP-Ed is (and is not) equitably supporting high-need and historically underserved populations, including American Indian or Alaska Native, Hispanic or Latino, and Black or African American populations; those speaking a language other than English at home, or with limited English-speaking ability; and areas with particularly high rates of poverty or low-income.

How is AZ Health Zone SNAP-Ed reaching different sociodemographic groups in need?

The SNAP-Ed program serves individuals, families, and children in households that are eligible for SNAP. The tract qualification process ensures that SNAP-Ed activities impact low-income populations; in Arizona, low-income individuals have 3.7 times the odds of residing in a qualifying tract compared to higher-income individuals. Areas where SNAP-Ed is working have higher levels of need compared to the state as a whole, and similar levels of need compared to all qualifying tracts (i.e., the low-income rate was 41.2% in active tracts compared to 42.3% in qualifying tracts and 25.7% statewide).

Custom analyses were performed to identify the sociodemographic groups in Arizona with higher rates of SNAP-Ed eligibility, as well as whether these groups are able to access services based on proximity (defined as living in a Census tract with SNAP-Ed activity). In Arizona, rates of poverty are more prevalent among young children (OR 1.6) and school-age children (OR 1.5) than other age groups. Moreover, Census tracts are most likely to qualify for AZ Health Zone based on child household income patterns (with 75% qualified for young child and 68% qualified for school-age child criteria). In accordance with these trends, school-age children are slightly more likely to reside in SNAP-Ed active tracts than other age groups (OR 1.2).

Additionally, individuals who speak Spanish (OR 1.5) or other languages (OR 3.0) at home; and individuals identifying as American Indian or Alaska Native (OR 3.0), Hispanic or Latino (OR 1.7), and Black or African American (OR 1.4) are more likely to be living in poverty in Arizona. SNAP-Ed is currently active in tracts with a higher prevalence of limited-English speakers (OR 1.2) and

individuals speaking Spanish (OR 1.2) or another language (OR 2.9) at home. In terms of racial and ethnic diversity, individuals identifying as American Indian or Alaska Native had double the odds of residing in a SNAP-Ed active tract, and individuals identifying as Hispanic or Latino also had increased odds of living in an active tract compared with non-Hispanic individuals (OR 1.3).

AZ Health Zone is focusing more on policy, systems, and environments (PSE) work as well as implementing a greater depth and variety of programming within communities in order to affect lasting change. Tracts with PSEs implemented in 2023 had high concentrations of low-income and in-poverty populations. Almost two-thirds of PSE implementation sites were child-focused, with 45% being schools and 20% being early care and education facilities. Spanish speakers (OR 1.7) and speakers of other languages (OR 1.7) had higher odds of living in tracts with a higher intensity of SNAP-Ed activities compared to other language groups, as did individuals identifying as American Indian or Alaska Native (OR 1.8) and Hispanic or Latino (OR 1.8). Speakers of other languages (OR 3.8) and individuals identifying as American Indian or Alaska Native (OR 2.8) were much more likely to live in an area served by a diversity of SNAP-Ed activity compared to other language, race, and ethnicity groups, while those identifying as Hispanic or Latino (OR 1.2) and Black or African American (OR 1.1) were slightly more likely to reside in these tracts compared to all other groups.

Gaps in reach

AZ Health Zone SNAP-Ed is serving high-need populations, but a focus on more intensive work in fewer communities means that a large portion of in-need areas are not currently served. Across the state, SNAP-Ed is active in only 34% of qualifying tracts. While SNAP-Ed is active in higher-need tracts compared with the state as a whole, low-income individuals (OR 0.93) and individuals in poverty (OR 0.92) are slightly less likely to live in tracts with SNAP-Ed activity compared to higher-income individuals. Active tracts have marginally lower rates of low-income and poverty compared with all qualifying tracts, indicating that some areas of need are being missed by programming.

As noted above, SNAP-Ed appears to be available in Census tracts with higher concentrations of some groups in need. However there are several populations that are generally underrepresented at the state level relative to their rates of poverty: those identifying as Black or African American and those identifying as Native Hawaiian or Pacific Islander. In Arizona, both of these populations make up a small fraction of the total population, and in the case of the Native Hawaiian or Pacific Islander population, the entire population numbers less than 15,000 statewide. Both populations tend to reside in large urban counties; 95% of Arizona's Black or African American population resides in Maricopa, Pima, or Pinal counties (compared to 83% of the total population of all races). For the Native Hawaiian or Pacific Islander population, these 3 counties account for 88% of this population.

Arizona has large and diverse counties, meaning that SNAP-Ed needs and services look different across the state. A subset of counties face particular challenges in equitably reaching the population in highest need due to the distribution of this population and the geography of their county. In some rural counties, such as Apache County, the level of need is extremely high, with the majority of tracts qualifying for SNAP-Ed based on community need. Given the large size of Arizona's counties, this means that focus on going deeper will mean not reaching many SNAP-Ed eligible individuals due to the limited resources available and the effort required to serve areas that are the size of some small states. In other counties, such as La Paz County, distinct, non-overlapping populations in need set up a trade-off in serving one particular target population in terms of age and race and ethnicity instead of another.

In terms of age inclusion, most SNAP-Ed activities statewide focus on children and their families, with a particular emphasis on school- and early care education-based PSE changes and direct education. Seniors ages 65 and older are generally underrepresented in areas with intensive SNAP-Ed activity, which is commensurate with their lower odds of living in poverty compared to other age groups in Arizona. However, seniors do likely have unique needs related to nutrition and physical activity, and there are some select counties (such as La Paz and Navajo Counties) with high rates of seniors in poverty where this population could be better served.

Finally, throughout the state of Arizona, speakers of Spanish and Other languages, including Native languages, are frequently overrepresented in areas where SNAP-Ed is active. This is appropriate given the much higher odds that these individuals live in poverty compared to speakers of English only or other major language groups. However, the presence of these populations in areas where SNAP-Ed works does not guarantee that SNAP-Ed activities are accessible to them, especially for limited-English-speaking households. While the vast majority of speakers of languages other than English in Arizona are multilingual, provision of materials in individuals' home languages can help foster a sense of belonging and ensure that materials can be shared within homes with family members who may not have similar levels of English proficiency.

Addressing identified gaps

Going deeper: Overall, statewide data suggest that AZ Health Zone's push to go deeper with work in fewer communities is not leading to systematic exclusion of particular groups, and that this strategy generally can be applied equitably, potentially with a few adjustments in some counties. AZ Health Zone could consider providing additional resources and support for counties with very high levels of need, for example those with 70% or more tracts qualifying for SNAP-Ed based on community demographics. This could help support LIAs in working in a sufficient number of communities to ensure that specific populations, such as American Indian or Alaska Native populations residing in sovereign Native nations or low-income senior populations, are not excluded from SNAP-Ed reach.

Geography: Because of the challenges associated with serving low-income populations spread across large, rural geographies, continuing to provide pathways for alternative justification of sites is vital. While sites may be located in population centers with higher-incomes, they often serve larger areas and may be the only option for serving low-resourced areas.

Equitable activity by race and ethnicity: Targeted efforts to reach Black or African American and Native Hawaiian or Pacific Islander populations may be needed, particularly in urban counties, to ensure that these populations are not systematically excluded from SNAP-Ed work. This may look like pursuing partnerships with both statewide and local community organizations that work specifically to serve Black or African American, Native Hawaiian or Pacific Islander, and refugee populations.

AZ Health Zone should consider further incentivizing LIA work with tribal nations and develop best practice guidelines for partnerships with Native nations. This should be done in consultation with the ADHS Tribal Liaison to ensure that appropriate government-to-government consultation is conducted with sovereign Native nations. For LIAs undertaking new partnerships with Native nations, there should be built-in time for relationship building and the development of memoranda of understanding and tribal approvals for any data collection taking place within the community. There should also be a clear plan for ensuring data sovereignty over any data collected from members of Native nations, especially in recognition of the central role that feeding practices and physical activity have in many Native cultures.

Equitable activity by age: In order to support low-income Arizona residents across the entire life course, more programming for seniors may be needed. The current system of qualification makes qualifying sites for adult and senior populations more challenging due to the lower prevalence of low-income in these populations at the tract-level statewide. If LIAs are prioritizing serving the highest need populations, seniors will often not fit this target when compared to families with younger children. AZ Health Zone could consider adopting a strategy domain specifically focused on older adults, or incorporating more multi-generational activities that target both children and their parents as well as older grandparents and relatives who may be an important part of family support systems. Determining a model for qualifying primarily senior-serving sites based on program participation, perhaps in collaboration with local organizations such as area councils on aging, could also help with ensuring that sites are able to be qualified to serve seniors.

Equitable activity by language: Serving multilingual and limited-English-speaking populations in need requires ensuring that materials and programs are available in Spanish, Native languages, and/or languages prevalent in Arizona's refugee populations (such as Arabic, Somali, Swahili, and other languages). Recruiting and retaining multilingual staff may be a challenge for LIAs, so it may be necessary to come up with alternate accessibility plans (such as phone interpretation services, in-ear translation devices, and apps) in place. Direct education activities currently offered in Spanish and Diné, as well as English, in multiple Arizona counties can be a model for other counties going forward.

Introduction

The Supplemental Nutrition Assistance Program (SNAP) is a federally funded social safety net program that provides essential food benefits to low-income families in the US. In fiscal year 2022, one in nine (11%) Arizona residents participated in SNAP, 69% of whom were in families with children. The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) is intended to assist SNAP-eligible individuals and families in using their SNAP funds and to improve nutrition, increase food security, and enhance opportunities to be physically active for this population.

In Arizona, AZ Health Zone allocates SNAP-Ed funds to local implementing agencies (LIAs) in each county. In a Request for Grant Application (RFGA) process every five years, LIAs are asked to select geographical communities of high need within their county where they will implement policy, systems, and environmental (PSE) change strategies; shift the dialogue around nutrition and physical activity through marketing approaches; and offer complementary direct education (DE) programming. In the RFGA released in 2020, LIAs were instructed to identify fewer communities in which to work compared to prior funding cycles and instead focus on coordinated, multi-level interventions in each of these select communities. The hope is that LIAs reach areas of high need with a variety of programming, thereby making a more substantial impact in these areas. However, a potential side effect of "going deeper, not broader" is that other eligible communities may be missed under this model.

This gap analysis aims to understand how communities that are currently served by SNAP-Ed compare with those not selected for programming in each Arizona county, and statewide, including whether there are any systematic demographic differences between these communities.

The analysis uses community-level sociodemographic data as well as SNAP-Ed programmatic data (detailed in the *Methods* section), which allow us to quantify the *intensity* and *diversity* of SNAP-Ed activity within each community that is served. The goal is to identify counties where SNAP-Ed is (and is not) equitably supporting high-need and historically underserved populations, including American Indian or Alaska Native, Hispanic or Latino, and Black or African American populations; those speaking a language other than English at home, or with limited English-speaking ability; and areas with particularly high rates of poverty or low-income. This report will make specific recommendations to improve equitable SNAP-Ed engagement across the state based on the results; an important complementary step will be to understand the barriers and facilitators to serving target communities in each county.

In this report, we use five different terms to describe tracts. They are as follows:

- **Qualified –** These tracts qualified for SNAP-Ed based on community demographics.
- **Active –** These tracts have SNAP-Ed activity. These can include non-qualified tracts because there are some non-qualifying tracts with auto-qualified sites (see the Methods section for further detail on qualification).
- **PSE –** These tracts have implemented PSE changes.
- **Intense –** Looking at SNAP-Ed activities in a tract, the 'intense' tracts have higher than median intensity activity counts (median based on all active tracts in Arizona).

- **Diverse –** Looking at types of SNAP-Ed activities in a tract, the 'diverse' tracts had higher than mean diversity of activity score, meaning that activities range across multiple strategy areas(with the mean based on all active tracts in Arizona).

The current analysis supplements a 2023 needs assessment, which identified key populations in need of SNAP-Ed programming based on population demographics and economic circumstances; nutrition and physical activity environments; personal nutrition and physical activity behaviors; physical and mental health outcomes; and current AZ Health Zone SNAP-Ed programming.[1] For key takeaways, see the *How Arizona is faring: Communities most in need* section below. Please note also that all analysis results for the state as a whole and each county are included as figures in the *Appendix*.

Methods

In this gap analysis, we take a spatial approach to understanding the populations AZ Health Zone is and is not serving through current activities. Since community selections and activities are driven by LIAs operating at the county-level, we focus our analyses at that level. However, since SNAP-Ed activities predominantly take place at the community-level, our measures of SNAP-Ed activity, PSE implementation, activity intensity, and activity diversity are all derived at the level of the census tract. This approach has been widely used in assessments of SNAP-Ed reach.[2, 3]

Data Sources

Data for these analyses were compiled from multiple sources:

Demographics and relative need (county and tract-level)	2022 American Community Survey (ACS) 5-Year Estimates
SNAP-Ed activity data (program-level)	SEEDS data system, received from AZ Health Zone by special request
SNAP enrollment (tract-level)	Arizona Department of Economic Security (DES), received by special request

Throughout this report, we use SNAP-Ed to refer to programming while we use AZ Health Zone to refer to the state-level SNAP-Ed administering organization and LIA to refer to local implementing agencies for SNAP-Ed programming.

The primary demographic and need variables used in these analyses were:

[1] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

[2] Molitor, Sugerman, S., Yu, H., Biehl, M., Aydin, M., Levy, M., & Ponce, N. A. (2015). Reach of Supplemental Nutrition Assistance Program-Education (SNAP-Ed) interventions and nutrition and physical activity-related outcomes, California, 2011-2012. Preventing Chronic Disease, 12, E33–E33. https://doi.org/10.5888/pcd12.140449

[3] Woodward-Lopez, Esaryk, E. E., Hewawitharana, S. C., Kao, J., Talmage, E., & Rider, C. D. (2023). Supplemental Nutrition Assistance Program Education reductions during COVID-19 may have exacerbated health inequities. SSM - Population Health, 23, 101471–101471. https://doi.org/10.1016/j.ssmph.2023.101471

Age. We examined four primary age groups: young children ages birth to 5, school-age children ages 6 to 17, adults ages 18 to 64, and seniors ages 65 and older.

Race or ethnicity. We defined racial and ethnic identities following widely used federal definitions; while non-Hispanic White and Hispanic or Latino are exclusive categories from each other, all other racial identities (Black or African American, American Indian or Alaska Native, Asian, Hawaiian or Pacific Islander, and Multi-racial) include individuals who identify as both Hispanic and non-Hispanic. Throughout this report, we use terminology that corresponds with Census Bureau coding of racial and ethnic identities since this is our primary source of data.

Language use. Since language use can be an important mediator of access to programming, we included all five major home language categories available through the ACS: English only, Spanish, Indo-European languages (which include French, Russian, Farsi, Urdu, etc.), Asian and Pacific Island languages (which include Mandarin, Tagalog, Thai, etc.), and Other languages (in Arizona, the most predominantly spoken languages in this category are Native North American languages, but this group also includes Arabic, Hebrew, and most African languages).

Poverty or low-income status. Our primary measures of need were the proportion of the population in poverty (with incomes at or below the federal poverty threshold) and the proportion of the population with low-income (that is incomes at or below 185% of the federal poverty threshold). All demographic and need variables were obtained at both the tract- and county-level. It is important to note that poverty and low-income prevalence have changed in the past several years. Our primary data source for this report, 2022 ACS 5-year-estimates, include several years of data collected during the COVID-19 pandemic when overall, and particularly child poverty rates, were substantially reduced due to increased economic supports provided to families, such as the expanded child tax credit.[4] Many of these supports have since been discontinued, and early evidence suggests that poverty rates are again increasing.[5] This pattern means that the data used in this report may underestimate current prevalence of low-income and in-poverty populations.

Measuring SNAP-Ed Activity

To examine SNAP-Ed activity, we created six qualification and activity variables to describe both where SNAP-Ed could work and where it does work as well as the intensity of the work happening at the tract level:

1. We defined a binary **SNAP-Ed qualification variable** (qualified or not qualified) by assessing the percent of the population that was low-income overall and in five different age categories (under 6, ages 6-17, ages 0-11 to mirror CACFP qualifications, ages 18-64, and ages 65 and over). A tract was considered qualified if the proportion of the low-income population exceeded 50% in any of these categories or in the population as a whole.
2. We then mapped all SNAP-Ed sites in ESRI ArcGIS Pro to assign them to **Census tracts**. Sites were assigned to the Census tract within which they were located.

[4] Han, J., Meyer, B. D., & Sullivan, J. X. (2020). Income and poverty in the COVID-19 pandemic. National Bureau of Economic Research: Working Paper 27729. https://doi.org/10.3386/w27729

[5] Burnside, A., Fuller, B., Maag, E., Menefee, K., Rosa-Rodriguez, B., & Zhang, Q. (2023). National Survey: Families faced financial strain when expanded CTC expired. The Center for Law and Social Policy. https://www.clasp.org/wp-content/uploads/2023/08/2023.8.9_National-Survey-Families-Faced-Financial-Strain-When-Expanded-CTC-Expired.pdf

3. We then created two binary variables: **SNAP-Ed activity** and **PSE implementation.** SNAP-Ed activity indicated if any SNAP-Ed activity, including direct education and PSE activities, occurred in the tract in 2023 (sites with no activities in 2023 were excluded). PSE implementation specifically indicated if any PSEs were implemented in 2023.
4. Finally, we examined the level of SNAP-Ed activity occurring in each tract through both an activity intensity variable and an activity diversity variable. **Activity intensity** was measured by enumerating the number of SNAP-Ed actions (including direct education) and implemented PSEs occurring in a tract; high intensity was defined as an activity count exceeding the median count for all tracts in Arizona (19 for actions; 2 for PSEs). **Activity diversity** was constructed using a Gini-Simpson diversity index. A Gini-Simpson diversity index is a measure of statistical dispersion that expresses the probability that two items, drawn from a set with replacement, will be of different types. [6, 7] In our case, the SNAP-Ed diversity measure expressed the probability that two actions (including direct education) or implemented PSEs selected from a tract would be of different AZ Health Zone strategy types. High intensity tracts were defined as those with a diversity index higher than the statewide mean score of 0.48 for actions or 0.52 for implemented PSEs.

Once all SNAP-Ed activity and qualification variables were defined, we could merge this dataset with our demographic and need dataset at the tract level in order to make comparisons between the counts of individuals in specific social and demographics groups residing in qualifying and non-qualifying tracts, as well as tracts with varying levels of activity and qualifying tracts with no activity. To make these comparisons, we aggregated tract-level data to both the county- and state-levels.

Analytical Approach

Recognizing that the demographics of low-income populations differ from those of higher income populations, we pulled the counts of individuals in specific demographic groups who were living in poverty statewide and in each county against which to compare the demographics of SNAP-Ed active areas. The demographics of each active area (at each activity level definition: active, PSE, high intensity, high diversity) within a county were compared descriptively to the overall population of the state or county as well as the population in poverty (our proxy for the demographics of the population most in need). We then calculated odds ratios for specific population groups using Fisher's exact test for count data.[8] Throughout this report, we only report odds ratios with significant differences at a level of $p<0.001$, due to Bonferroni correction for multiple testing.[9]

[6] Simpson. (1949). Measurement of Diversity. Nature (London), 163(4148), 688–688. https://doi.org/10.1038/163688a0
[7] Jost. (2006). Entropy and diversity. Oikos, 113(2), 363–375. https://doi.org/10.1111/j.2006.0030-1299.14714.x
[8] Fisher, R. A. (1935). The Logic of Inductive Inference. *Journal of the Royal Statistical Society*, *98*(1), 39–82. https://doi.org/10.2307/2342435
[9] VanderWeele, & Mathur, M. B. (2019). Some desirable properties of the Bonferroni correction: Is the Bonferroni correction really so bad? *American Journal of Epidemiology*, *188*(3), 617–618. https://doi.org/10.1093/aje/kwy250

We expect that if SNAP-Ed is effectively and equitably serving high-need populations that the following hypotheses will hold true:

Hypothesis 1: Low-income individuals and individuals in poverty should be more likely to reside in SNAP-Ed qualifying and active tracts than individuals with higher incomes.

Hypothesis 2: Historically minoritized individuals have higher rates of poverty (and low-income) than White populations, in part due to the legacy of structural racism. Thus we expect SNAP-Ed qualifying tracts to have higher proportions of Hispanic or Latino, American Indian or Alaska Native, and Black or African American populations than non-qualifying tracts.

Hypothesis 3: The demographics of SNAP-Ed active tracts should (a) match the demographics of qualifying tracts and (b) match the demographics of the population in poverty at the state- and county-level. In cases where there is a mismatch, this mismatch should be in favor of higher need populations (e.g., populations with known higher rates of poverty and low-income).

Hypothesis 4: The demographics of higher levels of SNAP-Ed activity, defined as areas with implemented PSEs, high intensity activity, and high diversity activity, should (a) match the demographics of qualifying tracts and (b) match the demographics of the population in poverty at the state- and county-level. Again, where there are mismatches, these mismatches should be in favor of higher need populations.

Limitations

We have chosen to use a spatial approach as it closely mirrors the site qualification criteria used to select sites for SNAP-Ed activity and as it provides a useful benchmark for PSE work that is meant to affect entire communities, not solely individuals. However, this approach does have specific limitations.

First, many SNAP-Ed sites are 'closed' sites such as schools and child care facilities where PSE changes predominantly affect attending children and staff and their families but not the wider community, except in specific cases like joint use agreements that open school grounds to neighborhood residents. This means that looking at SNAP-Ed activity at the tract-level may overestimate the reach of current programming. We have tried to account for this by incorporating activity intensity and diversity measure that look specifically at tracts with high levels of activity and activities from multiple strategies, thus hopefully capturing tracts where deep, multi-level, community-wide work is happening.

Second, by using a place-based approach we do not capture individual mobility and exposure. People are highly mobile and frequently pass through multiple Census tracts in the course of their daily lives. For example, a 2015 USDA study found that on average, SNAP participants travel to grocery stores 3.3 miles from their residence, often bypassing the closest store.[10] In many urban

[10] Ver Ploeg, M., Mancino, L., Todd, J.E., Clay, C.M., Scharadin, B. (2015). Where Do Americans Usually Shop for Food and How Do They Travel To Get There? Initial Findings From the National Household Food Acquisition and Purchase Survey.

areas in Arizona, this would translate to crossing three to four Census tracts. In our current analyses, we are only counting individuals as 'served' by a particular SNAP-Ed activity if they reside in the same Census tract that the activity took place, which does not account for the impacts that SNAP-Ed may have in individual's places of work, grocery shopping locations, the library where they take their children for story time, or other places of community exposure. While more detailed studies of person-based exposure are technically feasible, especially in the age of widespread mobile computing devices, these studies are highly resource intensive and beyond the scope of this current study.[11, 12] Similarly, these analyses do not account for edge effects, that is, the likelihood that the zone of influence of a particular site likely extends beyond the Census tract in which it is located. While better accounting for these effects could be incorporated into these analyses by use of more complex floating catchment zones, these more computationally intensive analyses were again beyond the scope of this current study. Due to these limitations, we may underestimate the reach of current programming, particularly activity at major anchor institutions such as large grocery stores or benefits offices that serve individuals in a large catchment area.

Third, SNAP-Ed activity is generally captured through actions at sites in the communities where LIAs are working. However, potential sites for SNAP-Ed are not evenly distributed, and in many cases, key community resources are less likely to be located in areas with high prevalence of low-income and in-poverty populations.[13] For example, in rural and wilderness (highly remote) areas, more SNAP recipients are more concentrated in low-income, low access tracts compared to the general populations, indicating that grocery stores are not often located in areas where many SNAP recipients reside.[14] This means that to serve low-income individuals, SNAP-Ed may need to operate at sites these population use that are located in higher income areas because there are no potential sites of that type in the neighborhoods where SNAP-Ed's target population resides. This is not always the case, but it is vital to note that sometimes SNAP-Ed may not be operating in sites in the highest need areas because those areas lack the infrastructure altogether to support the intervention. A goal over time of PSE changes is to provide more equal access to healthy food retail and physical activity opportunities, but large-scale infrastructure changes will take time (generally measured in years), heavy resource investment, and robust partnerships.

Fourth, we have few sources of data capturing the population that interacts with SNAP-Ed activities or are directly affected by policy changes. While we did acquire demographic data collected for participants involved in direct education, these participants are a small subset of the population

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Economic Research Service, U.S. Department of Agriculture: Economic Information Bulletin No. 138. https://www.ers.usda.gov/webdocs/publications/43953/eib138_errata.pdf?v=7335.8

[11] Kwan, M.P. (2018). The Limits of the Neighborhood Effect: Contextual Uncertainties in Geographic, Environmental Health, and Social Science Research. *Annals of the American Association of Geographers*, *108*(6), 1482–1490. https://doi.org/10.1080/24694452.2018.1453777

[12] Chen, X. & Kwan, M.P. (2015). Contextual Uncertainties, Human Mobility, and Perceived Food Environment: The Uncertain Geographic Context Problem in Food Access Research. *American Journal of Public Health, 105,* 1734-1737. https://doi.org/10.2105/AJPH.2015.302792

[13] Moore, Latetia V., PhD, Diez Roux, Ana V., MD, PhD, Evenson, Kelly R., PhD, McGinn, Aileen P., PhD, & Brines, Shannon J., MEng. (2008). Availability of Recreational Resources in Minority and Low Socioeconomic Status Areas. American Journal of Preventive Medicine, 34(1), 16–22. https://doi.org/10.1016/j.amepre.2007.09.021

[14] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

that LIAs work with. Also, due to policy changes during the COVID-19 pandemic, the direct education data we received currently uses estimated demographics that depend on the facilitator's perception of individuals' age, gender, and race or ethnicity, rather than individual participants' self-reported identity.[15] This means that there are potentially more biases embedded in these data and that comparing these data to sources like the ACS, which gather self-reported data, should be done with caution, particularly for data on racial and ethnic identity. We thus use this data sparingly in this assessment.

Finally, related to the point above, we report on SNAP-Ed activity using data in the SEEDS system that is reported by LIA staff. The AZ Health Zone has put substantial effort into ensuring that high quality data are collected through this system. However, the analyses in this study are only accurate insofar as the data in the SEEDS system are accurate. There is always a risk of mis-entered data, missing activity data, or other errors in the data system skewing the results of the analyses we conducted.

This study aims to examine patterns of SNAP-Ed activity based on administrative data and to quantitatively compare the demographics of served and unserved communities based on place-based spatial relationships. The goal of this comparison is to illuminate areas where AZ Health Zone could make changes to serve populations in need more equitably and where current choices in approach may be resulting in structural inequities. This study does not aim to grade or rank LIAs against each other or to recommend a prescribed pattern of activity.

We present all these limitations before delving into our results because we feel it is vital to recognize what this study can tell us, and what it cannot. Arizona's fifteen counties all have unique geographies, needs, and populations. LIAs are frequently working with limited resources in very large counties with diverse populations in need, and the type of work that SNAP-Ed does in Arizona requires a solid understanding of the communities where LIAs work as well as deep relationships with multiple community partners built over time. A major goal of AZ Health Zone in Arizona is a high level of community engagement, which means that community members have voice and power in decision-making about where and how SNAP-Ed works in their community. With this acknowledgment, we present the primary findings of our analyses.

Assessing Equity: How Arizona is faring

Communities most in need

When talking about differences across groups, it is ultimately important to acknowledge the role that our physical, social, and economic environments play in our day-to-day health and wellbeing. These factors, known as the social determinants of health, affect everyone in our communities and

[15] Personal correspondence with AZ Health Zone staff.

accumulate over the lifespan and across generations.[16,17,18] Measuring and addressing these conditions can significantly impact health, educational, and economic circumstances across the lifespan.[19,20] This analysis is based off the understanding that structural inequities in access to quality health care, education, and food retailers as well as living, working, and leisure conditions lead to disparate health outcomes within and between groups[21] in Arizona, and that SNAP and SNAP-Ed should target the populations most in need to foster more equitable outcomes.

Based on a recent needs assessment for the AZ Health Zone,[22] there is significant need for SNAP-Ed services to support basic nutrition and physical activity needs across the state of Arizona. Almost half of births in Arizona were covered by the Arizona Health Care Containment System (AHCCCS), the state's Medicaid program, indicating high eligibility for SNAP among residents giving birth and raising young children. A quarter of Arizona's population live in households with incomes at or below 185% of the federal poverty level, but only 10% of households are receiving SNAP; this indicates that this resource is not reaching all eligible families.

The needs assessment indicated that certain areas of the state have disproportionate levels of poverty, including rural areas and tribal lands. Poverty is also more likely to impact women, young children and teens; American Indian or Alaska Native, Hispanic or Latino, and Black or African American populations; and those with less than a high school education. Individuals in single-parent households in Arizona are more likely to be eligible for SNAP, especially those in single-female-headed households. SNAP income eligibility is also higher among those speaking Spanish or another language at home as well as those who speak English less than "very well." Households receiving SNAP are more likely to live within low food-resourced areas (e.g., low income, low access or LILA areas as defined by the USDA), with more LILA areas being designated as rural or wilderness (as opposed to urban or suburban). This means that the populations in need of SNAP-Ed services have varying needs, such as programming in languages other than English, and are likely to be spread across the state, not only concentrated in population centers.

Our analyses of sociodemographic data from the ACS confirm that poverty rates differ by age group, language use, and racial or ethnic identity in Arizona. Children are more likely to be living in poverty than the adult population: **young children ages birth to 5 have higher odds (OR: 1.6) of living in poverty than other age groups**, and **school-age children have 1.5 times the odds of living in**

[16] Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: coming of age. Annual review of Public Health, 32, 381-398.
[17] Ibid.
[18] Maggi, S., Irwin, L. J., Siddiqi, A., & Hertzman, C. (2010). The social determinants of early child development: an overview. *Journal of paediatrics and child health*, *46*(11), 627-635.
[19] Hertzman, C. (1999). The biological embedding of early experience and its effects on health in adulthood. Annals of the New York Academy of Sciences, 896(1), 85-95.
[20] Karoly, L. A., Kilburn, M. R., & Cannon, J. S. (2006). Early childhood interventions: Proven results, future promise. Rand Corporation.
[21] World Health Organization. (2010). A conceptual framework for action on the social determinants of health. https://www.who.int/publications/i/item/9789241500852
[22] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

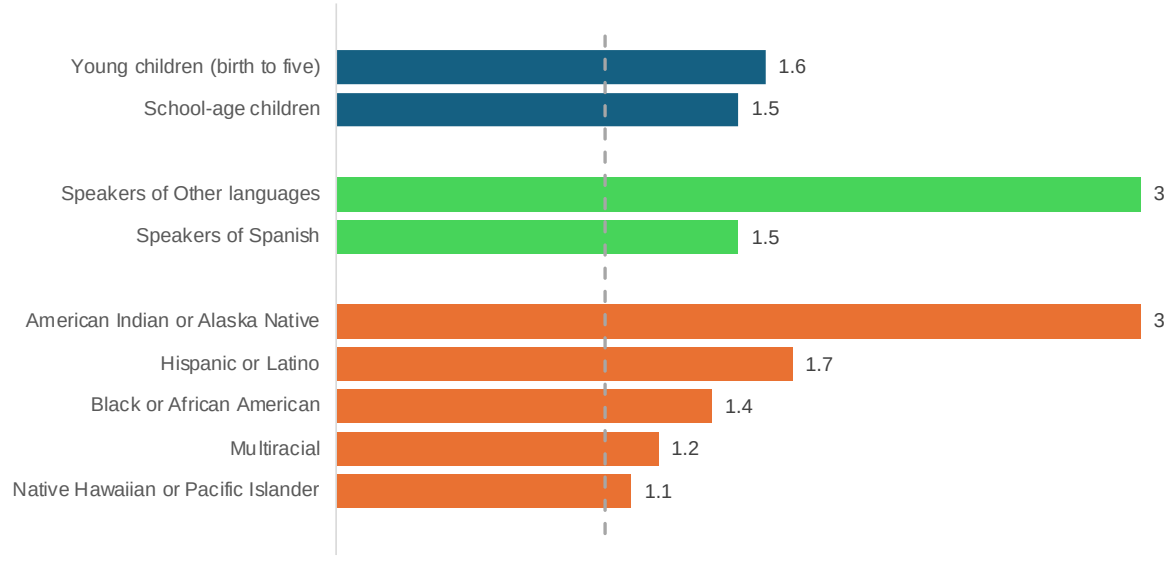
poverty than other age groups. In contrast, Arizona seniors ages 65 and older have 36% lower odds of living in poverty than other age groups statewide.

Individuals who speak Spanish or Other languages at home are also more likely to be living in poverty than speakers of English only or those who speak Indo-European or Asian and Pacific Island languages. **Individuals who speak Other languages have three times higher odds of living in poverty compared to those who do not (OR: 3.0). Speakers of Spanish have 1.5 times the odds of living in poverty compared to non-Spanish speakers.**

In Arizona, the languages most frequently spoken in the Other language category are Navajo (Diné, 50%), other Native North American languages (16%), Arabic (15%), and Amharic, Somali, or other Afro-Asiatic languages (7%).

The likelihood of living in poverty also varies substantially between racial and ethnic groups. **Individual identifying as American Indian or Alaska Native have three times the odds (OR: 3.0) of living in poverty than other groups. Individuals identifying as Hispanic or Latino (OR: 1.7) or Black or African American (1.4) also have higher odds of living in poverty.** In Arizona, individuals identifying as multi-racial or Native Hawaiian or Pacific Islander have slightly higher odds of living in poverty than other groups (OR: 1.2 & 1.1, respectively). Those identifying as Asian had about 20% lower odds of living in poverty (OR:0.81), and individual identifying as non-Hispanic White were substantially less likely to live in poverty, with a more than 50% lower odds of having an income below the poverty threshold (OR:0.47).

Figure 1. Groups (by age, language use, and race/ethnicity) in Arizona with above-average likelihood (OR>1) of living in poverty



Qualification for SNAP and SNAP-Ed

The target population of SNAP-Ed are SNAP-eligible individuals, defined by the USDA as individuals with incomes of 185% of the federal poverty level or lower.[23] This poverty level is responsive to household or family size. For example, a single-person household making $27,861 per year or less would be eligible for SNAP, while a six-person household with a household income of $87,579 would also be eligible.

Table 1. Household size and corresponding income to qualify as 100% and 185% of the federal poverty level, 2024

Household/Family Size	100%	185%
1	$15,060	**$27,861**
2	$20,440	**$37,814**
3	$25,820	**$47,767**
4	$31,200	**$57,720**
5	$36,580	**$67,673**
6	$41,960	**$77,626**
7	$47,340	**$87,579**
8	$52,720	**$97,532**
9	$58,100	**$107,485**
10	$63,480	**$117,438**

Source: U.S. Dept of Health and Human Services, ASPE (2024). HHS Poverty Guidelines for 2024. Retrieved from https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines
Note: The U.S. Census Bureau uses poverty thresholds to estimate the population in poverty; these thresholds are very similar to the federal poverty guidelines but not identical.

To serve SNAP-Ed's target population, activity sites go through a qualification process to ensure that activities at each site are likely to reach low-income populations.[24] *Sites may automatically qualify if they are:*

- Emergency Food Assistance sites,
- SNAP or WIC offices,
- public housing sites,
- Head Start facilities,
- or Food Insecurity Nutrition Incentive (FINI) program sites.

These sites all involve means-tested programs, creating a high likelihood of a predominantly low-income service population. Sites may also qualify based on the prevalence of low-income populations in the tract where the site is located. Both usual venues (SNAP or TANF offices, public housing sites, food banks, and job training programs for SNAP/TANF participants) and alternative venues (schools, child care centers, SFSP sites, WIC clinics, community centers, and grocery stores) may be qualified if the proportion of the population that is low-income is greater than or

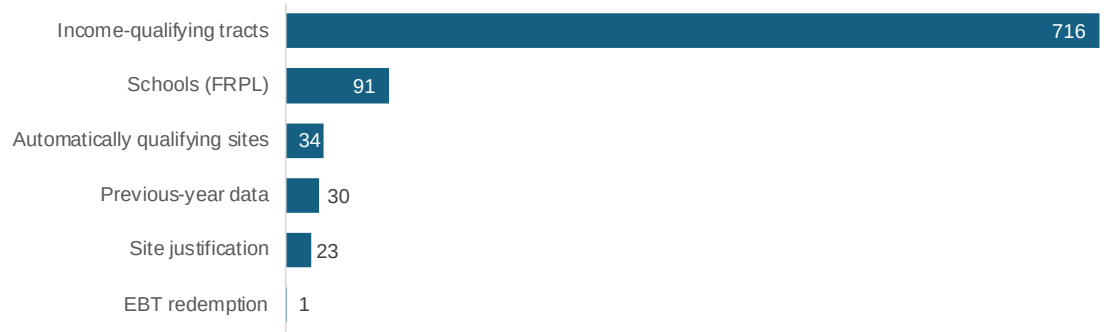
[23] U.S. Department of Agriculture, Food and Nutrition Service (2023). FY2024 Supplemental Nutrition Assistance Program (SNAP-Ed) Plan Guidance. Retrieved from https://snaped.fns.usda.gov/administration/snap-ed-guidance-and-policy
[24] AZ Health Zone (2024). AZ Health Zone Program Guidance and Policy Manual Federal Fiscal Year 2024. Retrieved from https://www.azhealthzone.org/wp-content/uploads/2023/09/FFY24-Guidance-and-Policy-Manual-FINAL-rev.03.26.2024.pdf

equal to 50%. Sites can be qualified for specific age groups (young children ages birth to 5, school-age children ages 6-17, adults ages 18-64, or seniors 65 and older) if more than 50% of that select population is low-income. Additionally:

- Schools can be qualified if 50% or more of the student body qualify for free- or reduced-price lunch (FRPL) or if the school has a community eligibility provision (CEP) and had 40% or more students qualifying for FRPL prior to implementation of the CEP.
- Summer Food Service Program (SFSP) sites are qualified for SNAP-Ed activity, as are stores with $50,000 or more SNAP electronic benefit transfer (EBT) redemption and worksites with 50% or more employees with hourly wages at or below $25.68/hr.

Due to this qualification process, **the majority of active SNAP-Ed sites (80%) are located in tracts that qualify for SNAP-Ed based on the proportion of low-income populations** in 2022. Of the 179 sites that did not qualify based on income criteria according to 2022 data, 91 (52%) were qualifying schools based on FRPL criteria, 34 (19%) were automatically qualifying sites (e.g., WIC offices, Head Start centers, public housing sites, etc.), 30 (16%) qualified based on past year data (e.g., 2021 ACS data or the CACFP mapper), 1 was a store qualifying via EBT redemption, and the final 23 qualified based on justifications for sites that were important community anchor institutions (such as a sole park, trailhead, or youth center in a town, an Extension office, or a key library) or served largely low-income populations (e.g., some child care centers with high low-income child enrollments). These sites are important to keep in mind throughout this report, as activity in seemingly 'lower need' tracts is almost certainly still occurring in a setting that serves low-income individuals.

Figure 2. Number of 2023 SNAP-Ed sites qualified by different criteria



The share of tracts that qualified based on tract-level low-income populations in 2022 varies widely depending on the criteria applied. **While 46% of the 1,765 tracts in Arizona (home to 44% of the population) qualify for SNAP-Ed according to any criteria, only 14% of tracts qualify based on the low-income population of all ages**. Tracts are most likely to qualify for SNAP-Ed through the young child (35%), CACFP (33%), or school-age child (31%) criteria. This reflects the higher prevalence of poverty in Arizona's child population. However, this means that many SNAP-Ed sites may only be qualified to provide child-focused programming. Very few tracts qualify based on the senior (11%) or adult (10%) criteria, and in many cases, tracts with high proportions of low-income adults or seniors also qualify based on overall population low-income proportions. In total, there

are only 2 tracts (out of 817) that qualify solely on senior low-income prevalence, and none that qualify solely on adult low-income prevalence. The lower level of need generally in Arizona in the adult and senior populations mean that much of SNAP-Ed's programming will be focused on children and their families. The current structure of the qualification process makes qualifying sites for adult- and senior-focused activities much less likely to succeed than qualifying sites to serve children.

Table 2. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Arizona

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**817**	**46%**	**3,192,372**	**44**
Overall Population Criteria	244	14%	923,926	13
Young Child Criteria	610	35%	2,450,034	34
School-age Child Criteria	553	31%	2,197,759	31
CACFP Criteria	586	33%	2,343,983	33
Adult Criteria	178	10%	621,945	9
Senior Criteria	195	11%	738,487	10

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

Economic need

The primary purpose of the qualification process is to ensure that SNAP-Ed activities involve and impact low-income populations. As such, we expect that low-income populations and individuals living in poverty should be more likely to reside in SNAP-Ed qualifying tracts, as should populations with higher prevalence of poverty and low-income (i.e., children, speakers of Spanish or Other languages, and individuals identifying as American Indian or Alaska Native, Hispanic or Latino, or Black or African American). This expectation largely proves true: **low-income individuals have 3.7 times the odds of residing in a qualifying tract compared to higher-income individuals**, and **individuals in poverty have 3.3 times the odds of residing in a qualifying tract than individuals not in poverty**. This provides evidence to support *Hypothesis 1: Low-income individuals and individuals in poverty should be more likely to reside in SNAP-Ed qualifying and active tracts than individuals with higher incomes.* However, it is vital to acknowledge the limitations of geographically-based criteria as 30% of the population in poverty (n=280,765) and 33% of the low-income population (n=646,879) reside in tracts that do not qualify for SNAP-Ed based on tract-level need. These individuals may be served by many of the automatically-qualifying sites or through sites in neighboring tracts, as discussed above in the *Limitations* section.

Age group representation

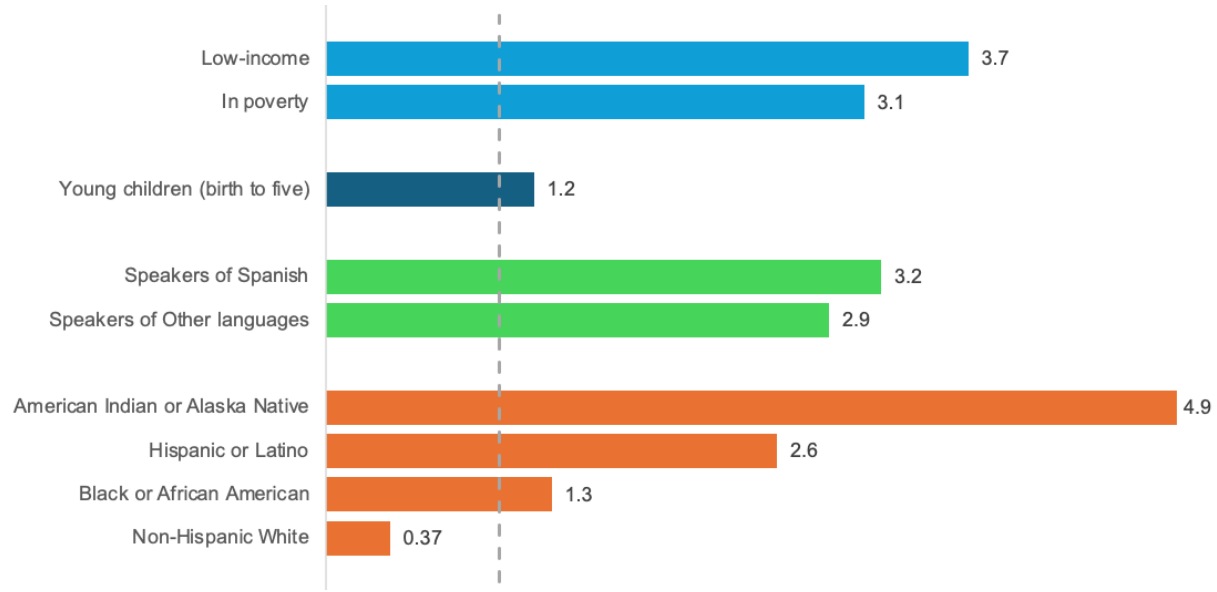
Looking at specific populations shows us a pattern that largely follows trends seen in the prevalence of poverty. Overall, populations by age group are fairly evenly distributed among qualifying and non-qualifying tracts. **Young children (of all income statuses) have slightly higher odds of residing in a SNAP-Ed qualifying tract (OR:1.2) than other age groups**, and seniors have slightly lower odds of residing in qualifying tracts (OR: 0.81).

Language use and race/ethnicity representation

Individuals that speak Spanish or Other languages at home (of all income statuses) have about three times the odds of residing in a SNAP-Ed qualifying tract (OR: 3.2 and 2.9, respectively).

Individuals identifying as American Indian or Alaska Native had nearly five times the odds of residing in a qualifying tract (OR: 4.9) compared to all other racial or ethnic groups; **those identifying as Hispanic or Latino had 2.6 times the odds of residing in a qualifying tract**; and **those identifying as Black or African American had 1.3 times the odds of residing in a qualifying tract**. By contrast, individuals identifying as non-Hispanic White (at all income levels) had 60% lower odds of residing in qualifying tracts (OR: 0.37) than non-White individuals. This provides evidence to support *Hypothesis 2: SNAP-Ed qualifying tracts should have higher proportions of Hispanic or Latino, American Indian, and Black or African American populations than non-qualifying tracts* at the state level. The higher-level of need for these populations indicates that these populations should also be disproportionately represented in tracts where SNAP-Ed works, if SNAP-Ed activity is equitably distributed.

Figure 3. Groups (by income, age, language use, and race/ethnicity) with a disproportionate likelihood of living in SNAP-Ed qualifying tracts (presented as OR)



Note: This figure includes groups whose likelihood of living in a qualifying tract is significantly different ($p < .001$) from its proportion of Arizona's population. See Appendix 2 for results for all groups.

Who is AZ Health Zone serving?

After establishing the demographic characteristics of the population most in need of SNAP-Ed and the population residing in tracts that qualify for SNAP-Ed sites based on prevalence of low-income populations, we can examine the characteristics of the population that reside in tracts with current SNAP-Ed activity to explore who SNAP-Ed is currently serving statewide compared to the population they could be serving (un-served, qualifying tracts).

Economic need

In terms of the population in need, **low-income individuals (OR: 0.93; RR: 0.96) and individuals in poverty (0.92; RR: 0.96) are very slightly less likely to live in tracts with SNAP-Ed activity than higher-income individuals**. These effects are very small, suggesting that high-need individuals are not substantially less likely to live in active tracts, but they do indicate that at the state-level, more individuals in poverty and with low incomes reside in qualifying but unserved tracts than in qualifying, served tracts. This is largely expected because of the emphasis on going deeper in fewer communities—**SNAP-Ed was only active in 278 of 817 qualifying tracts (34%)**. Looking at the prevalence of low-income and in-poverty populations shows that **the poverty rate in qualifying tracts was 20.5% compared to 19.9% in active tracts**, and **the low-income rate in qualifying tracts was 42.3% compared to 41.2% in active tracts**. Taken together, this suggests that the areas where SNAP-Ed is currently working have similar levels of need to where SNAP-Ed is not working. Put another way, SNAP-Ed is currently serving high-need populations, but a focus on more intensive work in fewer communities does mean that a large portion of in-need populations are not currently served.

As a result of investing more resources in fewer geographic areas, SNAP-Ed was only active in 34% of qualifying tracts in 2023.

Age group representation

Looking at specific age groups, **school-age children (regardless of income status) were slightly more likely to reside in active tracts than other age groups (OR: 1.2; RR:1.1)**, consistent with the patterns seen in qualification data that suggest that qualifying tracts are most likely to qualify for SNAP-Ed based on child income patterns. Seniors were about 15% less likely to reside in a qualifying tract (OR:0.74; RR:0.84), again consistent with the low rate of tracts qualifying based on senior income patterns.

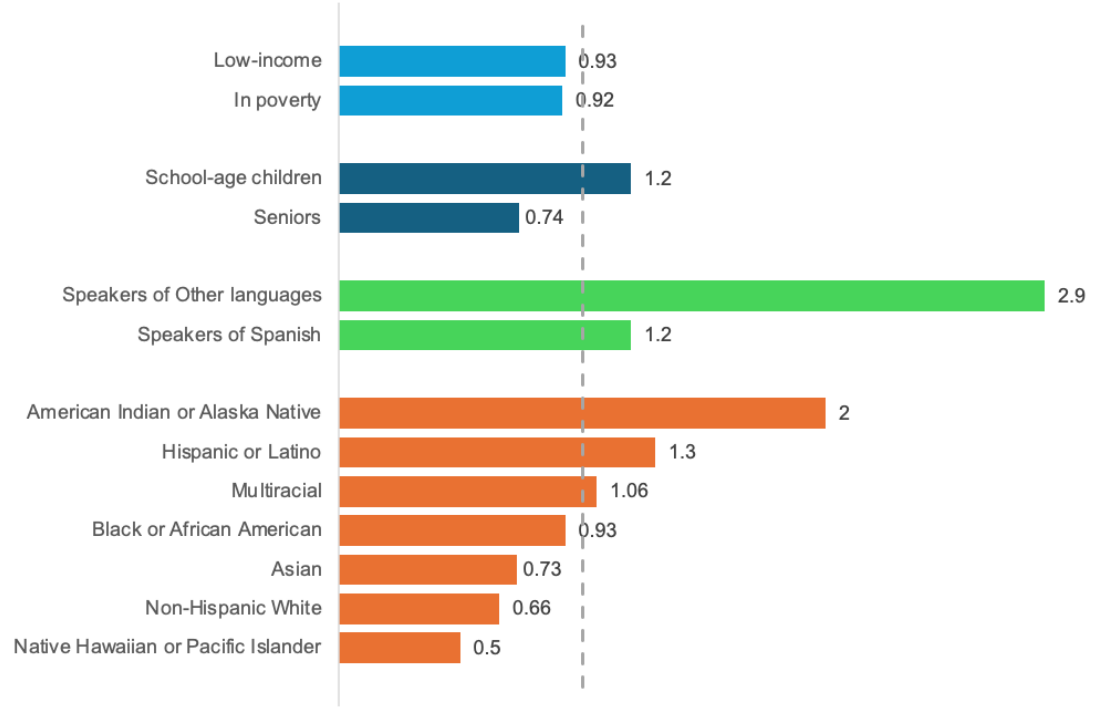
Language use representation

For home language use, **speakers of Other languages had nearly three times the odds of living in an active tract (OR: 2.9) than other groups**, and **individuals who speak Spanish also had higher odds of living in an active tract than non-Spanish speakers (OR: 1.2)**. This suggest that SNAP-Ed is currently active in tracts with high prevalence of multi-lingual households. Statewide 7.1% of households in active tracts are limited-English-speaking compared to 6.0% in qualifying tracts. Given the high rates of poverty among individuals who speak Spanish and Other languages, this higher representation of these individuals in active tracts is a positive sign for equity in SNAP-Ed services, providing support for *Hypothesis 3: The demographics of where SNAP-Ed is currently active should match the demographics of the population in poverty and in tracts qualifying for SNAP-Ed; where this is a mismatch, more in-need groups should be overrepresented*. However, presence in a tract does not necessarily mean that SNAP-Ed activities are accessible in the home languages of the population of that tract. Ensuring that translated materials are available as well as staff who can speak Spanish, Native languages, or languages prevalent in Arizona's refugee populations (Arabic, Somali, and other African languages), remain vital for serving the multi-lingual populations who live where SNAP-Ed is currently working.

Race/ethnicity representation

Statewide, **individuals identifying as American Indian or Alaska Native had double the odds of residing in a tract where SNAP-Ed is currently active** when compared to other racial and ethnic groups and qualifying but un-served tracts. **Individuals identifying as Hispanic or Latino had 1.3 times the odds of living in an active tract** compared to non-Hispanic individuals. **Individuals identifying as Black or African American were slightly less likely to reside in an active tract (OR:0.93; RR: 0.96), despite their over-representation in qualifying tracts and high prevalence of poverty**. This suggests that current SNAP-Ed activity may be underserving this population and further evaluation of how Black communities can be better served by SNAP-Ed in Arizona may be needed. Multi-racial individuals were slightly more likely to reside in active tracts (OR:1.06). All other groups were much less likely to reside in active tracts, including individuals identifying as Asian (OR: 0.73), non-Hispanic White (0.66), and Native Hawaiian or Pacific Islander (OR: 0.50). For the Asian and non-Hispanic White populations, lower prevalences are consistent with lower poverty rates. However, Native Hawaiian and Pacific Islander populations do have slightly elevated rates of poverty compared to other racial and ethnic groups and are slightly more likely to reside in qualifying tracts (OR: 1.2). Though this population is quite small in Arizona (n=13,000), it is important to note that they are currently underserved by SNAP-Ed. These data provide mixed support for *Hypothesis 3* – while American Indian or Alaska Native populations are appropriately overrepresented in active SNAP-Ed areas, Black or African American and Native Hawaiian or Pacific Islander populations are not currently represented at a proportion commensurate with their risk of poverty.

Figure 4. Groups (by income, age, language use, and race/ethnicity) with a disproportionate likelihood of living in tracts with AZHZ SNAP-Ed activity (presented as OR)



Note: This figure includes groups whose likelihood of living in a tract with AZHZ SNAP-Ed activity in 2023 is significantly different ($p < .001$) from its proportion of Arizona's population. See Appendix 2 for results for all groups (by income, age, language use, and race/ethnicity).

Who is AZ Health Zone serving well?

PSE Implementation

While looking at SNAP-Ed activity highlights areas where particular populations may or may not be served, the presence of SNAP-Ed does not necessarily indicate that the AZ Health Zone's current goal, having multi-level, mutually reinforcing activities to "go deeper" in community work to drive change, is occurring in all tracts. Different sites may be at varying levels of partnerships, and only examining the presence or absence of SNAP-Ed in a tract does not capture whether SNAP-Ed is effectively serving the community therein. Thus exploring the population in tracts with varying levels of SNAP-Ed activity can also provide useful insights into SNAP-Ed equity in service.

Economic need

The first level of activity we consider are sites with implemented PSE changes in 2023. These indicate an investment by LIAs to shift policies, systems, and environments that suggests longer-term, deeper community work**. Looking at populations in need, individuals in poverty and low-income individuals were equally likely to live in a tract with an implemented PSE (versus a qualifying tract with no implemented PSEs) when compared to higher-income individuals.** Taken together with the fact that **only 113 of 817 qualifying tracts (14%) had implemented PSEs** in 2023, this suggests that **PSE work is happening in tracts with high concentrations of low-income and in-poverty populations.**

Only 14% of SNAP-Ed qualifying tracts had implemented policy, systems, or environmental (PSE) work in 2023, however they were largely implemented in areas with higher levels of need.

Age group representation

Similar to patterns seen in active tracts, **school-age children were again slightly more likely to reside in tracts with implemented PSEs (OR:1.2) than other age groups.** Young children were equally likely to live in a tract with an implemented PSE as all other age groups, and both adults and seniors were slightly less likely to live in a tract with an implemented PSE than other age groups (OR: 0.92 and 0.95, respectively). This fits with the distribution of sites with implemented PSEs by site type; **nearly half of all sites with implemented PSEs were schools (45%; n=123), and an additional 20% (n=56) were early care and education facilities, meaning that about 2 out of every 3 implemented PSEs took place at a child-focused site.**

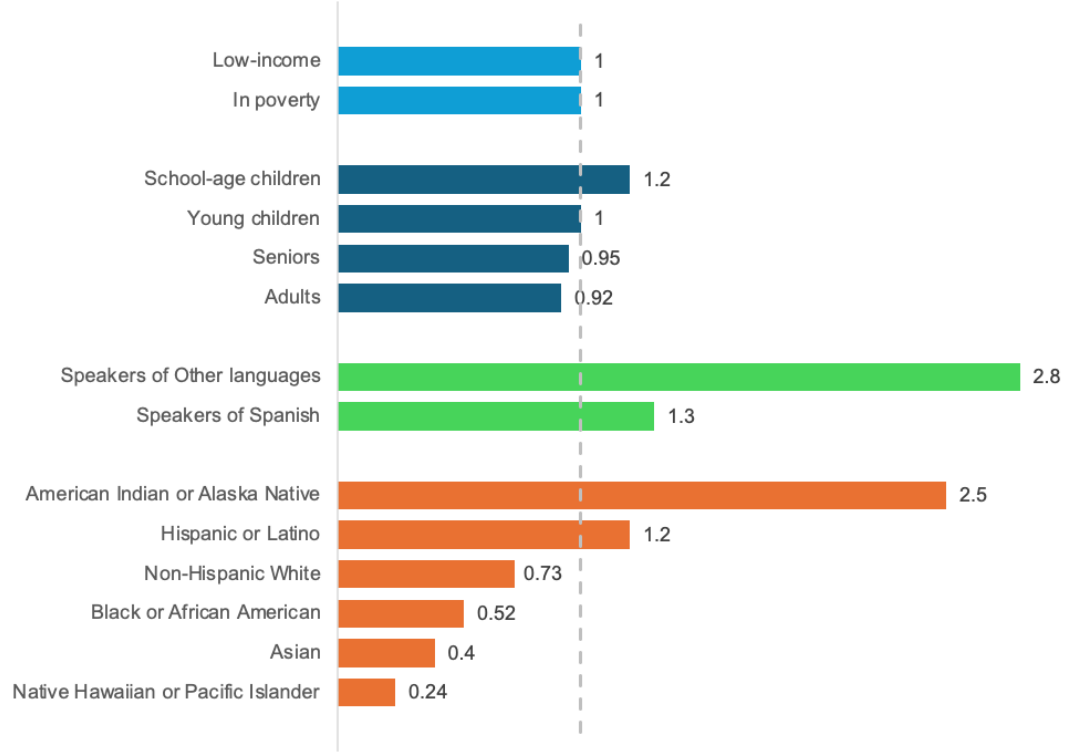
Language use representation

Speakers of Other languages (OR:2.8) and Spanish (OR: 1.3) were again significantly more likely to live in tracts with implemented PSEs than all other language groups. Limited English households again make up 7.1% of households in tracts with implemented PSEs, nearly identical to the 7.1% in active tracts. This again suggests that SNAP-Ed is serving multi-lingual and limited English households well, especially because many (but not all) PSE changes benefit all individuals and families served by a school, child care center, community center, or park, regardless of home language spoken.

Race/ethnicity representation

Finally, statewide, **individuals identifying as American Indian or Alaska Native were again more than twice as likely to reside in tracts with implemented PSEs (OR: 2.5), and individuals identifying as Hispanic or Latino were also 1.2 times as likely to reside in tracts with PSEs as other racial and ethnic groups.** Concerningly, **individuals identifying as Black or African American were half as likely to reside in tracts with PSEs as other groups (OR: .52), despite being over-represented in qualified tracts (OR:1.3) compared to other racial and ethnic groups.** This suggests that current PSE work is not equitably serving Black communities that qualify for SNAP-Ed. Similar to the pattern seen in active tracts, individuals identifying as Native Hawaiian or Pacific Islander were significantly less likely to live in tracts with PSEs compared to other groups (OR: 0.24), again suggesting that this small population is also not well-served by current sites. Individuals identifying as non-Hispanic White (OR:0.73) or Asian (OR: 0.40) were less likely than other groups to reside in tracts with implemented PSEs; this mirrors patterns seen in SNAP-Ed activity.

Figure 5. Groups (by income, age, language use, and race/ethnicity) with a disproportionate likelihood of living in tracts with policy, systems, and environmental (PSE) work implemented (presented as OR)



Note: This figure includes groups whose likelihood of living in a tract with an AZHZ-implemented PSE in 2023 is significantly different ($p < .001$) from its proportion of Arizona's population. See Appendix 2 for results for all groups (by income, age, language use, and race/ethnicity).

Overall, this again provides mixed support for *Hypothesis 3: The demographics of where SNAP-Ed is currently active should match the demographics of the population in poverty and in tracts qualifying for SNAP-Ed; where this is a mismatch, more in-need groups should be overrepresented*. This hypothesis holds true for speakers of Spanish and Other languages as well as American Indian or

Alaska Native and Hispanic or Latino populations. However, like with SNAP-Ed activity generally, Black or African American and Native Hawaiian or Pacific Islander population are underrepresented commensurate to their level of economic need.

Intense & Diverse Work

In addition to exploring the demographics of tracts with implemented PSE changes, examining where SNAP-Ed is doing intense and diverse work can highlight the communities where deep relationships are being built through high levels of interaction and where activities from multiple strategy areas build toward community-wide change. Our definitions of tracts with high-intensity SNAP-Ed activities and with high-diversity activities capture tracts with higher than median number of activities completed during the year or implemented PSEs and where activities within the tract are more likely to be from multiple strategy areas instead of concentrated in a single strategy domain.

Economic need

Like the pattern seen for PSE implementation, **individuals living in poverty were equally likely to live in tracts with high-intensity SNAP-Ed activity compared to those not in poverty. Low-income individuals were slightly more likely to live in high-intensity tracts (OR: 1.1) than higher income individuals.** With high-intensity tracts making up 20% (n=166) of qualifying tracts, this again suggests that SNAP-Ed activity is most intense in high-need tracts. **Individuals in poverty (OR: 0.95) and low-income individuals (OR: 0.98) were nearly equally likely to live in tracts with high-diversity SNAP-Ed activity compared to individuals with higher incomes and qualifying tracts without high-intensity activity.** High-diversity tracts comprise 14% (n=112) of qualifying tracts, which again suggests that on the whole SNAP-Ed high-diversity activity is occurring in tracts with high-need populations.

Age group representation

The distribution of age groups in high-intensity tracts compared to all qualifying tracts again followed a similar pattern as seen in poverty prevalence and SNAP-Ed activity**; school-age children had the highest odds of living in a high-intensity tract (OR: 1.2), followed by young children (OR: 1.1)**, while adults were equally likely to living in a high-intensity tract as other age groups and seniors were less likely to live in high intensity tracts (OR: 0.72). **For tracts with high-diversity activity, school-age children again had 20% higher odds than other age groups of residing in these tracts (OR: 1.2), while seniors had 20% lower odds (OR: 0.80).**

Language use representation

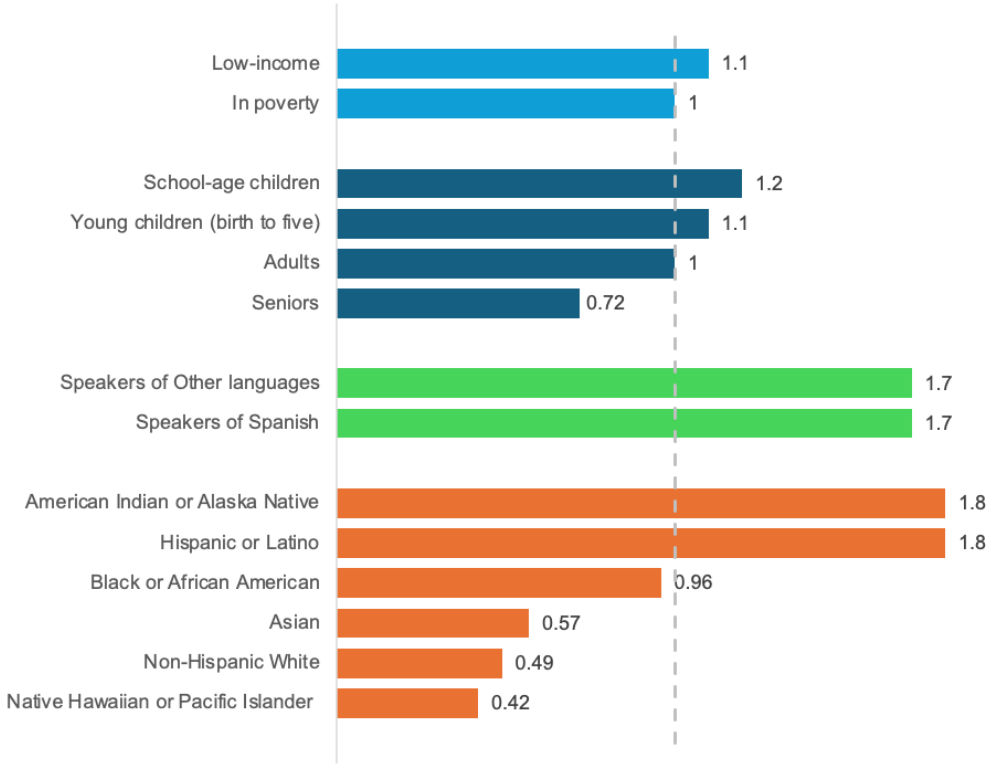
Spanish speakers (OR: 1.7) and speakers of Other languages (OR: 1.7) have equally higher odds of living in high-intensity tracts compared to all other language groups. Speakers of Other language had 3.6 times higher odds of residing in tracts with high-diversity activity than other language groups, while **Spanish speakers had about 20% higher odds of living in these high-diversity tracts (OR: 1.2)**.

Race/ethnicity representation

Again**, individuals identifying as American Indian or Alaska Native (OR:1.8) and those identifying as Hispanic or Latino (OR: 1.8) had equally higher odds of living in high-intensity**

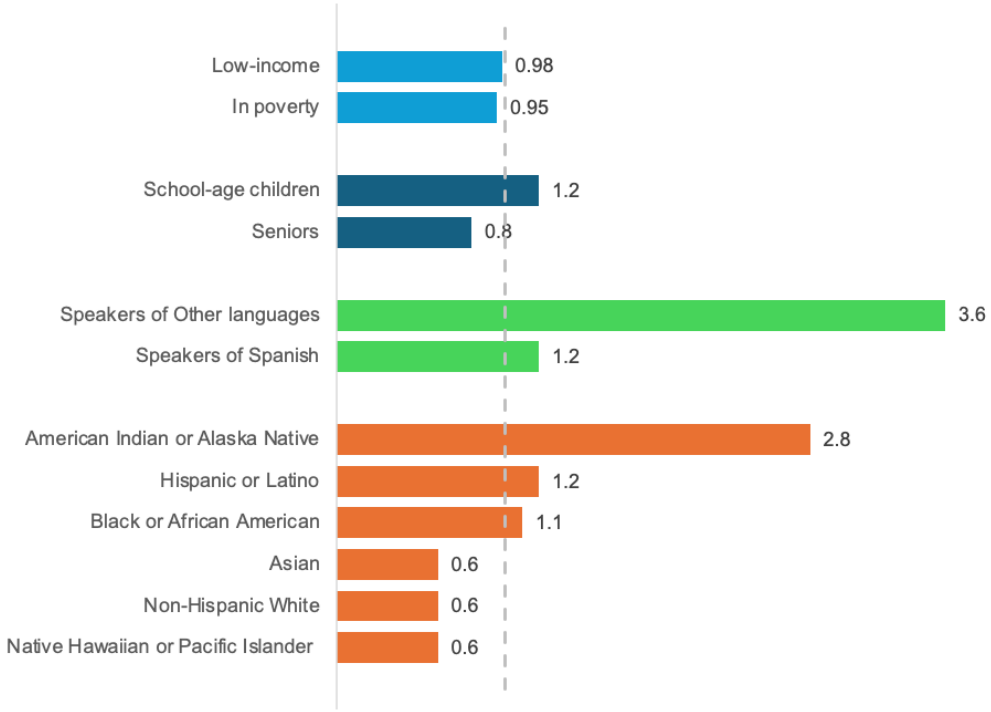
tracts compared to other racial and ethnic groups. However, unlike patterns of PSE activity, individuals identifying as **Black or African American had nearly equal odds in high-intensity tracts (OR:0.96) as other groups.** Similar to the pattern seen in language use, **individuals identifying as American Indian or Alaska Native had about 2.8 times the likelihood of living in tracts with high-diversity activity** compared to all other groups, **while both individuals identifying as Hispanic or Latino (OR: 1.2) and those identifying as Black or African American (OR:1.1) were slightly more likely to reside in these tracts.** This suggests that while Black communities are currently underserved in terms of implemented PSEs, SNAP-Ed activities do happen with high frequency and high strategy diversity in tracts where these populations reside. Individuals identifying as Native Hawaiian or Pacific Islander (OR: 0.42), non-Hispanic White (OR:0.49) or Asian (0.57) were all substantially less likely to reside in high intensity tracts, as well as tracts with high-diversity activity (OR: 0.60 for all 3 groups).

Figure 6. Groups (by income, age, language use, and race/ethnicity) with a disproportionate likelihood of living in tracts with a higher intensity of AZHZ SNAP-Ed activity (presented as OR)



Note: This figure includes groups whose likelihood of living in a tract with a high intensity of AZHZ SNAP-Ed activity in 2023 is significantly different ($p < .001$) from its proportion of Arizona's population. See Appendix 2 for results for all groups (by income, age, language use, and race/ethnicity).

Figure 7. Groups (by income, age, language use, and race/ethnicity) with a disproportionate likelihood of living in tracts with a higher diversity of AZHZ SNAP-Ed activity (presented as OR)



Note: This figure includes groups whose likelihood of living in a tract with a high diversity of AZHZ SNAP-Ed activity in 2023 is significantly different ($p < .001$) from its proportion of Arizona's population. See Appendix 2 for results for all groups (by income, age, language use, and race/ethnicity).

Overall, this provides support for *Hypothesis 3: The demographics of where SNAP-Ed is currently active should match the demographics of the population in poverty and in tracts qualifying for SNAP-Ed; where this is a mismatch, more in-need groups should be overrepresented*. This hypothesis holds true for speakers of Spanish and Other languages as well as American Indian or Alaska Native and Hispanic or Latino populations. Compared to other types of SNAP-Ed activity, Black or African American individuals are less underrepresented in tracts with high-intensity and high-diversity activity. However, like with SNAP-Ed activity generally, Native Hawaiian or Pacific Islander population continue to be underrepresented commensurate to their level of economic need.

Going Deeper: An exploration of county-level trends

While SNAP-Ed goals and strategic direction are set by AZ Health Zone at the state-level through the RFGA process, the selection of communities, development of community action plans, and implementation of activities are the responsibility of LIAs, which operate at the county-level. This means that examination of patterns at the state-level must be complemented by county-by-county analyses to identify local activity patterns. In this section of the report, we explore patterns of SNAP-Ed activity and demographics of communities served for each of the 15 counties in Arizona.

Apache County

Apache County is a geographically large rural county in northeastern Arizona that overlaps with the lands of the Navajo Nation and the White Mountain Apache Tribe. It is comprised of 18 Census tracts.

Economic need: The county has very high economic need compared to other parts of the state; in 2020, 72% of all births in the county were covered by AHCCCS, suggesting that the majority of children in the county are likely eligible for SNAP.[25] About 1 in 3 individuals (33%) residing in the county are in poverty, and more than half (55%) are low-income. This need is even more pronounced among children; more than 2 out of every 3 children (64%) in the county live in low-income households. Adults and seniors make up a slightly lower proportion of the population in poverty (55% and 11%, respectively) than their share of the overall population (57% and 16%, respectively). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 74% of the overall population, they comprise 86% of the population in poverty. By contrast, individuals identifying as non-Hispanic White comprise 18% of the population but only 8% of those in poverty.

Qualifying tracts: This high level of economic need means that the majority of the county's tracts (17 of 18; 94%) qualify for SNAP-Ed under at least one criterion, and 95% of the county's population lives in a qualifying tract. More than 90% of all tracts qualify based on the proportion of low-income young children and 67% due to low-income school-age children (compared to 31-35% statewide, depending on child age). More than half of all tracts qualify for adults (67%) and seniors (56%), compared to 10-11% statewide. Overall, 72% of all tracts qualify for the population of all ages (compared to 14% statewide). This widespread need for SNAP-Ed means that nearly all communities could benefit from SNAP-Ed activity.

Table 3. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Apache County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**17**	**94**	**62,728**	**95**
Overall Population Criteria	13	72	47,777	72
Young Child Criteria	17	94	62,728	95
School-age Child Criteria	12	67	46,272	70
CACFP Criteria	15	83	55,892	85
Adult Criteria	12	67	41,963	64
Senior Criteria	10	56	38,783	59

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Apache County was active in 15 of 17 qualifying tracts (88%) in the county (compared to 45% statewide), and SNAP-Ed is additionally active at automatically-qualifying sites (including a WIC office, senior center, and emergency food site) in

[25] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

the only tract that does not qualify based 2022 low-income proportions. This expansive coverage in the county means that numerically more individuals live in active tracts than in qualifying tracts, so odds ratios could not be calculated. However, individuals in poverty (0.56) and with low incomes (0.48) had much lower odds of living in tracts with implemented PSEs as those with higher incomes. The same pattern held true for tracts with high-intensity activity (OR for in-poverty: 0.65; OR for low-income: 0.6) and high-diversity activity (OR for in-poverty: 0.65; OR for low-income: 0.6). This pattern is likely driven by the very high rate of poverty in the county, which means that individuals in poverty are widely distributed, and this, combined with the relatively higher income population of the one non-qualifying tract, leads to skewed odds ratios.

Age group representation: Children made up an equal proportion of the population in tracts with SNAP-Ed activity compared to qualified tracts; the same held true for tracts with PSEs, high-intensity SNAP-Ed activity, and high-diversity SNAP-Ed activity. In terms of age, the demographics of tracts where SNAP-Ed was active at any level matched the distribution of the population both overall and in qualified tracts.

Language use representation: Speakers of Other languages (mostly Navajo and Native North American languages in Apache County) made up a nearly equal share of the population in active tracts (67%) as their representation in qualified tracts (67%), but were very underrepresented in tracts with implemented PSEs and high-intensity of activity (56%). In contrast, Spanish speakers were overrepresented in tracts with implemented PSEs (6%) and with high-intensity activities (6%) compared to their proportion in qualified tracts, and approximately equally represented in active (4%) and tracts with high-diversity activity (5%) when compared to all qualified tracts (4%). Taken together this suggests that SNAP-Ed in Apache County is highly active in communities with a small population of Spanish speakers and many speakers of Native languages. SNAP-Ed in Apache County currently offers direct education in both English and Diné in both the Chinle and Ft. Defiance communities.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as American Indian or Alaska Native are underrepresented in qualified tracts (77%) relative to their share of the population in poverty (86%), and they comprise 75% of the population in tracts where SNAP-Ed is active, suggesting that they are underrepresented in active tracts. The share of the population identifying as American Indian or Alaska Native is even lower in tracts with implemented PSEs and high-intensity activities (66%) than in qualifying tracts (76%). By contrast, individuals identifying as Hispanic or Latino are slightly over-represented in active tracts (7%), tracts with PSEs (9%), and tracts with high-intensity activity (9%) and high-diversity activity (7%) as in qualified tracts, where they comprise 5% of the population. Individuals identifying as Black or African American make up a very tiny proportion of the overall population and population in poverty but appear to be equally represented in all active tracts. Individuals identifying as Non-Hispanic White are overrepresented in tracts with PSEs and high-intensity activity (23% for both) compared to the population residing in qualified tracts (16%).

Overall, Apache County has a very high level of need across nearly the entire, very large and remote, county, and SNAP-Ed in Apache County is currently serving the majority of the county. Comparing the demographics of where SNAP-Ed is working to the population in highest need suggests that adding an additional community within the Navajo Nation or White Mountain Apache Tribe could ensure that populations with high economic need are served, as American Indian populations and speakers of Native languages are currently underrepresented relative to their share of the population in poverty. However, Apache County also illustrates some of the limitations of a geographically-based approach to assessing equity. Key community institutions, such as libraries, benefits offices, and community centers in rural areas are frequently located in larger towns, which also tend to have better-resourced populations. These institutions serve a broad catchment area, which includes many of the SNAP-Ed-qualified surrounding areas even though their most proximate population may have lower levels of need.

Cochise County

Cochise County sits in the southeastern corner of Arizona, bordering Mexico and New Mexico. It is largely rural, with ranching and agricultural areas in addition to the Fort Huachuca military base near the largest city, Sierra Vista. It is comprised of 38 Census tracts.

Economic need: In 2020, over half (52%) of all births in the county were covered by AHCCCS, suggesting that the majority of children in the county are likely eligible for SNAP.[26] About 1 in 7 individuals (15%) residing in the county are in poverty, and over one-third (35%) are low-income. This need is even more pronounced among children; 48% of children in the county are in low-income households. Adults and seniors make up a slightly lower proportion of the population in poverty (51% and 19%, respectively) than their share of the overall population (54% and 24%, respectively). Individuals identifying as Hispanic or Latino are disproportionately in poverty; they make up 36% of the overall population but comprise 53% of the population in poverty. The same is true for multi-racial individuals who make 17% of the overall population, but comprise 24% of the population in poverty.

Qualifying tracts: This level of economic need means that the majority of the county's tracts (26 of 38; 68%) qualify for SNAP-Ed under at least one criteria, and 70% of the county's population lives in a qualifying tract. More than 60% of all tracts qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), whereas 10% of all tracts qualify for adults and seniors (similar to 10-11% statewide), and 21% of all tracts qualify for the population of all ages (compared to 14% statewide). This widespread need for SNAP-Ed means that there are many potential communities that could benefit from SNAP-Ed activity.

[26] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

Table 4. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**26**	**68**	**88,275**	**70**
Overall Population Criteria	8	21	22,898	18
Young Child Criteria	22	58	77,345	62
School-age Child Criteria	20	53	64,304	51
CACFP Criteria	20	53	67,116	54
Adult Criteria	4	10	8,578	7
Senior Criteria	4	10	10,749	9

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Cochise County was active in 14 of 26 qualifying tracts (54%) in the county (compared to 45% statewide). Low-income individuals (OR: 0.94) had slightly lower odds of residing in tracts with SNAP-Ed activity than higher income populations. Individuals in poverty (OR:1.0) had equal odds of residing in tracts with SNAP-Ed activity compared to higher income populations. Individuals in poverty and with low incomes had the same odds of living in tracts with implemented PSEs as those with higher incomes. For high-intensity tracts, individuals in poverty (OR: 0.92) had slightly lower odds of residing in these areas than higher income individuals. Individuals with low incomes had no difference in odds of residing in these areas compared to higher income individuals. However, individuals in poverty (OR:1.4) and with low incomes (1.6) had significantly higher odds of living in tracts with high-diversity activities compared to those with higher incomes.

Intense and diverse SNAP-Ed activity: Qualifying tracts, tracts with any SNAP-Ed activity, tracts with high-intensity, and high-diversity activities have similar proportions of the population made up by children as the county as a whole; about 7% for young children and about 15% for school-age children. By comparison, seniors made up 22% of the population in qualified tracts, but only 18% in tracts with high-diversity activities, and 20% in tracts with PSEs. In Cochise County, 20 of 24 sites with implemented PSEs (83%) were school or child care settings, which helps explain the slight over-representation of children in these tracts. Children also comprised 82% of all direct education participants in Cochise County in 2023.

Language use representation: Spanish speakers made up a larger share of the population in active tracts (38%), PSE tracts (40%), tracts with high-intensity activities (39%), and tracts with high-diversity activities (42%) than their representation in qualified tracts (30%). Limited English speakers were also slightly better represented in active tracts (8%), PSE tracts (8%), tracts with high-intensity activities (9%), and tracts with high-diversity activities (9%) than their representation in qualified tracts (6%). This suggests that SNAP-Ed in Cochise County is serving in communities with high numbers of Spanish speakers. SNAP-Ed in Cochise County currently offers direct education in both English and Spanish in the Willcox community.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as Hispanic or Latino are underrepresented in qualified tracts (42%) relative to their share of the population in

poverty (53%), thus it is notable that they comprise 51% of the population in tracts where SNAP-Ed is active, and 55% of the population in tracts with high-diversity activity. Multiracial individuals are also slightly underrepresented in qualified tracts (20%) relative to their share of the population in poverty (24%), but despite that are reasonably well-served by SNAP-Ed activities, making up 21% of the population in active tracts, 22% of the population in PSE tracts, 20% of the population in intense-activity tracts, and a full 24% of the population in diverse-activity tracts. White, non-Hispanic residents make up about 48% of the population in qualifying tracts, but about 41% of the population where SNAP-Ed is active. Individuals identifying as Black or African American make up a small proportion of the overall population (4%) and population in poverty (2%) but are slightly over-represented in tracts with high-diversity activity (6%) compared to their share of the population in qualified tracts (4%).

Taken together, this suggests that SNAP-Ed in Cochise County is successfully reaching diverse populations with need well. The populations with the highest economic needs both overall and in terms of race or ethnicity and language use are being served both generally and in hubs of multi-pronged approaches and diverse types of activities, hopefully leading to true community change.

Coconino County

Coconino County is a county in northern Arizona and is the second largest county in the entire U.S. by land area. The county overlaps the lands of the Navajo Nation and the Hopi Tribe. It is comprised of 39 Census tracts.

Economic need: The county has similar economic need to the state overall. About 1 in 6 individuals (17%) residing in the county are in poverty, and about 1 in 3 (34%) are low-income. A similar share of children (35%) live in low-income households. In 2020, about half of all births in the county (49%) were covered by AHCCCS, suggesting that many children in the county are likely eligible for SNAP.[27] Adults and seniors make up a slightly lower proportion of the population in poverty (51% and 19%, respectively) than their share of the overall population (54% and 24%, respectively). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 27% of the overall population, they comprise 39% of the population in poverty.

Qualifying tracts: About half of the county's tracts (20 of 39; 51%) qualify for SNAP-Ed under at least one criteria, and 51% of the county's population lives in a qualifying tract. About a quarter of all tracts (26%) qualify based on the proportion of low-income young children and 36% due to low-income school-age children (compared to 31-35% statewide, depending on child age). Very few tracts qualify for adults (7%) and seniors (7%), compared to 10-11% statewide. Overall, only 9% of all tracts qualify for the population of all ages (compared to 14% statewide). This means there are relatively fewer tracts that qualify based on community demographics alone, and thus more sites

[27] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

qualified through program participation (such as participation in NSLP or SFSP, or high proportions of benefits-eligible individuals served).

Table 5. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**20**	**51**	**73,871**	**51**
Overall Population Criteria	9	23	39,690	27
Young Child Criteria	10	26	45,824	32
School-age Child Criteria	14	36	56,931	39
CACFP Criteria	10	26	44,769	31
Adult Criteria	7	18	32,373	22
Senior Criteria	7	18	34,444	24

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Coconino County was active in 11 of 20 qualifying tracts (55%) in the county (compared to 45% statewide), and SNAP-Ed in Coconino County is also active at qualifying sites located in six additional tracts that did not meet community-wide qualification thresholds according to 2022 data. Individuals in poverty (2.0) and with low incomes (1.7) had higher odds of living in tracts where SNAP-Ed was active than higher income individuals when looking at all tracts in the county. However, individuals in poverty (0.30) and with low incomes (0.20) had much lower odds of living in tracts with implemented PSEs than those with higher incomes when compared to the distribution across qualifying tracts. The same pattern held true for tracts with high-intensity activity (OR for in-poverty: 0.63; OR for low-income: 0.55) and high-diversity activity (OR for in-poverty: 0.75; OR for low-income: 0.71). This suggests that the areas where PSEs and high-intensity and high-diversity activity have lower concentrations of populations in poverty and with low-income than qualified but unserved tracts.

Age group representation: Children made up an equal proportion of the population in tracts with SNAP-Ed activity compared to qualified tracts; the same held true for tracts with PSEs, high-intensity SNAP-Ed activity, and high-diversity SNAP-Ed activity. In terms of age, the demographics of tracts where SNAP-Ed was active at any level matched the distribution of the population both overall and in qualified tracts.

Language use representation: When looking at language use, speakers of Other languages (mostly Navajo and Native North American languages in Coconino County) were more prevalent in active tracts and tracts with high intensity activity (both 32%) than in qualified tracts (26%) and even more represented in tracts with high activity diversity (42%). Spanish speakers were approximately equally represented across all levels of SNAP-Ed activity (6-7%) compared to their proportion of the population in qualified tracts (7%). Taken together this suggests that SNAP-Ed in Coconino County is highly active in communities with a small but representative population of Spanish speakers and a substantial population of speakers of Native languages. SNAP-Ed in Coconino County currently offers direct education in English only.

Racial/ethnic representation: As mentioned above, individuals identifying as American Indian or Alaska Native make up a disproportionately large portion of the population in poverty (39%), thus it is all the more important that they comprise 46% of the population in tracts where SNAP-Ed is active, and 56% of the population in tracts with high-diversity activity. The share of the population identifying as American Indian or Alaska Native is also higher in tracts with implemented PSEs (42%) and high-intensity activities (50%) than in qualifying tracts (38%). Individuals identifying as Hispanic or Latino are slightly underrepresented in active tracts (11%), tracts with PSEs (12%), and tracts with high-intensity activity (11%) and with high-diversity activity (12%) as in qualified tracts, where they comprise 14% of the population. Individuals identifying as Black or African American make up a very tiny proportion of the overall population (1.2%) but they comprise a disproportionate share of the population in poverty (2.5%). However, they are currently underrepresented in tracts with SNAP-Ed activity compared to their share of the overall population and population in qualified tracts.

Overall, this suggests that SNAP-Ed in Coconino County is successfully reaching diverse populations across the county, especially American Indian populations. However, these data also suggest that SNAP-Ed in Coconino County could be doing deeper and more intensive work in communities with concentrated need. Like with Apache County, some of the seeming mismatch between SNAP-Ed activity and communities in need is likely an artifact of the methods used in this assessment, where work with key community institutions (including benefits offices, libraries, and grocery stores) that serve outlying, high-need areas as well as low-income proximate populations but are located in higher income areas can influence how the demographics of where SNAP-Ed is working match the demographics of areas of high need.

Gila County

Gila County is a county in central-eastern Arizona with a high concentration of small mining towns in the Copper Corridor in the southern part of the county and mountain towns nestled in the Tonto National Forest in the northern half of the county. The county contains the lands of the Tonto Apache Tribe and overlaps the lands of the San Carlos Apache Tribe and White Mountain Apache Tribe. It is comprised of 16 Census tracts.

Economic need: The county has high economic need compared to other parts of the state; in 2020, 49% of all births in the county were covered by AHCCCS, suggesting that about half of children in the county are likely eligible for SNAP.[28] About 1 in 5 individuals (19%) residing in the county are in poverty, and more than 1 in 3 (37%) are low-income. This need is even more pronounced among children; 55% of children in the county live in low-income households. Seniors make up a much lower proportion of the population in poverty (16%) than their share of the overall population (30%). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 16% of the overall population, they comprise 39% of the population in poverty.

[28] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

Qualifying tracts: This high level of economic need means that the majority of the county's tracts (13 of 16; 81%) qualify for SNAP-Ed under at least one criteria, and 78% of the county's population lives in a qualifying tract. More than half of all tracts qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), but only 1 tract (6%) qualifies based on senior low-income prevalence (compared to 11% statewide). Overall, 19% of all tracts qualify for the population of all ages (compared to 14% statewide). This widespread need for SNAP-Ed, particularly among child populations, means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 6. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**13**	**81**	**41,758**	**78**
Overall Population Criteria	3	19	9,328	18
Young Child Criteria	10	62	33,987	64
School-age Child Criteria	8	50	25,001	47
CACFP Criteria	11	69	33,854	63
Adult Criteria	4	25	10,411	20
Senior Criteria	1	6	2,302	4

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Gila County was active in 7 of 13 qualifying tracts (54%) in the county (compared to 34% statewide). However, low-income individuals (OR:0.47) and individuals in poverty (OR:0.36) had significantly lower odds of residing in tracts with SNAP-Ed activity than higher income populations. This held true across most definitions of SNAP-Ed activity. Individuals in poverty had much lower odds of residing in tracts with implemented PSEs (OR:0.53) or with high-diversity activity (OR:0.43), as did low-income individuals (OR: 0.75 and 0.44, respectively). Low-income and in-poverty individuals did have equal odds of living in a tract with high-intensity activities, because one tract in the Globe-Miami community, which has a higher low-income and in-poverty population, met this criterion.

Age group representation: School-age children comprised 13% of the population in active tracts compared to 14% in qualified tracts and made up about 12% of the population in tracts with PSEs, high-intensity SNAP-Ed activity, and high-diversity SNAP-Ed activity. By comparison, seniors made up 30% of the population in qualified tracts, but 32% in active tracts, 33% in tracts with high-intensity activity and implemented PSEs, and 36% in tracts with PSEs. In Gila County, 11 of 12 sites with implemented PSEs (92%) were located in the Payson community, which may help explain the difference in demographics between tracts with PSEs and qualifying tracts (which are evenly distributed throughout the county). However, despite the high concentration of activity in tracts with substantial senior population, children comprised 97% of all direct education participants in Gila County in 2023.

Language use representation: Speakers of Other languages (mostly Navajo and Native North American languages in Gila County) made up a smaller share of the population in active tracts (4%)

and tracts with implemented PSEs (5%), high-intensity activity (6%), and particularly high-diversity activity (1%). Spanish speakers were equally represented in active tracts (8%) compared to qualified tracts, but slightly underrepresented in tracts with implemented PSEs, high-intensity activities, and high-diversity activity (all 7%). This suggests that SNAP-Ed in Gila County is not highly active in communities with Native language speakers and active at about the level we would expect in communities with Spanish speakers. SNAP-Ed in Gila County currently offers direct education in English only, likely due to their focus on direct education within school settings.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as American Indian or Alaska Native are overrepresented in qualified tracts (19%) relative to their share of the overall population (16%), though under-represented in qualified tracts relative to their share of the population in poverty (39%). Thus it is concerning that they comprise 10% of the population in tracts where SNAP-Ed is active, 11% of the population in tracts with PSEs, and only 3% of the population in tracts with high-diversity activity. Individuals identifying as Hispanic or Latino are slightly over-represented in active tracts (20%), tracts with PSEs (18%), and tracts with high-intensity activity (18%) and high-diversity activity (16%) as in qualified tracts, where they comprise 14% of the population. Individuals identifying as Black or African American make up a very tiny proportion of the overall population (0.6%) but they comprise a disproportionate share of the population in poverty (2.1%). They currently comprise a similar proportion of the population in active tracts (0.5%) as they do in all qualified tracts (0.7%).

Taken together, this suggests that SNAP-Ed in Gila County is not currently serving populations with the highest level of economic need. The demographics of the tracts where SNAP-Ed is currently active match the demographics of the overall population but are substantively different from the demographics of the population in poverty countywide. SNAP-Ed in Gila County is not currently working in communities within either the lands of the San Carlos Apache Tribe or the White Mountain Apache Tribe, which likely explains much of the differences between the demographics of where SNAP-Ed currently works and the populations with the highest economic need.

Graham County

Graham County is a rural county in central-eastern Arizona with a robust mining and agricultural sector. The county overlaps the eastern half of the lands of the San Carlos Apache Tribe. It is comprised of 9 Census tracts.

Economic need: The county has similar economic need compared to the state; in 2020, 41% of all births in the county were covered by AHCCCS, suggesting that more than 1 in 3 children in the county are likely eligible for SNAP.[29] About 1 in 5 individuals (18%) residing in the county are in poverty, and more than 1 in 3 (36%) are low-income. This need is even more pronounced among children; 43% of children in the county live in low-income households. Seniors make up a much lower proportion of the population in poverty (10%) than their share of the overall population (15%). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while

[29] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

these individuals make up 12% of the overall population, they comprise 28% of the population in poverty.

Qualifying tracts: Only a third of the county's tracts (3 of 9; 33%) qualify for SNAP-Ed under at least one criteria, and 39% of the county's population lives in a qualifying tract. This is mostly due to the prevalence low-income school-age children (33% of tracts) and children age birth to 11 (CACFP criteria). Only one tract qualifies for adults, and none qualify for seniors. Overall, only 1 tract qualifies for the population of all ages. This means there are relatively fewer tracts that qualify based on solely community demographics, and thus more sites qualified through program participation (such as participation in NSLP or SFSP, or high proportions of benefits-eligible individuals served).

Table 7. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Graham County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**3**	**33**	**15,032**	**39**
Overall Population Criteria	1	11	4,333	11
Young Child Criteria	1	11	4,333	11
School-age Child Criteria	3	33	15,032	39
CACFP Criteria	3	33	15,032	39
Adult Criteria	1	11	4,333	11
Senior Criteria	0	0	0	0

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Graham County was active in 3 tracts in the county, and most of these tracts were not tracts that qualified based on community-level demographics. Instead, most sites in Graham County are qualified based on program participation (in programs like SFSP) or through alternative justification. Individuals in poverty (0.52) and with low incomes (0.59) had lower odds of living in tracts where SNAP-Ed was active than higher income individuals when looking at all tracts in the county. This pattern held true for tracts with implemented PSEs, and high-intensity and high-diversity activity as well. This suggests that the areas where SNAP-Ed is currently active have lower concentrations of populations in poverty and with low-income than qualified but un-served tracts. Most PSEs were implemented at sites in Safford, which is a major population center and the county seat, but not a high-poverty area relative to the rest of the county.

Age group representation: In terms of age, the demographics of tracts where SNAP-Ed was active at any level generally matched the distribution of the overall population. Seniors were slightly overrepresented in active tracts relative to their prevalence in the population in poverty (16% and 10%, respectively). However, most actions taken by SNAP-Ed in Graham County in 2023 were youth-facing (in school or child care settings), consistent with the higher rates of poverty and low-income among children in the county.

Language use representation: Spanish speakers were overall equally represented in tracts where SNAP-Ed is currently working relative to their prevalence in the overall population and qualified tracts. However, speakers of Other languages (most frequently Native North American languages in

Graham County), were a substantial share of the population in qualifying tracts (17%) but very underrepresented in tracts where SNAP-Ed is active.

Racial/ethnic representation: Following a similar pattern, individuals identifying as American Indian or Alaska Native are disproportionately represented in the population in poverty (28%) and residing in qualifying tracts (29%) compared to their prevalence in the overall population (12%) but are very underrepresented in tracts where SNAP-Ed is currently active. In contrast, individuals identifying as Hispanic or Latino (41%), Black or African American (2%), or non-Hispanic White were all relatively overrepresented in areas where SNAP-Ed is active compared to their prevalence in the population in poverty (31%, 0.5%, and 39%, respectively). This suggests that SNAP-Ed in Graham County is likely serving a diverse population in the county but missing communities with a high proportion of American Indian residents because they do not currently work in any communities within the San Carlos Apache Tribe.

Overall, these data suggest that SNAP-Ed in Graham County is not currently serving the areas with the highest concentrations of economic need in the county. Like with Coconino County, some of the seeming mismatch between SNAP-Ed activity and communities in need is likely an artifact of the methods used in this assessment, where work in key community institutions (including benefits offices, libraries, and grocery stores) that serve outlying, high-need areas as well as low-income proximate populations but are located in higher income areas can influence how the demographics of where SNAP-Ed is working match the demographics of areas of high need. However, another substantial driver of the mismatch in demographics between where SNAP-Ed works and where the areas of highest need are located is the current lack of activity within the San Carlos Apache Tribe. Further partnerships may be needed to support community-based work within Native nations in the county.

Greenlee County

Greenlee County is a small rural county in central-eastern Arizona that is the state's smallest county in terms of population, with fewer than 10,000 residents according to the 2020 Census.[30] It is comprised of only 3 census tracts.

Economic need: The county has lower economic need than the state overall; in 2020, only 30% of all births in the county were covered by AHCCCS, compared to 48% statewide.[31] About 1 in 8 individuals (13%) residing in the county live in poverty, and about 1 in 5 (24%) are low-income. A similar share of children (24%) are in low-income households, but school-age children have notably higher rates of poverty than the general population (18%). Seniors make up a larger proportion of the population in poverty (20%) than their share of the overall population (14%) Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 12% of the overall population, they comprise 28% of the population in poverty.

Qualifying tracts: Only 1 of the county's 3 tracts qualify for SNAP-Ed under at least one criteria, meaning that 29% of the county's population lives in a qualifying tract. However, this tract only

[30] U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing File, Table P1.
[31] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

qualifies based on the proportion of low-income young children and children ages birth to 12 (CACFP criteria). This means there relatively no tracts that qualify for serving populations of all ages based on solely community demographics, and thus more sites qualified through program participation (such as participation in NSLP or SFSP or high proportions of benefits-eligible individuals served). All of the Greenlee County SNAP-Ed sites are currently located in the one tract that does qualify for young child-focused activity.

Table 8. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Greenlee County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**1**	**33**	**2,777**	**29**
Overall Population Criteria	0	0	0	0
Young Child Criteria	1	33	2,777	29
School-age Child Criteria	0	0	0	0
CACFP Criteria	1	33	2,777	29
Adult Criteria	0	0	0	0
Senior Criteria	0	0	0	0

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed activity and inclusivity: With such a small county and such a small potential area of work, many of the comparisons we have drawn for other counties are not particularly applicable to Greenlee County, as the SNAP-Ed is fully serving the tract that qualifies for SNAP-Ed based on community demographics. However, SNAP-Ed in Greenlee County had no implemented PSEs in 2023 and currently works predominantly in the local elementary school (accounting for 65% of total actions in 2023). Given the relatively high proportion of seniors in poverty, there may be need among adults for SNAP-Ed; however, qualifying sites for work with adults is likely to be difficult in Greenlee County. The SNAP-Ed work in both the local elementary school and Head Start means that the Greenlee County SNAP-Ed have likely well-saturated the target population in their county. Current estimated direct education reach suggests that nearly all early elementary school students in the Duncan community have participated in direct education within the last year. Within such a small community, SNAP-Ed in Greenlee County is effectively reaching their target population and hopefully encouraging community-wide change.

La Paz County

La Paz County is a small rural county on the Colorado River in western Arizona. The county contains the Arizona lands of the Colorado River Indian Tribes. It is comprised of 12 Census tracts.

Economic need: The county has high economic need compared to other parts of the state; in 2020, 74% of all births in the county were covered by AHCCCS (the highest percentage of any county

statewide), suggesting that 3 out of 4 children in the county are likely eligible for SNAP.[32] About 1 in 5 individuals (21%) residing in the county are in poverty, and more than 1 in 3 (41%) are low-income. This need is even more pronounced among children; 50% of children in the county live in low-income households. Seniors make up a lower proportion of the population in poverty (30%) than their share of the overall population (41%). Individuals identifying as American Indian or Alaska Native are overrepresented among the population in poverty; while these individuals make up 15% of the overall population, they comprise 20% of the population in poverty. Individuals identifying as Hispanic or Latino are likewise 28% of the overall population but 34% of the population in poverty.

Qualifying tracts: This high level of economic need means that the majority of the county's tracts (9 of 12; 75%) qualify for SNAP-Ed under at least one criterion, and 75% of the county's population lives in a qualifying tract. Unlike many other counties, qualifying tracts are evenly distributed between qualifying criteria. The largest portion of tracts (42%) qualify based on the proportion of low-income seniors (compared to 11% statewide). For all other populations (adults, young children, school-age children and children ages birth to 12), 3-4 tracts qualify based on the prevalence of the low-income population in each group. Overall, a third of all tracts (33%) qualify for the population of all ages (compared to 14% statewide). This widespread economic need means that there are many potential communities that could benefit from SNAP-Ed activity. An additional challenge that this creates for SNAP-Ed in La Paz County is that in-need populations are spread across the entire county. Some tracts have high proportions of low-income seniors and adults, and other tracts have high low-income child populations.

Table 9. Tracts qualifying for AZ Health Zone based on community low-income prevalence, La Paz County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**9**	**75**	**12,483**	**75**
Overall Population Criteria	4	33	6,658	40
Young Child Criteria	3	25	6,686	40
School-age Child Criteria	4	33	7,627	46
CACFP Criteria	3	25	6,686	40
Adult Criteria	3	25	5,475	33
Senior Criteria	5	42	4,856	29

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in La Paz County was active in only 1 of the 9 qualifying tracts (11%) in the county (compared to 34% statewide). SNAP-Ed in La Paz County currently works in one community, Parker, which is the county seat and most populous town. Because of this narrow focus in one tract in a context of low-income populations and populations in poverty spread relatively evenly across the county, individuals in poverty (0.19) and low-income individuals (0.42) have significantly lower odds of residing in a tract with SNAP-Ed activity than higher income individuals when compared to all qualifying tracts. La Paz County had no implemented PSEs in

[32] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

2023 but did engage in high-intensity and high diversity activity, with actions across four out of the five potential strategy areas.

Age group representation: Due to the narrow focus of SNAP-Ed activity in La Paz County, the age distribution within the tract where SNAP=Ed is active looks substantially different from the age distribution in qualifying tracts. Young children (9%), school-age children (16%), and adults (58%) are all overrepresented in the community where SNAP-Ed works compared to the population in qualified tracts (3%, 10%, and 41%, respectively. Conversely, seniors are substantially underrepresented, comprising only 16% of the tract where SNAP works compared to 46% of the population in qualified tracts and 30% of the population in poverty.

Language use representation: Spanish speakers are overrepresented in the area where SNAP-Ed works (38%) compared to their prevalence in qualified tracts (14%). However, SNAP-Ed in La Paz County currently only offers direct education in English, which suggests a potential opportunity to offer more Spanish language materials and programming.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as American Indian or Alaska Native are equally represented in the community where SNAP-Ed is active as they are in the population in poverty in the county, while individuals identifying as Hispanic or Latino are very over-represented in this area, comprising 52% of the population compared to only 23% of the population in qualified tracts. Both of these groups are disproportionately likely to be in poverty in the county, which suggests SNAP-Ed is serving these populations well. However, the non-Hispanic White population is substantially underserved relative to their prevalence in the population in poverty and in qualifying tracts; only 26% of the population in the tract where SNAP-Ed is active identify as non-Hispanic White, compared to 48% of the population in poverty and 62% of the population in all qualifying tracts.

Taken together, these data suggest that the La Paz County has chosen to focus deeply in one community, a racially and ethnically diverse area with a substantial number of families with children and Spanish-speaking households. However, this choice of community comes with trade-offs, as this means that SNAP-Ed in La Paz County is not currently reaching other communities in the county with high proportions of low-income seniors. To equitably reach the population in need in the county, SNAP-Ed in La Paz County would need to work in more than one community due to the distinct distributions of different populations in need.

Maricopa County

Maricopa County, located in central Arizona, includes Phoenix, the state's capital and largest city, along with diverse suburban areas as well as rural areas. Maricopa County also includes several Native nations, including the Salt River Pima-Maricopa Indian Community, Fort McDowell Yavapai Nation, and the Gila River Indian Community, as well as several small communities affiliated Tohono O'odham Nation (San Lucy) and the Pascua Yaqui Tribe (Guadalupe). It contains the majority of the state's population and is comprised of 1,009 Census tracts.

Economic need: In 2020, 45% of all births in the county were covered by AHCCCS (the third lowest proportion among Arizona's 15 counties), suggesting that many children in the county are likely

eligible for SNAP.[33] About 1 in 9 individuals (12%) residing in the county are in poverty, and one-quarter (25%) are low-income. This need is even more pronounced among children; 34% of children in the county are in low-income households. Adults and seniors make up a slightly lower proportion of the population in poverty (56% and 12%, respectively) than their share of the overall population (61% and 16%, respectively), whereas children are overrepresented among those in poverty (10% in poverty compared to 7% of the total population for children birth to age 5, and 22% of the population in poverty while only 16% of the total population for ages 6-17). Individuals identifying as Hispanic or Latino are disproportionately in poverty; while they make up 32% of the overall population, they comprise 46% of the population in poverty. The same is true for Multiracial individuals (14% of the overall population, 16% of the population in poverty), Black individuals (6% overall, 9% in poverty), and American Indian individuals (1.8% overall, 3.3% in poverty).

Qualifying tracts: The relative economic prosperity in the county means that only 38% of the county's tracts (379 of 1184) qualify for SNAP-Ed under at least one criteria, and 37% of the county's population lives in a qualifying tract, representing over 1.6 million people. More than a quarter of all tracts (26-28%) qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), whereas 10% or less of all tracts qualify for adults and seniors (similar to 10-11% statewide). Only 10% of all tracts qualify for the population of all ages (compared to 14% statewide). While the relative need is lower than in some other counties, the large size of the county means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 1. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Maricopa County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**379**	**38**	**1,631,276**	**37**
Overall Population Criteria	101	10	404,239	9
Young Child Criteria	281	28	1,225,044	28
School-age Child Criteria	266	26	1,147,795	26
CACFP Criteria	271	27	1,172,725	26
Adult Criteria	55	6	185,972	4
Senior Criteria	98	10	379,211	9

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Maricopa County was active in 155 of 379 qualifying tracts (41%) in the county (compared to 45% statewide). Low-income individuals (OR:0.88) and individuals in poverty (OR:0.85) had lower odds of residing in tracts with SNAP-Ed activity than higher income populations. Individuals in poverty (OR: 0.96) also had slightly lower odds of living in tracts with implemented PSEs than those with higher incomes, whereas low-income individuals had slightly higher odds (OR:1.2) than those with higher incomes. For high-intensity tracts,

[33] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

individuals in poverty (OR: 0.97) had nearly equal odds of residing in these areas than higher income individuals. Individuals with low incomes again had slightly higher odds (OR:1.1) of residing in these areas compared to higher income individuals. Finally, individuals in poverty (OR:0.83) and with low incomes (OR:0.90) both had lower odds of living in tracts with high-diversity activities compared to those with higher incomes.

Age group representation: Children made up a slightly larger proportion of the population in tracts with SNAP-Ed activity compared to qualified tracts; young children comprised 8.5% of the population in active tracts compared to 7.8% in qualified tracts, and school-age children comprised 17.8% of the population in active tracts compared to 16.4% in qualified tracts. School-age children made up an even larger proportion of the population in tracts with PSEs (21.4%), high-intensity SNAP-Ed activity (19.3%), and high-diversity SNAP-Ed activity (19.3%). By comparison, seniors made up 12.7% of the population in qualified tracts, but only 9.7% in active tracts, 9.1% in tracts with high-intensity, 9.5% in tracts with high-diversity activities, and 9.8% in tracts with PSEs. In Maricopa County, 29 of 46 sites with implemented PSEs (63%) were school settings, which helps explain the over-representation of children in these tracts. Children also comprised 82% of all direct education participants in Maricopa County in 2023; adults were 14% and seniors were 2%.

Language use representation: Spanish speakers made up a larger share of the population in active tracts (40%), PSE tracts (60%), tracts with high-intensity activities (50%), and tracts with high-diversity activities (46%) than their representation in qualified tracts (31%). Limited English speakers were also slightly better represented in active tracts (7%), PSE tracts (10%), tracts with high-intensity activities (9%), and tracts with high-diversity activities (8%) than their representation in qualified tracts (6%). Speakers of Other languages are proportionally represented across the board. However, it is important to note that unlike the rest of the state, the most prevalent languages spoken in this category in Maricopa County are Arabic (45%), African languages such as Swahili and Somali (31%), then Navajo and other Native North American languages (18%). This likely reflects the substantial refugee population in the county. Populations of Indo-European and Asian or Pacific Island languages are relatively small in qualified tracts (2.6% and 2.5%, respectively) but slightly underrepresented, particularly in PSE activity tracts (0.9% and 1.2% respectively). Taken together, this suggests that SNAP-Ed in Maricopa County is active in communities with Spanish speakers and those with limited English-speaking households. In fact, one Maricopa LIA reports offering sessions in Spanish at all of its DE sites. Given the diversity of languages spoken in the county, additional language offerings may be needed.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as Hispanic or Latino are well-represented in qualified tracts (48%) relative to their share of the population in poverty (46%), and even better represented among tracts where SNAP-Ed is active (57%), in tracts with implemented PSEs (77%), high-intensity (67%) and high-diversity (64%) activity. Multiracial individuals are also slightly overrepresented in qualified tracts (18%) relative to their share of the population in poverty (16%), and are also proportionally served by SNAP-Ed activities, making up 20% of the population in active tracts, 21% of the population in PSE tracts, 22% of the population in intense-activity tracts, and 23% of the population in diverse-activity tracts. White, non-Hispanic residents make up about 36% of the population in qualifying tracts but are underrepresented in tracts where SNAP-Ed is active. Individuals identifying as Asian make up a small proportion of the overall population (4%) and population in poverty (4%) but are slightly underrepresented in tracts

with implemented PSEs (1%), high-intensity (1.8%) activity, and high-diversity activity (2.1%) compared to their share of the population in qualified tracts (3%). Black, American Indian, and Native Hawaiian/Pacific Islander populations are generally proportionally represented among tracts with SNAP-Ed activities.

Taken together, this suggests that SNAP-Ed in Maricopa County is purposefully working with populations of color, which could be helpful in reducing socioeconomically driven differences in health outcomes. By offering direct education programming in Spanish, they are also working to serve communities in ways that recognize linguistic preferences. These data also suggest that SNAP-Ed in Maricopa County could be doing more to serve the highest need populations with concentrated, multi-pronged activities given that people in poverty are less likely to live in tracts with a high diversity of SNAP-Ed activities. However, as acknowledged throughout this report, some of the mismatch may be due to the disparities in the locations of built environment infrastructure (like parks, trails, and grocery stores), meaning that work in some strategies is more likely to occur in higher income areas.

Mohave County

Mohave County is a large county in northwestern Arizona with the fifth largest land area of any county nationwide. It contains 66 Census tracts. The county overlaps with the lands of the Hualapai Tribe, the Fort Mojave Indian Tribe, and the Kaibab Band of Paiute Indians.

Economic need: The county has higher economic need compared to the state overall; in 2020, nearly two-thirds all births in the county (65%) were covered by AHCCCS, suggesting that the majority of children in the county are likely eligible for SNAP.[34] About 1 in 6 individuals (16%) residing in the county are in poverty, and about 1 in 3 (35%) are low-income. Half of all children (50%) live in low-income households. Seniors make up a substantially lower proportion of the population in poverty (18%) than their share of the overall population (32%). Individuals living in poverty are relatively evenly distributed across all racial and ethnic groups.

Qualifying tracts: About two-thirds of the county's tracts (42 of 64; 64%) qualify for SNAP-Ed under at least one criteria, and 64% of the county's population lives in a qualifying tract. Approximately 30% of all tracts qualify based on prevalence of low-income children (comparable to 31-35% statewide, depending on child age). Very few tracts qualify for seniors (3%), compared to 10-11% statewide. Overall, only 15% of all tracts qualify for the population of all ages (comparable to 14% statewide). This means there are relatively fewer tracts that qualify based solely on community demographics for the population of all ages, meaning that many sites are qualified specifically for child-focused work.

[34] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

Table 10. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Mohave County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**42**	**64**	**136,561**	**64**
Overall Population Criteria	10	15	32,238	15
Young Child Criteria	33	50	109,996	51
School-age Child Criteria	29	44	93,204	44
CACFP Criteria	32	48	106,745	50
Adult Criteria	12	18	38,709	18
Senior Criteria	2	3	5,263	2

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Mohave County was active in 27 of 42 qualifying tracts (64%) in the county (compared to 45% statewide). Low-income individuals (OR:0.66) and individuals in poverty (OR:0.79) had lower odds of residing in tracts with SNAP-Ed activity than higher income populations. Similarly, low-income individuals and those in poverty also had lower odds of residing in tracts with implemented PSEs (OR: 0.73 and 0.79, respectively), tracts with high-intensity activity (OR: 0.90 and 0.84, respectively), and tracts with high-diversity activity (OR: 0.90 and 0.84, respectively).

Age group representation: Children made up an equal proportion of the population in tracts with SNAP-Ed activity compared to qualified tracts; the same held true for tracts with PSEs, high-intensity SNAP-Ed activity, and high-diversity SNAP-Ed activity. In terms of age, the demographics of tracts where SNAP-Ed was active at any level matched the distribution of the population both overall and in qualified tracts. However, children, particularly those of school-age, appear to be under-represented in qualifying tracts and seniors overrepresented in qualifying tracts relative to their prevalence in the population in poverty. Distributions of speakers of Spanish, Other languages, and English only were markedly even across the overall population, population in qualified tracts, and populations in tracts where SNAP-Ed is active. Currently SNAP-Ed in Mohave County (both LIAs) offers DE in English only.

Language use and racial/ethnic representation: Similarly, the demographics of areas where SNAP-Ed is active generally match those of qualifying tracts in terms of racial and ethnic groups. Individuals identifying as American Indian or Alaska Native are equally represented in both the population in poverty and the tracts where SNAP-Ed is active (3% in both) and are slightly overrepresented in tracts with implemented PSEs (4%) and high intensity activity (5%). Individuals identifying as Hispanic or Latino are slightly underrepresented in active tracts (17%) compared to their prevalence in the countywide population in poverty (24%) but equally represented in comparison to qualified tracts.

Taken together, this suggests that SNAP-Ed in Mohave County is equitably serving the SNAP-Ed target population in terms of age, language use, and racial and ethnic identity. This is likely due to the well-distributed activity of SNAP-Ed across the county, including partnerships with two Native nations, Hualapai Tribe and Fort Mojave Indian Tribe. Given the high proportions of low-income children in the county, there are still communities with high need that are not being served, but the current communities in which SNAP-Ed in Mohave County is working represent the population of the county well and suggest that SNAP-Ed in Mohave County is investing deeply and intensely across the communities where it works.

Navajo County

Navajo County is a geographically large county in northeastern Arizona that overlaps with the lands of the Navajo Nation, Hopi Tribe, and White Mountain Apache Tribe. It is comprised of 37 Census tracts.

Economic need: The county has very high economic need compared to other parts of the state; in 2020, 70% of all births in the county were covered by AHCCCS, suggesting that the majority of children in the county are likely eligible for SNAP.[35] About 1 in 4 individuals (25%) residing in the county are in poverty, and nearly half (47%) are low-income. This need is even more pronounced among children; 58% of children in the county are in low-income households. Adults and seniors make up a slightly lower proportion of the population in poverty (56% and 12%, respectively) than their share of the overall population (61% and 16%, respectively). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 44% of the overall population, they comprise 66% of the population in poverty.

Qualifying tracts: This high level of economic need means that the majority of the county's tracts (28 of 37; 76%) qualify for SNAP-Ed under at least one criterion, and 80% of the county's population lives in a qualifying tract. More than 60% of all tracts qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), 30% or more of all tracts qualify for adults and seniors (compared to 10-11% statewide), and 38% of all tracts qualify for the population of all ages (compared to 14% statewide). This widespread need for SNAP-Ed means that there are many potential communities that could benefit from SNAP-Ed activity.

[35] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

Table 11. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Navajo County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**28**	**76**	**85,690**	**80**
Overall Population Criteria	14	38	44,609	42
Young Child Criteria	23	62	68,348	64
School-age Child Criteria	22	60	68,136	64
CACFP Criteria	24	65	70,831	66
Adult Criteria	11	30	32,842	31
Senior Criteria	13	35	41,798	39

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Navajo County was active in 16 of 28 qualifying tracts (57%) in the county (compared to 45% statewide). Low-income individuals (OR:1.1) and individuals in poverty (OR:1.2) had higher odds of residing in tracts with SNAP-Ed activity than higher income populations. Individuals in poverty and with low incomes had the same odds of living in tracts with implemented PSEs as those with higher incomes. For high-intensity tracts, individuals in poverty (OR: 0.80) and with low incomes (0.82) had slightly lower odds of residing in these areas than higher income individuals. However, individuals in poverty (OR:1.7) and with low incomes (1.6) had significantly higher odds of living in tracts with high-diversity activities compared to those with higher incomes.

Age group representation: Children made up a slightly larger proportion of the population in tracts with SNAP-Ed activity compared to qualified tracts; young children comprised 9% of the population in active tracts compared to 8% in qualified tracts, and school-age children comprised 18% of the population in active tracts compared to 16% in qualified tracts. School-age children made up an even larger proportion of the population in tracts with PSEs, high-intensity SNAP-Ed activity, and high-diversity SNAP-Ed activity. By comparison, seniors made up 13% of the population in qualified tracts, but only 10% in active tracts, 9% in tracts with high-intensity and high-diversity activities, and 8% in tracts with PSEs. In Navajo County, 13 of 25 sites with implemented PSEs (52%) were schools or child care facilities, which helps explain the slight over-representation of children in these tracts. Children also comprised 87% of all direct education participants in Navajo County in 2023.

Language use representation: Speakers of Other languages (mostly Navajo and Native North American languages in Navajo County) made up a larger share of the population in active tracts (51%) and tracts with high-diversity activities (66%) than their representation in qualified tracts (42%) but were very slightly underrepresented in tracts with implemented PSEs and high-intensity of activity. In contrast, Spanish speakers were equally represented in tracts with implemented PSEs (6%) and with high-intensity activities (6%) compared to their proportion in qualified tracts, but slightly under-represented in active tracts (4%) and tracts with high-diversity of activity (4%). However, taken together this suggests that SNAP-Ed in Navajo County is deeply active in communities with Spanish speakers and speakers of Native languages. SNAP-Ed in Navajo County

currently offers direct education in both English and Diné in both the Chinle and Winslow communities.

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as American Indian or Alaska Native are underrepresented in qualified tracts (52%) relative to their share of the population in poverty (66%), thus it is all the more important that they comprise 60% of the population in tracts where SNAP-Ed is active, and 78% of the population in tracts with high-diversity activity. The share of the population identifying as American Indian or Alaska Native is slightly higher in tracts with implemented PSEs and high-intensity activities (53%) than in qualifying tracts (53%). Individuals identifying as Hispanic or Latino are similarly overrepresented in active tracts (14%), tracts with PSEs (20%), and tracts with high-intensity activity (21%) while being equally represented in tracts with high-diversity activity (10%) as in qualified tracts, where they comprise 10% of the population. Individuals identifying as Black or African American make up a very tiny proportion of the overall population and population in poverty but are still slightly overrepresented in tracts with PSEs (1.3%), high-intensity activity (1.2%), and high-diversity activity (1.1%) compared to their share of the population in qualified tracts (0.7%).

Taken together, this suggests that SNAP-Ed in Navajo County is serving populations with high need well. The populations with the highest economic needs both overall and in terms of race/ethnicity and language use are being served both generally and with PSE implementation and high-diversity activities, hopefully leading to sustainable community change.

Pima County

Pima County is the largest county in southern Arizona by both land area and population, stretching along the southern border with Mexico from rural Ajo through the lands of the Tohono O'odham Nation to the major metropolitan center of Tucson. The county contains both the majority of the U.S. lands of the Tohono O'odham Nation as well as the lands of the Pascua Yaqui Tribe. It is comprised of 270 Census tracts.

Economic need: Compared to the rest of the state, Pima County has slightly higher economic need. The overall poverty rate is 15%, and nearly 1 in 3 residents (31%) have low incomes. Half of all births were covered by AHCCCS in 2020, suggesting that 1 out of every 2 young children are likely eligible for SNAP. More than 1 in 3 children (40%) live in low-income households. Seniors make up a markedly lower proportion of the population in poverty (12%) compared to their share of the overall population (21%). Individuals identifying as American Indian or Alaska Native or as Hispanic or Latino are disproportionately represented in the population in poverty countywide; American Indian or Alaska Native individuals comprise 7% of the population in poverty compared to 3% of the total population, and Hispanic or Latino individuals 49% of the population in poverty compared to 38% overall. Individuals identifying as Black or African American are also more likely to live in poverty, composing 5% of the population compared to 3% of the population overall.

Qualifying tracts: This level of economic need means that just over half of the county's tracts (138 of 270; 51%) qualify for SNAP-Ed under at least one criteria, and 52% of the county's population lives in a qualifying tract. More than a third of all tracts (34-40%) qualify based on the proportion of low-income children (comparable to 31-35% statewide, depending on child age), 16% qualify for

adults (compared to 10% statewide), and an equal proportion of tracts (11%) qualify for seniors as do statewide. Overall, 19% of all tracts qualify for the population of all ages (compared to 14% statewide). This level of need combined with the large size of the county means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 12. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Pima County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**138**	**51**	**545,887**	**52**
Overall Population Criteria	52	19	204,961	20
Young Child Criteria	108	40	435,391	42
School-age Child Criteria	93	34	376,230	36
CACFP Criteria	98	36	406,873	39
Adult Criteria	43	16	167,788	16
Senior Criteria	29	11	128,511	12

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Pima County was active in 48 of 138 qualifying tracts (35%) in the county (compared to 45% statewide). Low-income individuals (OR:1.2) and individuals in poverty (OR: 1.2) had slightly higher odds of living in a tract with SNAP-Ed activity than higher income individuals when compared to the population in qualifying un-served tracts. These low-income individuals and individuals in poverty also had higher odds of living in tracts with deeper SNAP-Ed work: tracts with implemented PSEs (OR: 1.3 for poverty; 1.3 for low-income) and tracts with high-intensity activity (OR: 1.3 for poverty; 1.4 for low-income) and high-diversity activity (OR: 1.2 for poverty; 1.3 for low-income). Taken together, this suggests that SNAP-Ed in Pima County is working in communities in the county with high concentrations of individuals in need.

Age group representation: Children made up similar proportions of the population in tracts with SNAP-Ed activity compared to qualified tracts, about 7% for young children and 15% of school-age children. School-age children made up an even larger proportion of the population in tracts with PSEs (16%) and high-diversity SNAP-Ed activity (17%). By comparison, seniors made up 16% of the population in qualified tracts, but only 13% in active tracts and 12% in tracts with implemented PSEs, consistent with the senior share of the population in poverty. Much of SNAP-Ed in Pima County's work is child-focused: In Pima County, 13 of 21 sites with implemented PSEs (62%) were schools or child care facilities, and children also comprised 83% of all direct education participants in Pima County in 2023.

Language use representation: Spanish speakers were overrepresented in the population in active tracts (41%), tracts with implemented PSEs (44%), and tracts with high-intensity (47%) and high-diversity activity (53%) compared to their share of the population in qualified tracts (33%). Similarly, limited English households were also over-represented in tracts where SNAP-Ed was active, comprising 9% of the population in active tracts and 10% of the population in tracts with high-diversity activity compared to their prevalence in all qualified tracts (6%). Speakers of all other non-English language groups were generally similarly represented in tracts with SNAP-Ed activity

compared to their prevalence in qualified tracts. This suggests that SNAP-Ed in Pima County is engaging in deep and multi-pronged work in communities with a high-density of Spanish speakers, including those who do not currently speak English well. Thus, it is important that SNAP-Ed is currently providing DE in both English and Spanish in two of the five community hubs where they work (Amphitheatre and Downtown/South Tucson).

Racial/ethnic representation: As noted above, both individuals identifying as Hispanic or Latino and those identifying as American Indian or Alaska Native are overrepresented in the population in poverty in Pima County. Therefore, it is appropriate that both populations are overrepresented in the areas where SNAP-Ed is currently active (7% American Indian; 56% Hispanic or Latino) and where PSEs were implemented (11% American Indian; 56% Hispanic or Latino) compared to their representation in qualified tracts (5% American Indian; 50% Hispanic or Latino). Individuals identifying as Black or African American were also overrepresented in the population in poverty; however, this population currently only comprises 3% of the population in tracts where SNAP-Ed is active, suggesting slight underrepresentation relative to need. Current direct education activities are also reaching an estimated audience that is 3% Black or African American, suggesting that this community could be better served.

Overall, these data suggest that SNAP-Ed in Pima County is effectively reaching the target population in most need, especially communities disproportionately affected by poverty in the county. SNAP-Ed in Pima County currently engages in intense multi-pronged work in partnership with the Pascua Yaqui tribe as well as the City of South Tucson, a city with a majority Hispanic or Latino population. SNAP-Ed could potentially improve engagement of Black communities in Pima County but on the whole the data suggests that SNAP-Ed is doing equitable work serving the communities of highest need in the county.

Pinal County

Pinal County is a large county in central Arizona with a wide diversity of communities, from small mining towns in the Copper Corridor in the eastern portion of the county to major agricultural areas in the central and western portions of the county and outlying suburbs of both the Phoenix and Tucson metro areas. The county overlaps the lands of the Gila River Indian Community, Tohono O'odham Nation, and San Carlos Apache Tribe (though this land is predominantly unpopulated) and entirely contains the lands of the Ak-Chin Indian Community. It is comprised of 95 Census tracts.

Economic need: The county has similar economic need to the state overall. About 1 in 10 individuals (11%) residing in the county are in poverty, and about 1 in 4 (27%) are low-income. A higher proportion of children (38%) live in low-income households, and in 2020, just under half of all births in the county (47%) were covered by AHCCCS, suggesting that many children in the county are likely eligible for SNAP.[36] Adults and seniors make up a lower proportion of the population in poverty (53% and 15%, respectively) than their share of the overall population (56% and 22%, respectively). Individuals identifying as American Indian or Alaska Native are disproportionately in

[36] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

poverty; while these individuals make up 5% of the overall population, they comprise 12% of the population in poverty. Similarly, individuals identifying as Hispanic or Latino comprise 31% of the total population but 38% of the population in poverty.

Qualifying tracts: Nearly half of the county's tracts (44 of 95; 46%) qualify for SNAP-Ed under one or more criteria, and 41% of the county's population lives in a qualifying tract. The largest portion of tracts (38%) qualify based on the proportion of low-income young children or children ages birth to 12 (CACFP criteria; 37%). Very few tracts qualify for adults (6%) and seniors (4%), compared to 10-11% statewide. Overall, only 6% of all tracts qualify for the population of all ages (compared to 14% statewide). While the relative need is lower than in some other counties, the large size of the county means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 13. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Pinal County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**44**	**46**	**178,129**	**41**
Overall Population Criteria	6	6	25,381	6
Young Child Criteria	36	38	151,349	35
School-age Child Criteria	24	25	100,695	23
CACFP Criteria	35	37	143,542	33
Adult Criteria	6	6	23,660	6
Senior Criteria	4	4	9,464	2

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Pinal County was active in 16 of 44 qualifying tracts (36%) in the county (compared to 45% statewide). Individuals in poverty (OR:1.1) had slightly higher odds of residing in tracts with SNAP-Ed activity than those not in poverty compared to residing in qualifying unserved tracts, while low-income individuals had equal odds of living in active tracts as higher income populations. Both individuals in poverty and low-income individuals had equal odds of residing in tracts with high-intensity activity as higher income individuals as compared to qualified unserved tracts. However, both groups had significantly higher odds of residing in tracts with high-diversity activity (OR: 1.5 for both) than higher income individuals. This indicates that SNAP-Ed in Pinal County is engaged in multi-pronged, hopefully mutually reinforcing work, in communities with high economic need. No implemented PSEs were reported in 2023 in Pinal County.

Age group representation: School-age children were slightly overrepresented in tracts with SNAP-Ed activity (17%) compared to their prevalence in qualifying tracts (15%), but this is appropriate considering their higher prevalence in the population in poverty. Seniors were likewise underrepresented in active tracts (17%) and especially tracts with high-diversity activity (12%) compared to the share of the population in qualified tracts (22%), but again this was appropriate given their lower prevalence in the population in poverty.

Language use representation: Spanish speakers (28%) were overrepresented in active tracts, and particularly tracts with high-intensity activity (32%), compared to the population in qualified tracts

(22%). Limited English households were similarly slightly overrepresented in high-intensity tracts (5%) compared to all qualified tracts (3%). This suggests that SNAP-Ed in Pinal County, which currently only offers direct education in English, should perhaps consider offering more programming in Spanish. However, most of SNAP-Ed in Pinal County's DE work occurs in schools, which may explain the primary use of English. Speakers of Other languages (mostly Native North American languages in Pinal County) are currently underrepresented in active tracts (1%) compared to their share of the population in qualified tracts (2%).

Racial/ethnic representation: Individuals identifying as Hispanic or Latino (49%) and those identifying as Black or African American (5%) are currently overrepresented in tracts where SNAP-Ed is active compared to their share of the population in qualified tracts (36%). As mentioned above, Hispanic or Latino are overrepresented in the population in poverty, indicating that a high level of SNAP-Ed activity is likely appropriate. Black or African American (5%) are currently overrepresented in tracts where SNAP-Ed is active compared to their share of the population in qualified tracts (3%) but fairly proportionate to their share of the population in poverty (4%). Both individuals identifying as non-Hispanic White (38%) and individuals identifying as American Indian or Alaska Native (4%) are underrepresented in active tracts relative to their shares of the population in poverty (45% and 12%, respectively). Given the disproportionately high rates of poverty for American Indian populations in the county, this underrepresentation suggests that Native communities are being inadequately served. Estimated demographics of Pinal County direct education audiences suggest that the vast majority of participants were Hispanic or Latino, with a small proportion of Black participants, again suggesting that SNAP-Ed in Pinal County is serving Black and Hispanic or Latino populations well, but underserving American Indian populations. Currently SNAP-Ed in Pinal County is not working in any of the Native nations with lands in Pinal County.

Taken together, this suggests that SNAP-Ed in Pinal County is effectively serving high need populations, especially Spanish speakers, individuals identifying as Hispanic or Latino, and individuals identifying as Black or African American. However, because SNAP-Ed is not currently working within the Gila River Indian Community, Ak Chin Indian Community, or Tohono O'odham Nation, the American Indian population within the county is currently not being served. Further partnerships with at least one of these Native nations may be needed to equitably serve this population. Additionally, the lack of implemented PSEs in such a large county suggests that further investment in supporting these changes may be needed.

Santa Cruz County

Santa Cruz County, located in southern Arizona, is Arizona's smallest county and the fourth smallest in terms of population. The county borders Mexico and has a predominately Hispanic/Latino population. It is comprised of 14 Census tracts.

Economic need: In 2020, 65% of all births in the county were covered by AHCCCS (the fourth highest proportion among Arizona's 15 counties), suggesting that many children in the county are

likely eligible for SNAP.[37] About 1 in 5 individuals (20%) residing in the county are in poverty, and 42% are low-income. This need is even more pronounced among children; 53% of children in the county are in low-income households. Adults and seniors make up a slightly lower proportion of the population in poverty (51% and 14%, respectively) than their share of the overall population (55% and 18%, respectively), whereas children are overrepresented among those in poverty (13% in poverty compared to 8% of the total population for children birth to age 5, and 21% of the population in poverty compared to 18% of the total population for ages 6-17). Individuals identifying as Hispanic or Latino are disproportionately in poverty; while they make up 83% of the overall population, they comprise 92% of the population in poverty.

Qualifying tracts: The high level of economic need in the county means that 71% of the county's tracts (10 of 14) qualify for SNAP-Ed under at least one criteria, and 73% of the county's population lives in a qualifying tract, representing about 35,000 people. Over half of all tracts (57%) qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), whereas about a quarter (29%) of all tracts qualify for adults and seniors (more than the 10-11% statewide). Only 36% of all tracts qualify for the population of all ages (compared to 14% statewide). Given the small size of the county, SNAP-Ed can more feasibly reach communities in need.

Table 1. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Maricopa County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**379**	**38**	**1,631,276**	**37**
Overall Population Criteria	101	10	404,239	9
Young Child Criteria	281	28	1,225,044	28
School-age Child Criteria	266	26	1,147,795	26
CACFP Criteria	271	27	1,172,725	26
Adult Criteria	55	6	185,972	4
Senior Criteria	98	10	379,211	9

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: To that end, in 2023, SNAP-Ed in Santa Cruz County was active in 6 of 10 qualifying tracts (60%) in the count, compared to 45% statewide. Low-income individuals and individuals in poverty had lower odds of residing in tracts with any SNAP-Ed activity (OR: 0.74 and 0.86 respectively), PSE activity (OR: 0.75 and 0.78 respectively), or high-intensity activity (OR: 0.70 and 0.90 respectively) than higher income populations. There are no tracts in Santa Cruz that were considered high-diversity tracts based on the number of SNAP-ed activity types implemented.

Age group representation: Despite their relatively high poverty rates, children are underrepresented in qualifying tracts. The representation climbs slightly in active tracts relative to qualified tracts, for example, young children comprised 10.5% of the population in intense-active

[37] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

tracts compared to 8.6% in qualified tracts, and school-age children comprised 17.8% of the population in active tracts compared to 16.4% in qualified tracts. By comparison, seniors made up 18% of the population in qualified tracts, but 14% in active tracts, 11% in tracts with high-intensity, and 14% in tracts with PSEs. Adults also tended to be overrepresented; for example, in high-intensity tracts 60% of the population was adults ages 18-64, relative to 56% of the overall population in qualifying tracts. However, 10 of 14 sites with implemented PSEs (71%) in the county were early learning or school settings. School-age children also comprised all recorded direct education participants in Santa Cruz County in 2023. This suggests that despite the over-representation of adults in the areas where SNAP-Ed work, children are still the primary audience of much of SNAP-Ed's work in the county.

Language use representation: Spanish speakers made up a slightly larger share of the population in active tracts (90%) and PSE tracts (87%) than their representation in qualified tracts (85%). Conversely, limited English speakers were slightly underrepresented in active tracts (27%), PSE tracts (23%), and tracts with high-intensity activities (19%), compared to their representation in qualified tracts (28%). Taken together, this suggests that SNAP-Ed in Santa Cruz County is active in communities with Spanish speakers and – to a lesser extent – those with limited English speakers. The Santa Cruz DE classes are offered in English and Spanish.

Racial/ethnic representation: The county's population is predominately Hispanic, and they are well-represented among SNAP-Ed service areas. Individuals identifying as Hispanic or Latino make up 88% of the population in qualified tracts, 92% in active tracts, 91% in tracts with implemented PSEs, and 89% in high-intensity tracts. Multiracial individuals are also proportionally represented in qualified, active, PSE and high-intensity tracts relative to their share of the population in poverty.

Taken together, this suggests that SNAP-Ed in Santa Cruz County is equitably serving areas with Spanish-speakers but slightly underserving areas with limited English speakers. These data also suggest that SNAP-Ed could be doing more to serve the highest need populations with SNAP-Ed activities, given that people in poverty are less likely to live in tracts with high diversity of SNAP-Ed activities. Finally, the lack of any 'high diversity' tracts suggests that SNAP-Ed in Santa Cruz County could consider implementing more types of activities in their served communities in a concentrated effort to effect meaningful change.

Yavapai County

Yavapai County is a large county in north central Arizona containing a diverse topography from the low desert to high forested peaks. The county contains the lands of both the Yavapai Apache Nation and the Yavapai Prescott Indian Tribe. It is comprised of 72 Census tracts.

Economic need: The county has similar economic need to the state overall. About 1 in 8 individuals (12%) residing in the county are in poverty, and over 1 in 4 (28%) are low-income. A higher proportion of children (37%) live in low-income households, and in 2020, just over half of all births in the county (52%) were covered by AHCCCS, suggesting that many children in the county

are likely eligible for SNAP.[38] Seniors make up a lower proportion of the population in poverty (23%) than their share of the overall population (33%). Individuals identifying as American Indian or Alaska Native are disproportionately in poverty; while these individuals make up 1% of the overall population, they comprise 3% of the population in poverty. Similarly, individuals identifying as Hispanic or Latino comprise 15% of the total population but 21% of the population in poverty.

Qualifying tracts: About half of the county's tracts (38 of 72; 53%) qualify for SNAP-Ed under at least one criteria, and 52% of the county's population lives in a qualifying tract. The largest portion of tracts (36%) qualify based on the proportion of low-income young children or children ages birth to 12 (CACFP criteria; 31%). Very few tracts qualify for adults (6%) and seniors (4%), compared to 10-11% statewide. Overall, only 6% of all tracts qualify for the population of all ages (compared to 14% statewide). While the relative need is lower than in some other counties, the large size of the county means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 14. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Yavapai County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**38**	**53**	**124,907**	**52**
Overall Population Criteria	3	4	5,357	2
Young Child Criteria	26	36	91,081	38
School-age Child Criteria	19	26	58,222	24
CACFP Criteria	22	31	73,205	31
Adult Criteria	4	6	8,141	3
Senior Criteria	3	4	13,192	6

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Yavapai County was active in 23 of 38 qualifying tracts (61%) in the county (compared to 45% statewide). Individuals in poverty (OR:1.1) had slightly higher odds of residing in tracts with SNAP-Ed activity than those not in poverty compared to residing in qualifying unserved tracts, while low-income individuals had equal odds of living in active tracts as higher income populations. Both individuals in poverty (OR: 1.2) and low-income individuals (OR:1.1) had slightly higher odds of residing in tracts with implemented PSEs as higher income individuals as compared to qualified unserved tracts, a pattern also seen in tracts with high-intensity activity (OR: 1.1 for poverty; 1.2 for low income). However, both groups had reduced odds of residing in tracts with a high diversity of SNAP-Ed activity (OR: 0.77 for poverty; 0.94 for low income). This indicates that SNAP-Ed in Yavapai County is engaged in PSE and high intensity work in areas of with concentrated economic need. High-diversity activity, meaning activities from multiple different strategy areas, appear to be occurring in slightly higher-resourced areas, which may be in part due to where some resources (such as physical activity infrastructure) are located.

[38] Community Research, Evaluation, and Development Team. (July 2023). AZ Health Zone (SNAP-Ed) 2023 Needs Assessment. Norton School of Human Ecology, University of Arizona. Retrieved from: https://www.azhealthzone.org/wp-content/uploads/2023/11/AZ-Health-Zone-2023-Needs-Assessment.pdf

Age group representation: School-age children were slightly overrepresented in tracts with SNAP-Ed activity (17%) compared to their prevalence in qualifying tracts (15%), but this is appropriate considering their higher prevalence in the population in poverty. Seniors were likewise underrepresented in active tracts (17%) and especially tracts with high-diversity activity (12%) compared to the share of the population in qualified tracts (22%), but again this was appropriate given their lower prevalence in the population in poverty. The vast majority of implemented PSEs in the county were in child-focused sites, mostly early care and education facilities (42%) and schools (31%), indicating a heavy focus on serving children.

Language use representation: Most individuals ages 5 and older speak English only at home, but the small proportion of Spanish-speakers in qualifying tracts in the county (10%) are generally well-represented in tracts where SNAP-Ed is active (9%). They are slightly less represented tracts with implemented PSEs (8%) and with high-diversity activity (7%). One Yavapai LIA currently offers DE programming in English and Spanish in two of the three communities where they work (Central and Southwest), while the other Yavapai LIA currently offers DE in English only (though this LIA also only engages in DE in school settings, which likely guides the choice of language).

Racial/ethnic representation: In terms of race and ethnicity, individuals identifying as non-Hispanic White are generally proportionately represented in active SNAP-Ed tracts as they are in qualified tracts (75-77%), though this population is slightly overrepresented in tracts with high-diversity activity (82%). Individuals identifying as Hispanic or Latino are also generally proportionately represented in active tracts as in qualified tracts (17-19%), but they are underrepresented in tracts with high-diversity activity. Individuals identifying as American Indian or Alaska Native are also proportionately represented in active tracts.

Overall, SNAP-Ed in Yavapai County is geographically reaching populations that match the demographics of the target population in the county.

Yuma County

Yuma County sits in the southwestern corner of Arizona along the U.S.-Mexico border as well as Arizona's border with California. It is both a major agricultural producer, producing much of the nation's leafy greens in the winter season and an important port of entry between the U.S. and Mexico. The county contains the lands of the Cocopah Indian Tribe as well as the Arizona lands of the Fort Yuma Quechan Indian Tribe (which are very sparsely populated). It is made up of 67 Census tracts.

Economic need: Yuma County has a higher level of economic need compared to other parts of the state. Nearly 1 in 5 county residents are living in poverty (18%), and more than 1 in 3 are in low-income households (40%). This need is even more pronounced among children; 54% of children in the county are in low-income households. In 2020, 59% of births in the county were covered by AHCCCS, suggesting that a substantial proportion of children in the county are likely eligible for SNAP. Adults and seniors make up a slightly lower proportion of the population in poverty (47% and 17%, respectively) than their share of the overall population (54% and 20%, respectively). Individuals identifying as Hispanic or Latino are disproportionately in poverty; while these

individuals make up 66% of the overall population, they comprise 74% of the population in poverty. Individuals identifying as American Indian or Alaska Native also a comprise twice the proportion of the population in poverty (2%) as in the overall population (1%).

Qualifying tracts: This high level of economic need means that the majority of the county's tracts (49 of 67; 73%) qualify for SNAP-Ed under one or more criteria, and 77% of the county's population lives in a qualifying tract. Nearly half of all tracts (46-51%, dependent on age group) qualify based on the proportion of low-income children (compared to 31-35% statewide, depending on child age), 18% or more of all tracts qualify for adults and seniors (compared to 10-11% statewide), and 22% of all tracts qualify for the population of all ages (compared to 14% statewide). This widespread need for SNAP-Ed means that there are many potential communities that could benefit from SNAP-Ed activity.

Table 15. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Yuma County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**49**	**73**	**158,161**	**77**
Overall Population Criteria	15	22	60,192	30
Young Child Criteria	31	46	106,713	52
School-age Child Criteria	31	46	110,500	54
CACFP Criteria	34	51	120,457	59
Adult Criteria	12	18	47,382	23
Senior Criteria	15	22	57,909	28

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

SNAP-Ed active tracts: In 2023, SNAP-Ed in Yuma County was active in 18 of 49 qualifying tracts (37%) in the county (compared to 45% statewide). Individuals in poverty (OR:1.1) had slightly higher odds of residing in tracts with SNAP-Ed activity than those not in poverty compared to residing in qualifying unserved tracts, while low-income individuals had nearly equal odds (OR: 0.96) of living in active tracts as higher income populations. Low-income individuals had equal odds and individuals in poverty had slightly higher odds (OR: 1.2) of residing in tracts with implemented PSEs. Both groups had higher odds of living in tracts with high-intensity activity (OR: 1.3 for poverty; 1.1 for low income), and both groups had equal odds of residing in tracts with high-diversity activity as higher income individuals. This indicates that SNAP-Ed in Yuma County is engaged in deep, multi-pronged, hopefully mutually reinforcing work, in communities with high economic need.

Age group representation: School-age children were very slightly overrepresented in tracts with SNAP-Ed activity (19%) compared to their prevalence in qualifying tracts (18%), but this is appropriate considering their higher prevalence in the population in poverty. Seniors were likewise underrepresented in active tracts (14%) compared to their share of the population in qualified tracts (19%), but again this was appropriate given their lower prevalence in the population in poverty. Most PSEs were implemented at child-focused sites in the county, particularly schools (70%).

Language use representation: Spanish speakers made up a larger share of the population in active tracts (66%), PSE tracts (68%), tracts with high-intensity activities (68%), and tracts with high-diversity activities (71%) than their representation in qualified tracts (57%). Limited English households were also slightly better represented in active tracts (15%), PSE tracts (16%), tracts with high-intensity activities (15%), and tracts with high-diversity activities (18%) than their representation in qualified tracts (13%). This suggests that SNAP-Ed in Yuma County is highly active in communities with Spanish speakers and those with limited English-speaking households. SNAP-Ed in Yuma County currently offers direct education in Spanish in one of their two communities of focus, which is also the community where they currently offer adult direct education in addition to child-focused direct education.

Racial/ethnic representation: Individuals identifying as Hispanic or Latino (80%) are currently overrepresented in tracts where SNAP-Ed is active compared to their share of the population in qualified tracts (72%). As mentioned above, Hispanic or Latino are also overrepresented in the population in poverty, indicating that a high level of SNAP-Ed activity is likely appropriate. Black or African American (5%) are currently slightly underrepresented in tracts where SNAP-Ed is active (1%) compared to their share of the population in qualified tracts (2%) and their share of the population in poverty (2%). Individuals identifying as non-Hispanic White (16%) are underrepresented in active tracts relative to their share of the population of the population in qualified tracts and in poverty (24% and 21%, respectively). Those identifying as American Indian or Alaska Native are currently represented in active tracts (1%) proportionate to their population in the overall county and in qualified tracts (1%) but not to their population in poverty (2%).

Taken together, this suggests that SNAP-Ed in Yuma County is effectively serving high need populations, especially Spanish speakers, limited English households, and individuals identifying as Hispanic or Latino. The populations with the highest economic needs both overall and in terms of race/ethnicity and language use are being served both generally and with PSE implementation and high-diversity activities, hopefully leading to sustainable community change.

Summary and Recommendations

Given all the data presented above, we conclude this report with a summary of key findings and with recommendations on how AZ Health Zone might adapt or maintain current policies and strategies to address areas of both strength and weakness.

General Recommendations

First and foremost, statewide, **AZ Health Zone serves a high-need and highly diverse population.** SNAP-Ed activities statewide are generally focused on serving children and their families, who are also the population most likely to be eligible for SNAP. Speakers of Spanish and Other (mostly Native North American) languages are disproportionately represented in areas where SNAP-Ed is currently active, which is commensurate with these groups' higher odds of living in poverty. Similarly, individuals identifying as American Indian or Alaska Native have consistently higher odds

of residing in tracts with SNAP-Ed activity, including high-intensity, high-diversity, and PSE-change work. This again matches these populations' higher odds of living in poverty.

Recommendation: Overall, statewide data suggest that AZ Health Zone's push to go deeper with work in fewer communities is not leading to systematic exclusion of particular groups, and that this strategy generally can be applied equitably, potentially with a few adjustments in some counties.

Despite the focus of so much of these analyses on tracts that qualify at the community-level for SNAP-Ed, it is worth reemphasizing that a substantial portion of SNAP-Ed's target population do not live in tracts with concentrated low-income populations. Nearly 1 out of every 3 low-income and in-poverty individual resides outside of tracts that qualify for SNAP-Ed based on current qualification criteria (greater than or equal to 50% low-income population in a tract). Additionally, in many rural counties, especially those with lower rates of overall poverty, key community anchor institutions, such as benefits offices, community centers, and libraries, are frequently located in relatively high-income tracts.

Recommendation: Continuing to provide pathways for alternative justification of sites that can serve low-income individuals outside of tracts with highly-concentrated low-income populations remains vital for serving the target population.

Finally, a subset of counties faces particular challenges in equitably reaching the population in highest need due to the distribution of the population in need and the geography of their county. In some rural counties, such as Apache County, the level of need is extremely high, with the majority of tracts in the county qualifying for SNAP-Ed based on community need. Given the large size of Arizona's counties, this means that focus on going deeper will mean not reaching many SNAP-Ed eligible individuals due to the limited resources available in these counties and the effort required to serve areas that are the size of some small states. In other counties, such as La Paz County, distinct, non-overlapping populations in need set up a trade-off in serving one particular target population in terms of age and race and ethnicity instead of another.

Recommendation: AZ Health Zone could consider providing additional resources and support for counties with very high levels of need, for example those with 70% or more tracts qualifying for SNAP-Ed based on community demographics. This could help support LIAs in working in a sufficient number of communities to ensure that specific populations, such as American Indian or Alaska Native populations residing in sovereign Native nations or low-income senior populations, are not systematically excluded from SNAP-Ed reach.

Equitable activity by race and ethnicity

However, there are several populations that are generally underrepresented at the state level relative to their rates of poverty: those identifying as Black or African American and those identifying as Native Hawaiian or Pacific Islander. In Arizona, both of these populations make up a small fraction of the total population, and in the case of the Native Hawaiian or Pacific Islander population, the entire population numbers less than 15,000 statewide. Both populations disproportionately reside in large urban counties; 95% of Arizona's Black or African American population resides in Maricopa, Pima, or Pinal counties (compared to 83% of the total population of

all races). For the Native Hawaiian or Pacific Islander population, these 3 counties account for 88% of this population.

Recommendation: Targeted efforts to reach Black or African American and Native Hawaiian or Pacific Islander populations may be needed, particularly in urban counties, to ensure that these populations are not systematically excluded from SNAP-Ed work. This may look like pursuing partnerships with both statewide and local community organizations that work specifically to serve Black or African American, Native Hawaiian or Pacific Islander, and refugee populations.

While individuals identifying as American Indian or Alaska Native have higher odds of residing in areas with SNAP-Ed activity statewide, there are multiple counties where this particular population is not being well-served. Comparing the demographics of the population most likely to reside in poverty to those of the areas where SNAP-Ed is active makes it readily apparent which county LIAs work with local Native nations and which currently do not. Given a history of underinvestment and inequitable policies, rates of poverty and food insecurity remain substantially higher in Native nations in Arizona.[39, 40] To serve the most in-need populations within almost any county in Arizona, it is vital to partner with Native nations. However, these relationships take time to build, and work in these communities must be done with sensitivity and care.

Recommendation: AZ Health Zone should consider further incentivizing LIA work with tribal nations and develop best practice guidelines for partnerships with Native nations. This should be done in consultation with the ADHS Tribal Liaison to ensure that appropriate government-to-government consultation is conducted with sovereign Native nations. For LIAs undertaking new partnerships with Native nations, there should be built-in time for relationship building and for the development of memoranda of understanding and tribal approval for any data collection taking place within the community. There should also be a clear plan for ensuring data sovereignty in any data collected from members of sovereign Native nations, especially in recognition of the central role that feeding practices and physical activity have in many Native cultures.[41]

Equitable activity by age

As mentioned above, most SNAP-Ed activity statewide focuses on children and their families, with a particular emphasis on school- and early care education-based PSE changes and supplemental direct education. Seniors ages 65 and older are generally underrepresented in areas with intensive SNAP-Ed activity, which is commensurate with their lower odds of living in poverty compared to

[39] Cornell, S., & Kalt, J.P. (2010). *American Indian self-determination: The political economy of a successful policy. JOPNA Working Papers*. Harvard University. Retrieved February 5, 2024 from http://nrs.harvard.edu/urn-3:HUL.InstRepos:4553307

[40] Lofthouse, J. K. (2019). Institutions and economic development on Native American lands. *The Independent Review*, *24*(2), 227–248. Retrieved February 6, 2024 from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3503072

[41] Hudson, Carroll, S. R., Anderson, J., Blackwater, D., Cordova-Marks, F. M., Cummins, J., David-Chavez, D., Fernandez, A., Garba, I., Hiraldo, D., Jäger, M. B., Jennings, L. L., Martinez, A., Sterling, R., Walker, J. D., & Rowe, R. K. (2023). Indigenous Peoples' Rights in Data: a contribution toward Indigenous Research Sovereignty. Frontiers in Research Metrics and Analytics, 8, 1173805–1173805. https://doi.org/10.3389/frma.2023.1173805

other age groups in Arizona. However, seniors do likely have unique needs related to nutrition and physical activity, and there are some select counties with high rates of seniors in poverty where this population could be better served.

Recommendation: If AZ Health Zone wants to support low-income Arizona residents across the entire life course, more programming for seniors may be needed. The current system of qualification makes qualifying sites for adult and senior populations more challenging due to the lower prevalence of low-income in these populations at the tract-level statewide. If LIAs are prioritizing serving the highest need populations, seniors will often not fit this target when compared to families with younger children. AZ Health Zone could consider adopting a strategy domain specifically focused on older adults, or incorporating more multi-generational activities that target both children and their parents as well as older grandparents and relatives who may be an important part of family support systems. Determining a model for qualifying primarily senior-serving sites based on program participation, perhaps in collaboration with local organizations such as area councils on aging, could also help with ensuring that sites are able to be qualified to serve seniors.

Equitable activity by language

Throughout the state of Arizona, speakers of Spanish and Other languages, including Native languages, are frequently overrepresented in areas where SNAP-Ed is active. This is appropriate given the much higher odds that these individuals live in poverty compared to speakers of English only or other major language groups. However, the presence of these populations in areas where SNAP-Ed works does not guarantee that SNAP-Ed activities are accessible to them, especially for limited-English-speaking households. While the vast majority of speakers of languages other than English in Arizona are multilingual, provision of materials in individuals' home languages can help foster a sense of belonging and ensure that materials can be shared within homes with family members who may not have similar levels of English proficiency.

Recommendation: Ensuring that translated materials are available as well as, whenever possible, staff or volunteers who can speak Spanish, Native languages, or languages prevalent in Arizona's refugee populations (such as Arabic, Somali, Swahili, and other languages), remain vital for serving multilingual populations who live where SNAP-Ed is currently working. We fully recognize that recruiting and retaining multilingual staff can be a challenge for LIAs but hope that the direct education activities currently offered in Spanish and Diné, as well as English, in multiple counties can be a model going forward.

Conclusion

We want to again recognize the excellent work in which LIAs are engaged throughout the state of Arizona, working deeply in diverse communities to promote meaningful change to support the health and wellbeing of all residents. We hope that these recommendations can provide a starting point for further refining AZ Health Zone approaches statewide to ensure that the program's reach is equitable while going deeper in a select subset of communities in need. To effectively shape new policies, real engagement with SNAP-Ed's target audience, partner organizations across many levels and sectors, and LIAs doing the day-to-day work will be essential. Creating effective community-wide change to support food security, healthy nutrition, and active living takes time,

resources, and committed partnerships and relationships of trust. We hope that this study can further support this good work in the state of Arizona.

Appendix 1: Data Sources

Arizona Department of Education, Health & Nutrition Services (2023). Free and Reduced Price Percentage Report SY 2023-2024 [Dataset]. Retrieved from https://www.azed.gov/hns/frp/

Arizona Department of Health Services, AZ Health Zone (2024). [Fiscal Year 2023 SEEDS Database Extract]. Unpublished data received by request.

U.S. Census Bureau (2023). 2018-2022 American Community 5-Year Estimates, Tables B01001, B03002, B17001A-I, B17024, B17026, C16002. Retrieved via API using tidycensus

U.S. Census Bureau (2020). 2020 TIGER/Line Shapefiles. Retrieved from https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html

U.S. Department of Agriculture (2024). FY2024 FNS CACFP SFSP Eligibility [Dataset]. Retrieved from https://www.fns.usda.gov/sfsp/capacitybuilder

Analytical & Visualization Packages

Iannone R, Cheng J, Schloerke B, Hughes E, Lauer A, Seo J, Brevoort K, Roy O (2024). gt: Easily Create Presentation-Ready Display Tables. R package version 0.10.1.9000, https://github.com/rstudio/gt, https://gt.rstudio.com

Kassambara A (2023). ggpubr: 'ggplot2' Based Publication Ready Plots. R package version 0.6.0, https://rpkgs.datanovia.com/ggpubr/

R Core Team (2024). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. http://www.R-project.org/

Walker K, Herman M (2024). tidycensus: Load US Census Boundary and Attribute Data as 'tidyverse' and 'sf'-Ready Data Frames. R package version 1.6.3, https://walker-data.com/tidycensus/

Wickham H, Averick M, Bryan J, Chang W, McGowan LD, François R, Grolemund G, Hayes A, Henry L, Hester J, Kuhn M, Pedersen TL, Miller E, Bache SM, Müller K, Ooms J, Robinson D, Seidel DP, Spinu V, Takahashi K, Vaughan D, Wilke C, Woo K, Yutani H (2019). "Welcome to the tidyverse." Journal of Open Source Software, 4(43), 1686. doi:10.21105/joss.01686.

Wickham H (2016). ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag New York. ISBN 978-3-319-24277-4, https://ggplot2.tidyverse.org

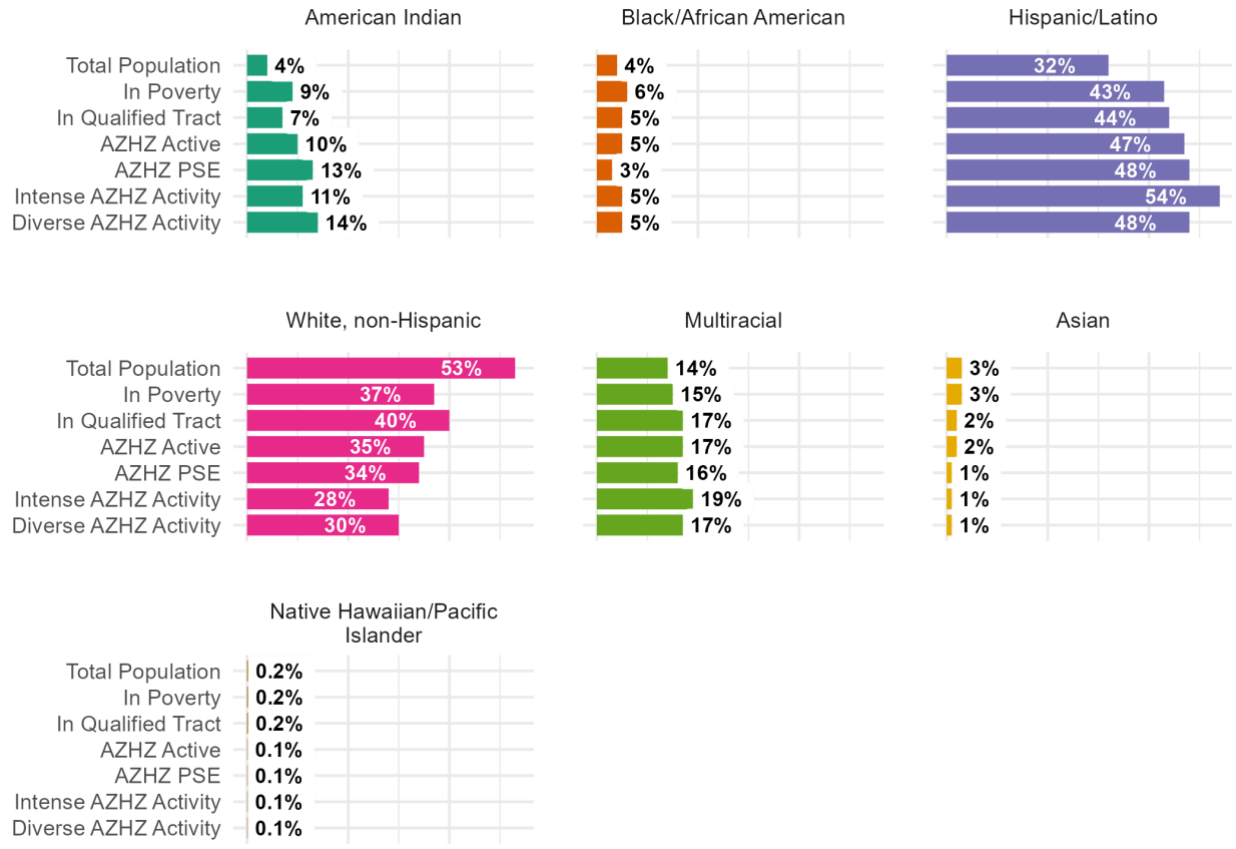
Data were acquired from the Census Bureau using tidycensus by Kara Haberstock Tanoue. All analyses and visualizations were run in R by Kara Haberstock Tanoue using the tidyverse and base R packages. Data and graphics were created with the ggplot2, ggpubr, and gt packages by Kara Haberstock Tanoue. For code and replication data, please contact Kara Haberstock Tanoue at kalynq@arizona.edu

Appendix 2: Analysis Results Tables and Figures

Arizona

Racial and ethnic groups with the highest need in terms of poverty are generally overrepresented in the areas where SNAP-Ed is active.

Example interpretation: Of the total population in Arizona, 4.1% identified as American Indian or Alaska Native, however this group made up more than twice the proportion of individuals in poverty (9.4%). Individuals identifying as American Indian or Alaska Native were also over-represented in qualified tracts (7.3% of the population); tracts where AZHZ was active in 2023 (10.1%); tracts with implemented PSEs in 2023 (13.4% of the population); tracts with intense AZHZ activity in 2023 (10.6% of the population): and tracts with diverse AZHZ activity in 2023 (14.1% of the population).

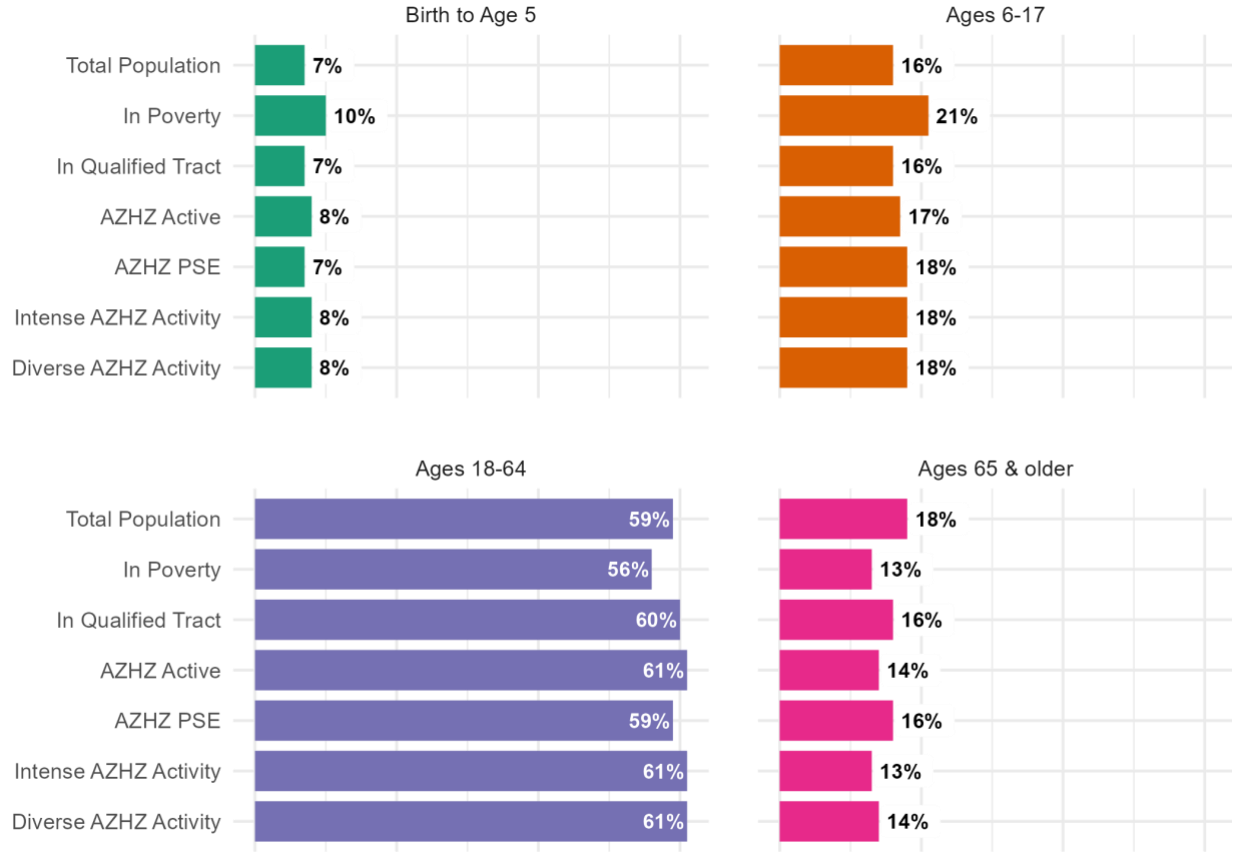


Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 1. Comparison of populations by race and ethnicity, Arizona

The distribution of the population in areas where SNAP-Ed works generally matches that of the overall population, with an appropriate slight overrepresentation of school-age children and underrepresentation of seniors commensurate to these population's poverty prevalence.

Example interpretation: Of the total population in Arizona, 6.8% were children birth to age 5. However, children birth to age 5 made up a larger percent of the total population in poverty in Arizona at 9.9%. Compared to their representation amongst the total population, young children were slightly over-represented in qualifying tracts and tracts with all levels of AZHZ activity in 2023 (ranging from 7.4%-7.9% of the population in these tracts).

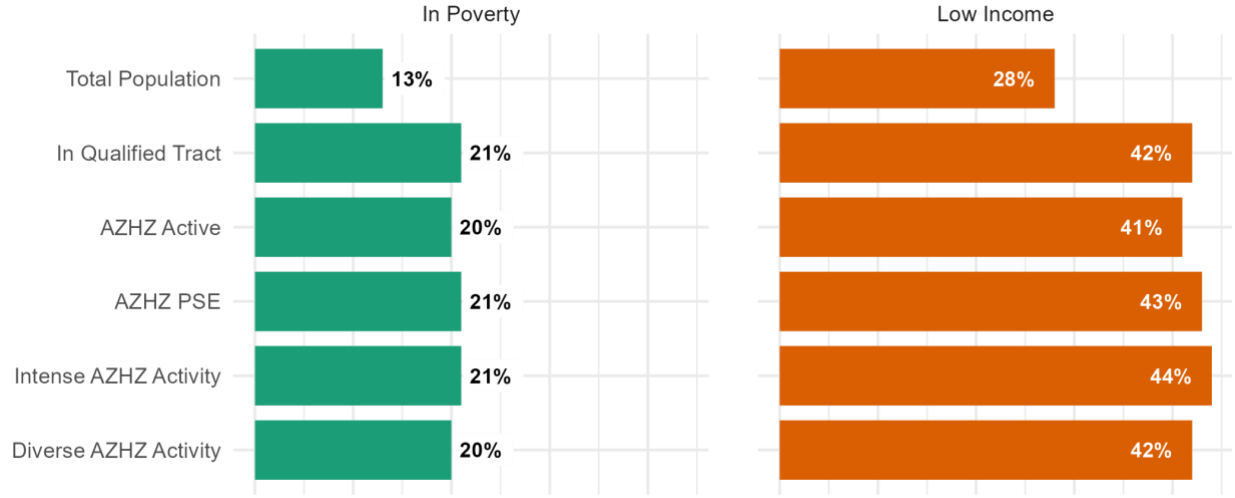


Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 1. Comparison of populations by age group, Arizona

Areas where SNAP-Ed is active tend to have similar rates of poverty and low-income as overall tracts qualifying for SNAP-Ed.

Example interpretation: Of the total population in Arizona, 13.1% were in poverty. A larger portion of the population in qualified tracts were in poverty (20.5%) as well as in tracts with AZHZ activity of all types (ranging from 19.9% to 20.8%).

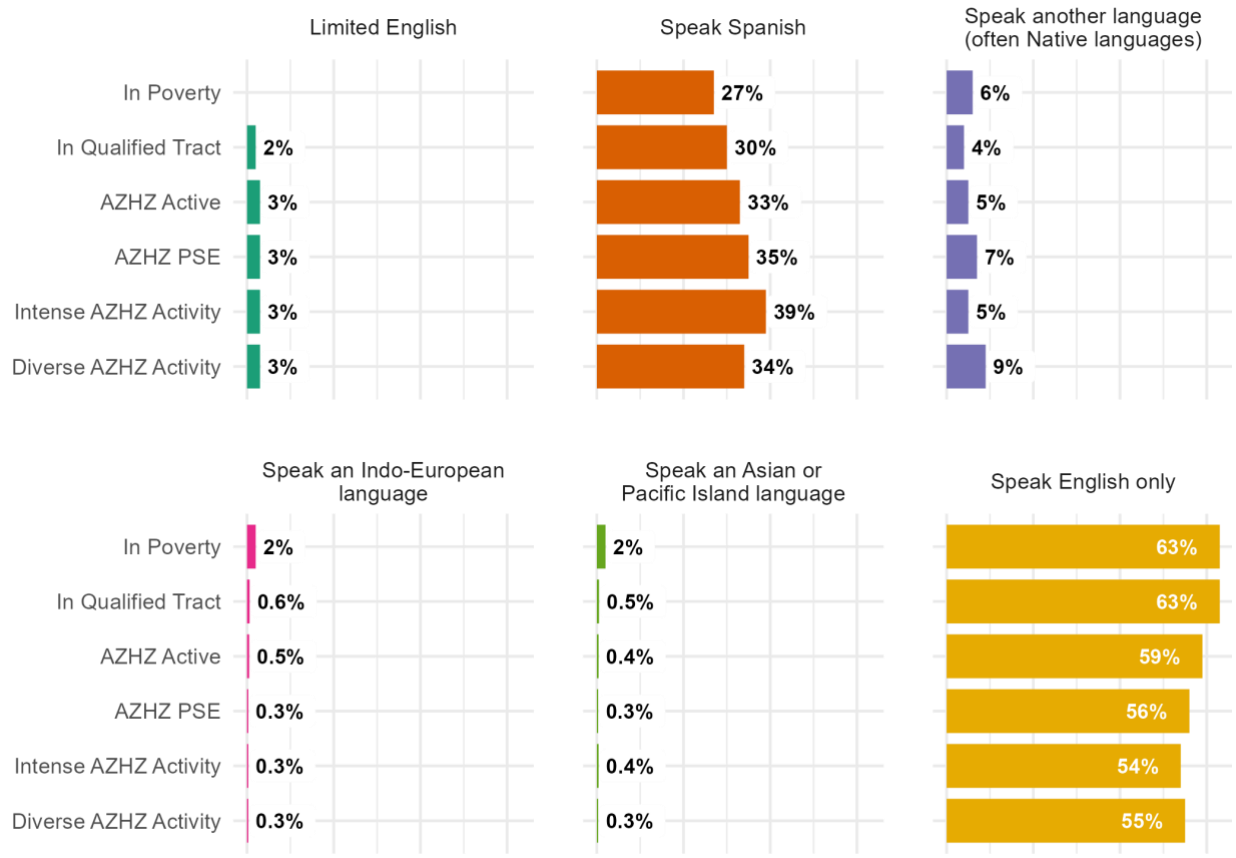


Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 2. Comparison of populations by poverty and low-income rates, Arizona

Speakers of Spanish and Other (often Native North American) languages are overrepresented in areas where SNAP-Ed is active; these groups are also overrepresented in the population in poverty.

Example interpretation: Individuals with limited English-speaking ability represented 3.7% of Arizona's population but a larger portion of qualified tracts (6%) and tracts with AZHZ SNAP-Ed activity in 2023 (7.1%). They also made up a larger portion of tracts with PSEs implemented (7.2%), intense activity (7.6%), and diverse activity (7.5%) in 2023.



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 3. Comparison of populations by home language use and limited English status, Arizona

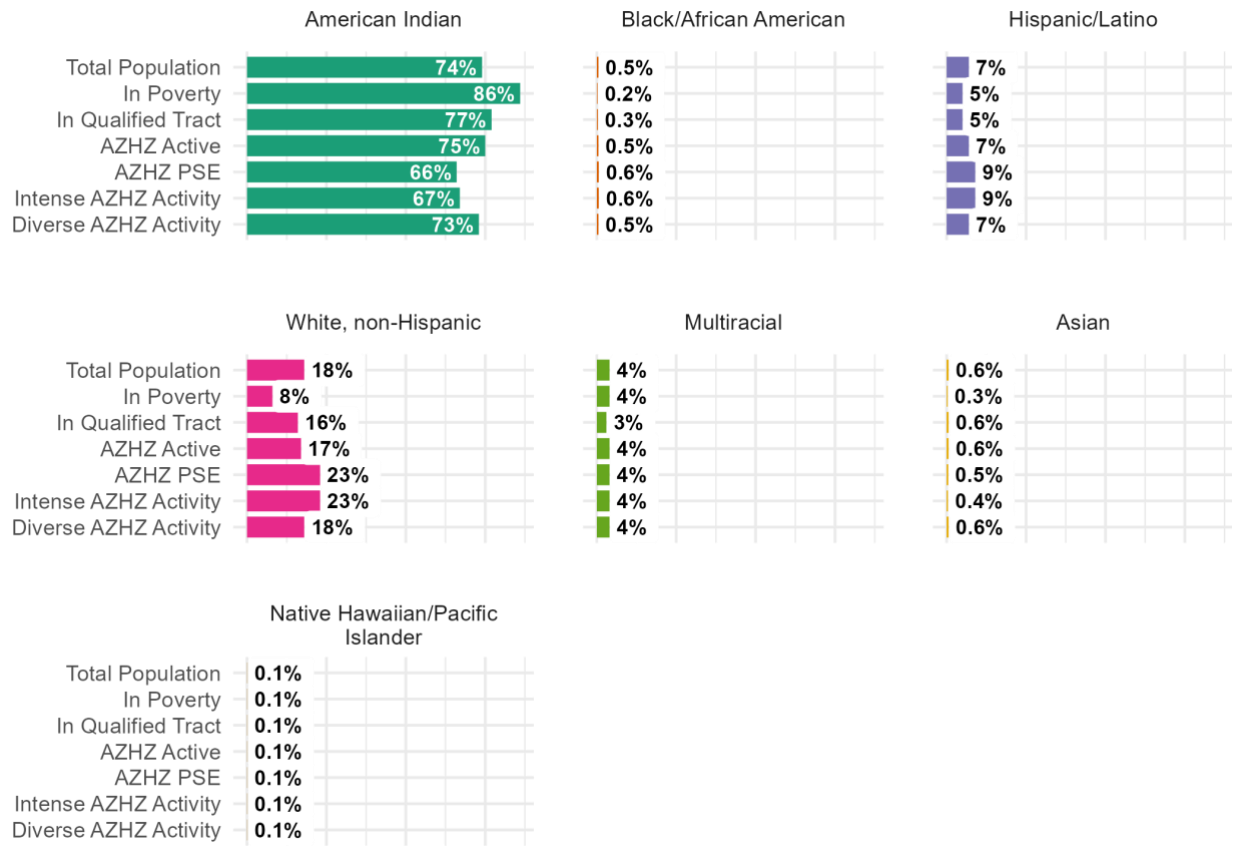
Apache County

Table 16. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Apache County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**17**	**94**	**62,728**	**95**
Overall Population Criteria	13	72	47,777	72
Young Child Criteria	17	94	62,728	95
School-age Child Criteria	12	67	46,272	70
CACFP Criteria	15	83	55,892	85
Adult Criteria	12	67	41,963	64
Senior Criteria	10	56	38,783	59

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

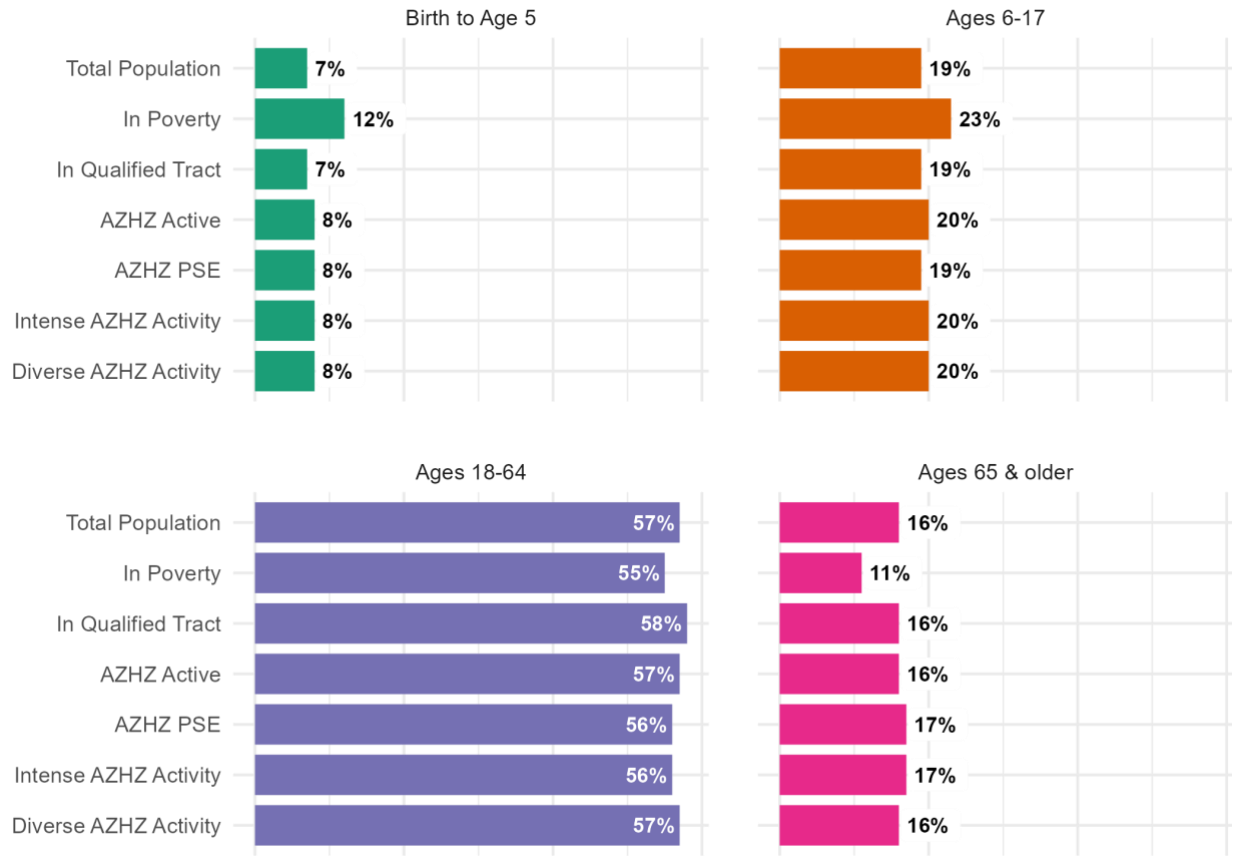
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 4. Comparison of populations by race and ethnicity, Apache County

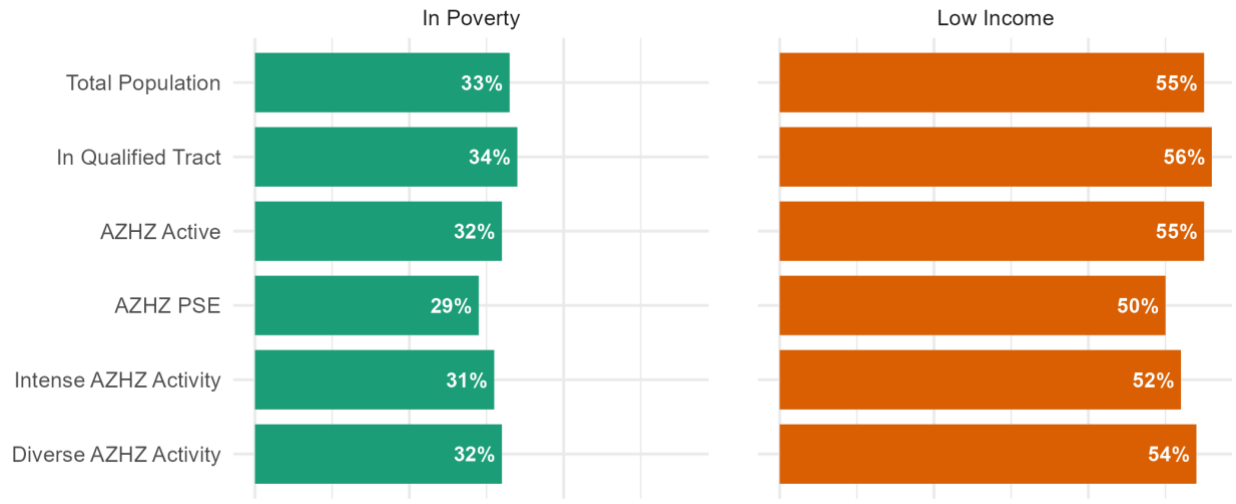
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 5. Comparison of populations by age group, Apache County

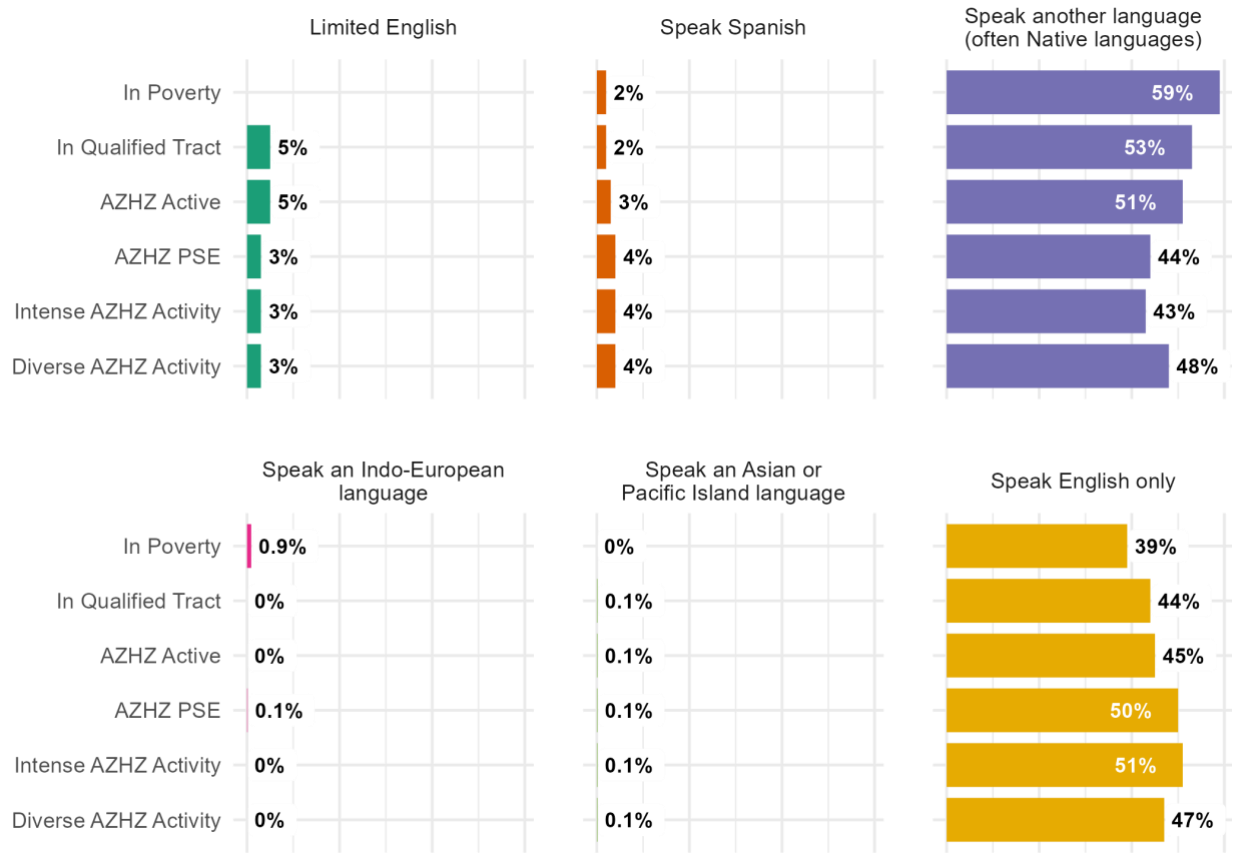
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 6. Comparison of populations by poverty and low-income rates, Apache County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 7. Comparison of populations by home language use and limited English status, Apache County

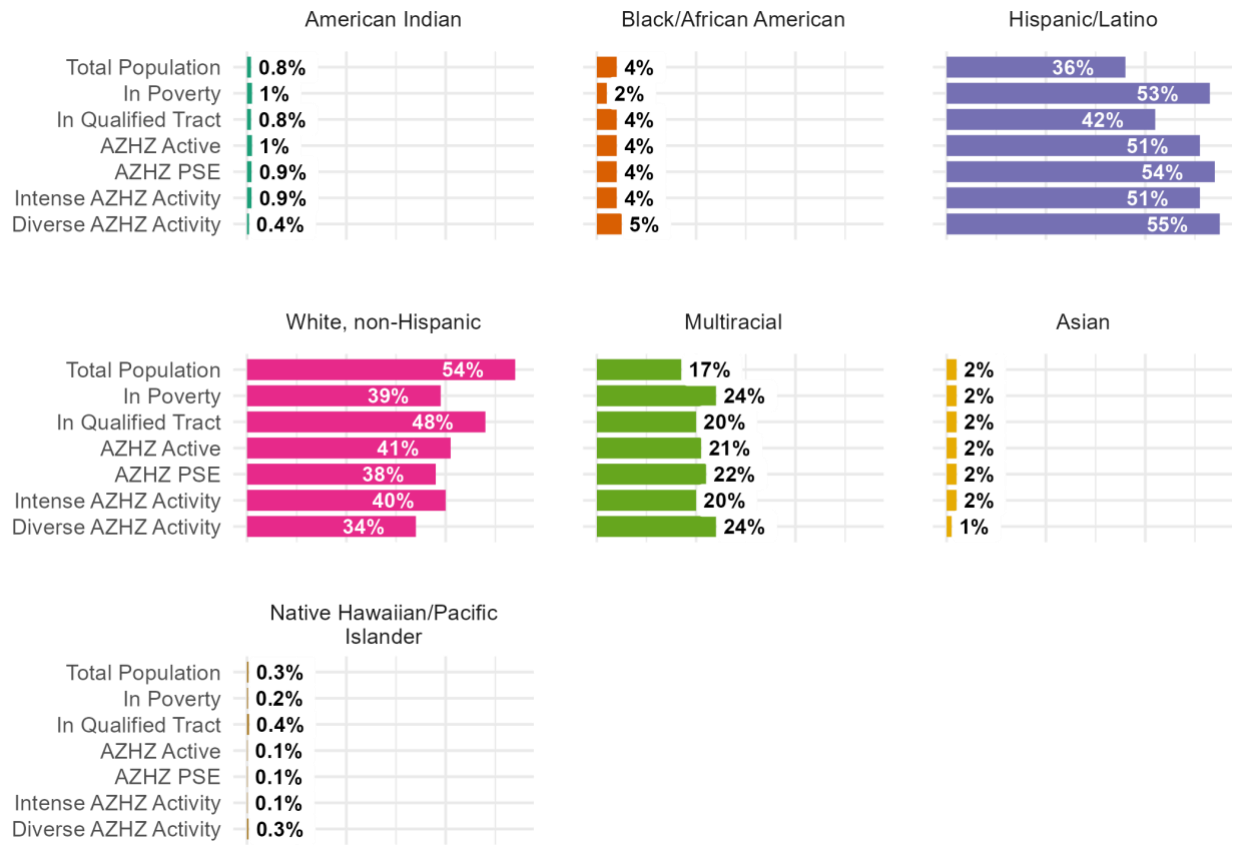
Cochise County

Table 17. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**26**	**68**	**88,275**	**70**
Overall Population Criteria	8	21	22,898	18
Young Child Criteria	22	58	77,345	62
School-age Child Criteria	20	53	64,304	51
CACFP Criteria	20	53	67,116	54
Adult Criteria	4	10	8,578	7
Senior Criteria	4	10	10,749	9

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

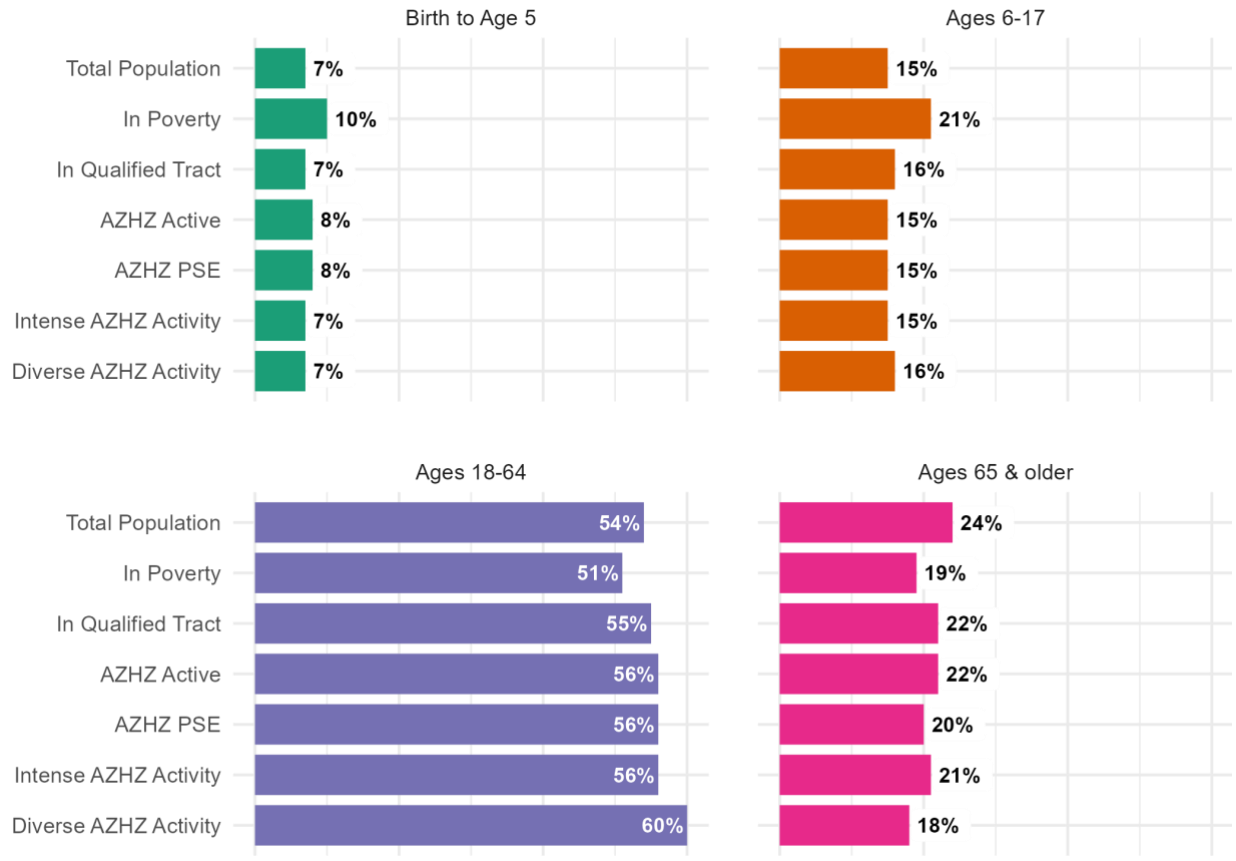
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 8. Comparison of populations by race and ethnicity, Cochise County

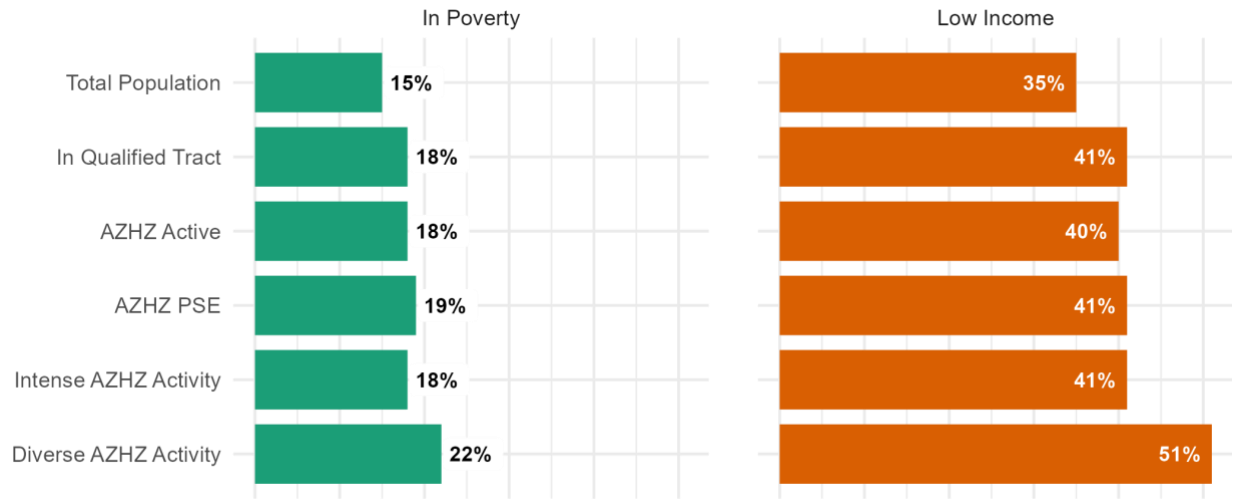
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 9. Comparison of populations by age group, Cochise County

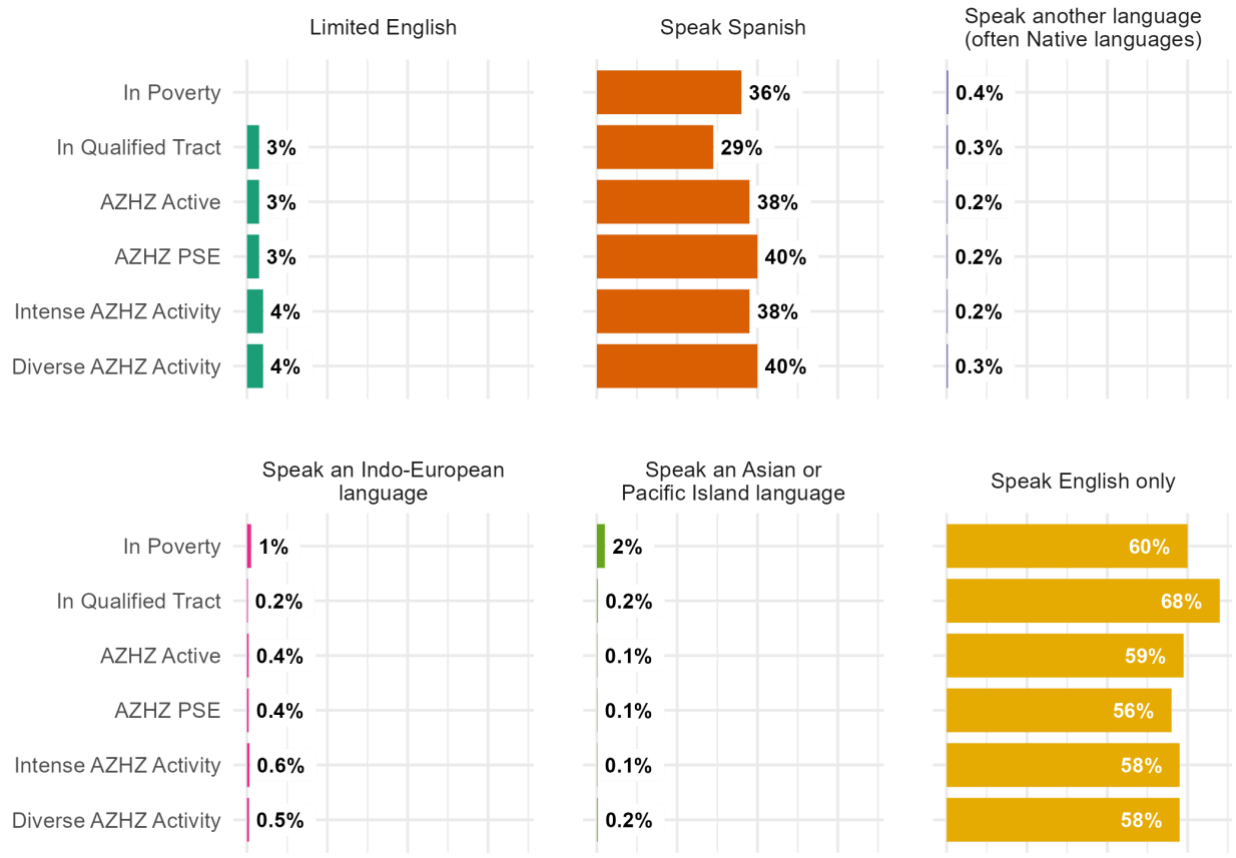
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 10. Comparison of populations by poverty and low-income rates, Cochise County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 11. Comparison of populations by home language use and limited English status, Cochise County

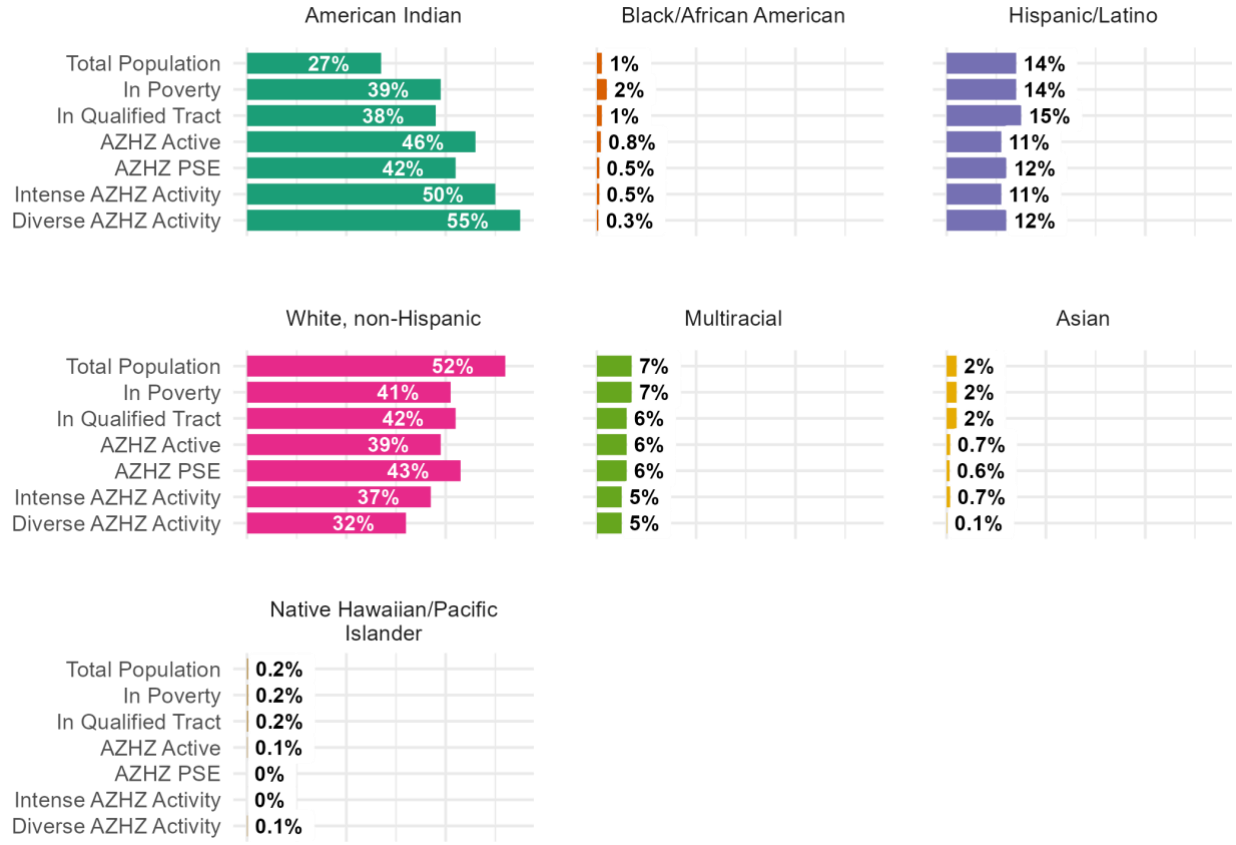
Coconino County

Table 18. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**20**	**51**	**73,871**	**51**
Overall Population Criteria	9	23	39,690	27
Young Child Criteria	10	26	45,824	32
School-age Child Criteria	14	36	56,931	39
CACFP Criteria	10	26	44,769	31
Adult Criteria	7	18	32,373	22
Senior Criteria	7	18	34,444	24

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

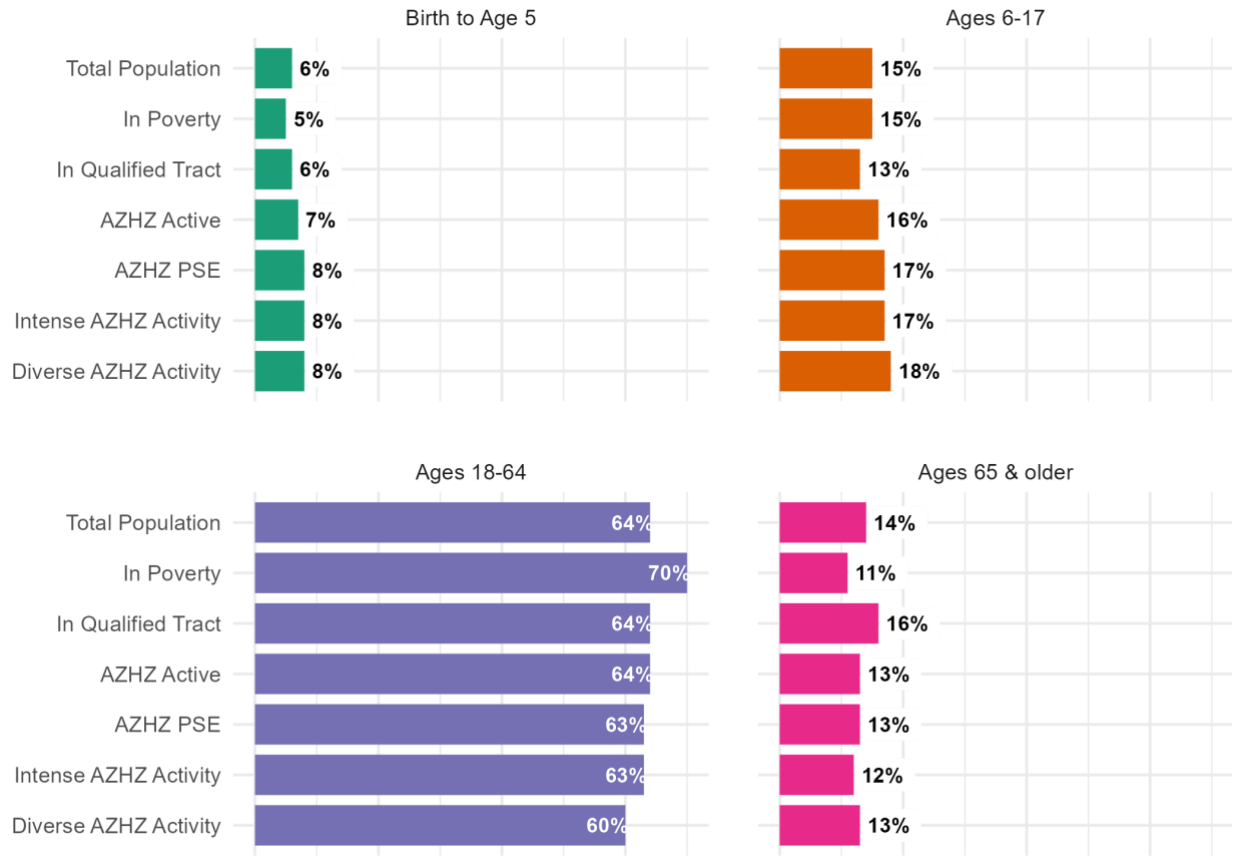
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 12. Comparison of populations by race and ethnicity, Coconino County

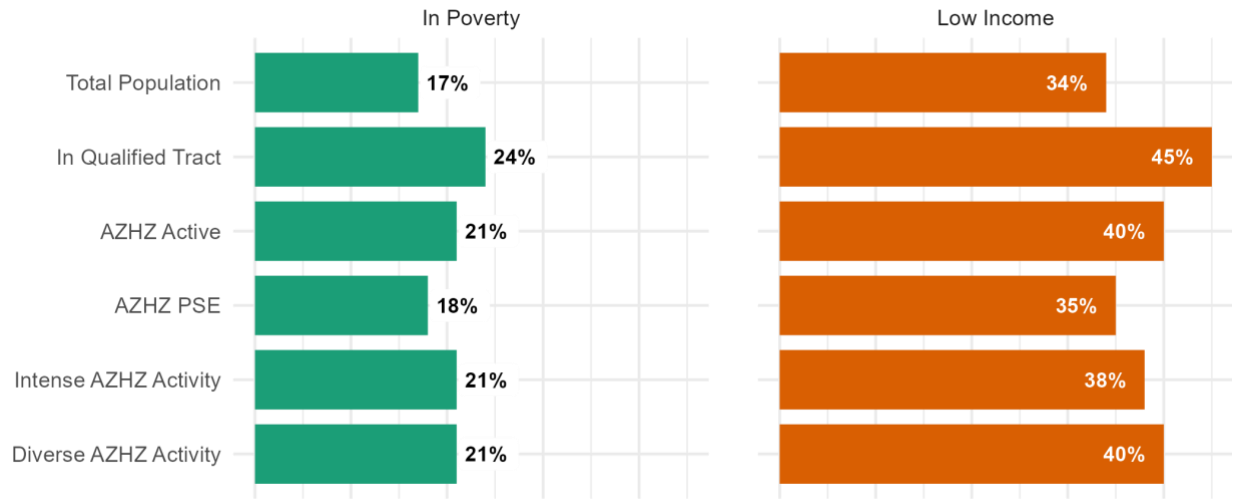
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 13. Comparison of populations by age group, Coconino County

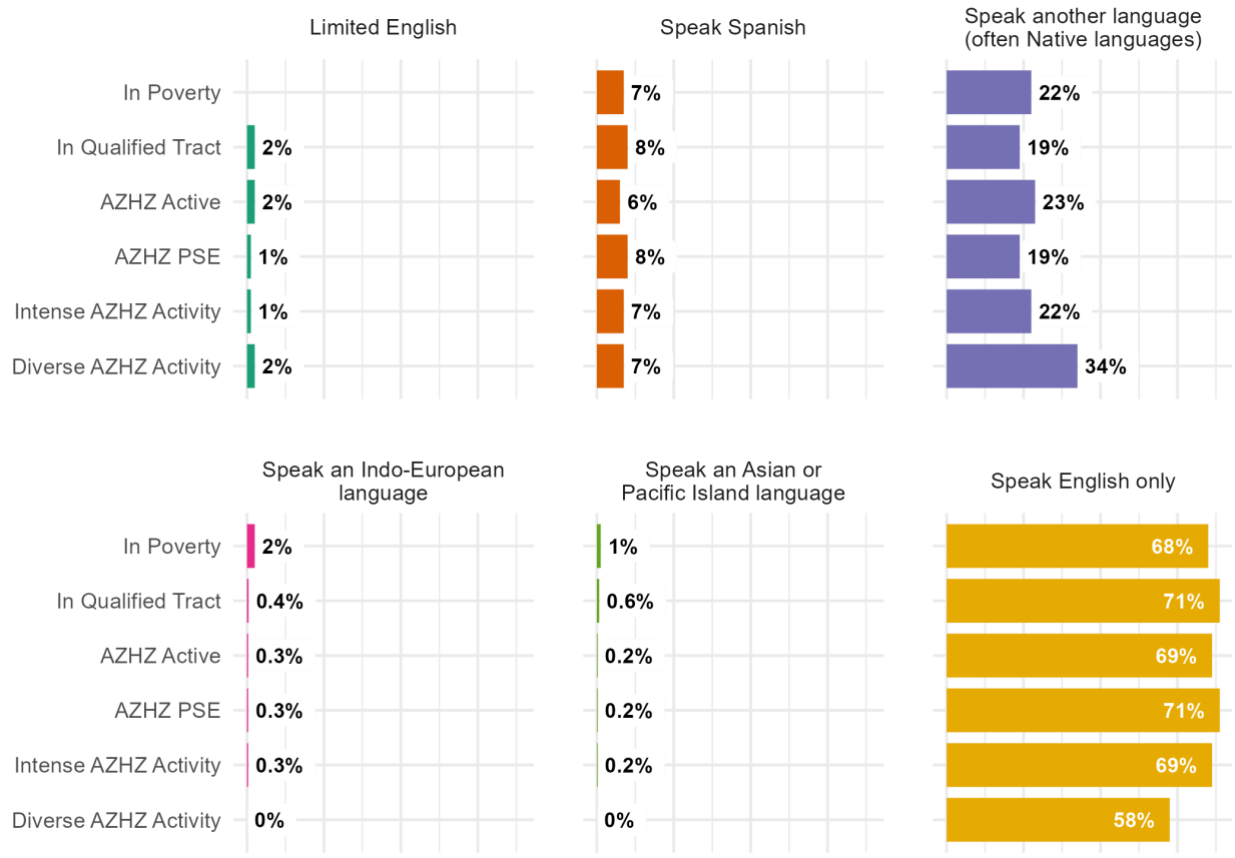
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 14. Comparison of populations by poverty and low-income rates, Coconino County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 15. Comparison of populations by home language use and limited English status, Coconino County

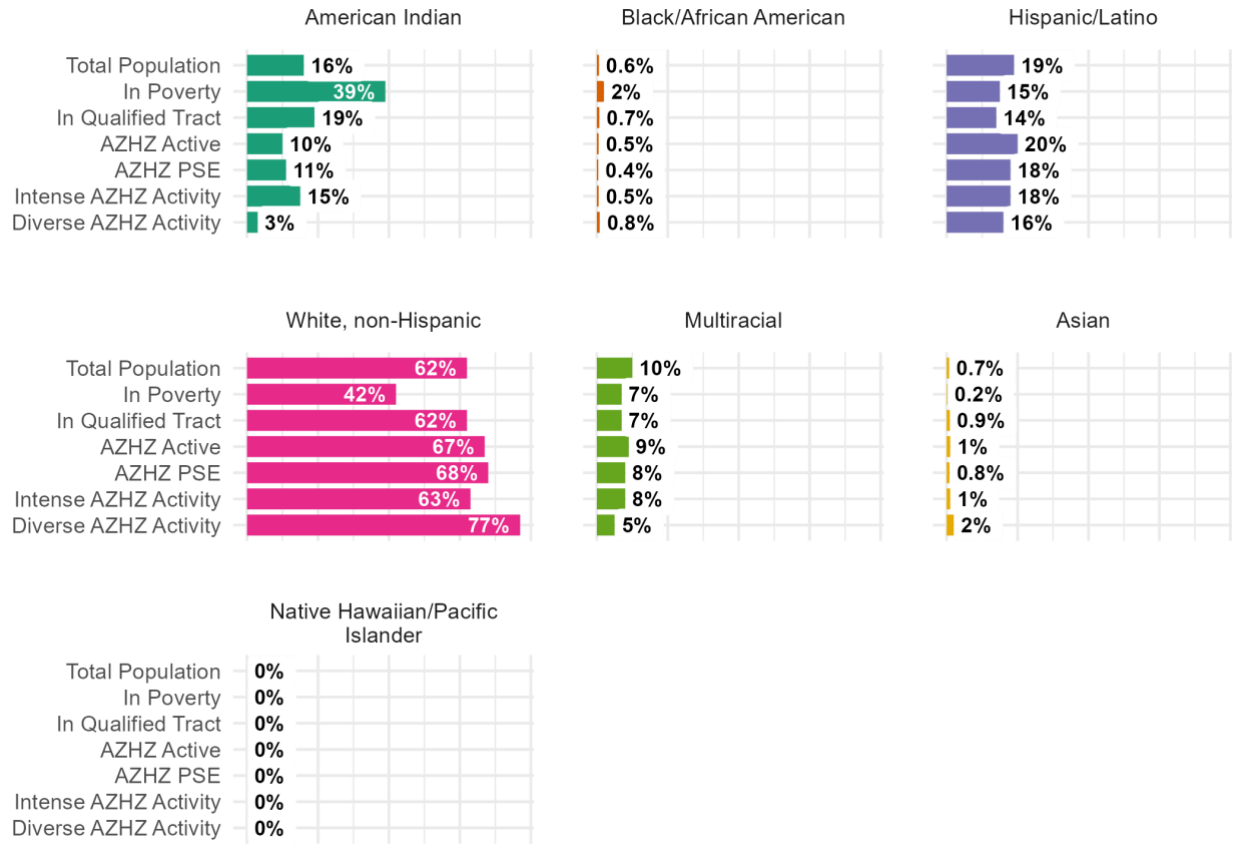
Gila County

Table 19. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Cochise County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**13**	**81**	**41,758**	**78**
Overall Population Criteria	3	19	9,328	18
Young Child Criteria	10	62	33,987	64
School-age Child Criteria	8	50	25,001	47
CACFP Criteria	11	69	33,854	63
Adult Criteria	4	25	10,411	20
Senior Criteria	1	6	2,302	4

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

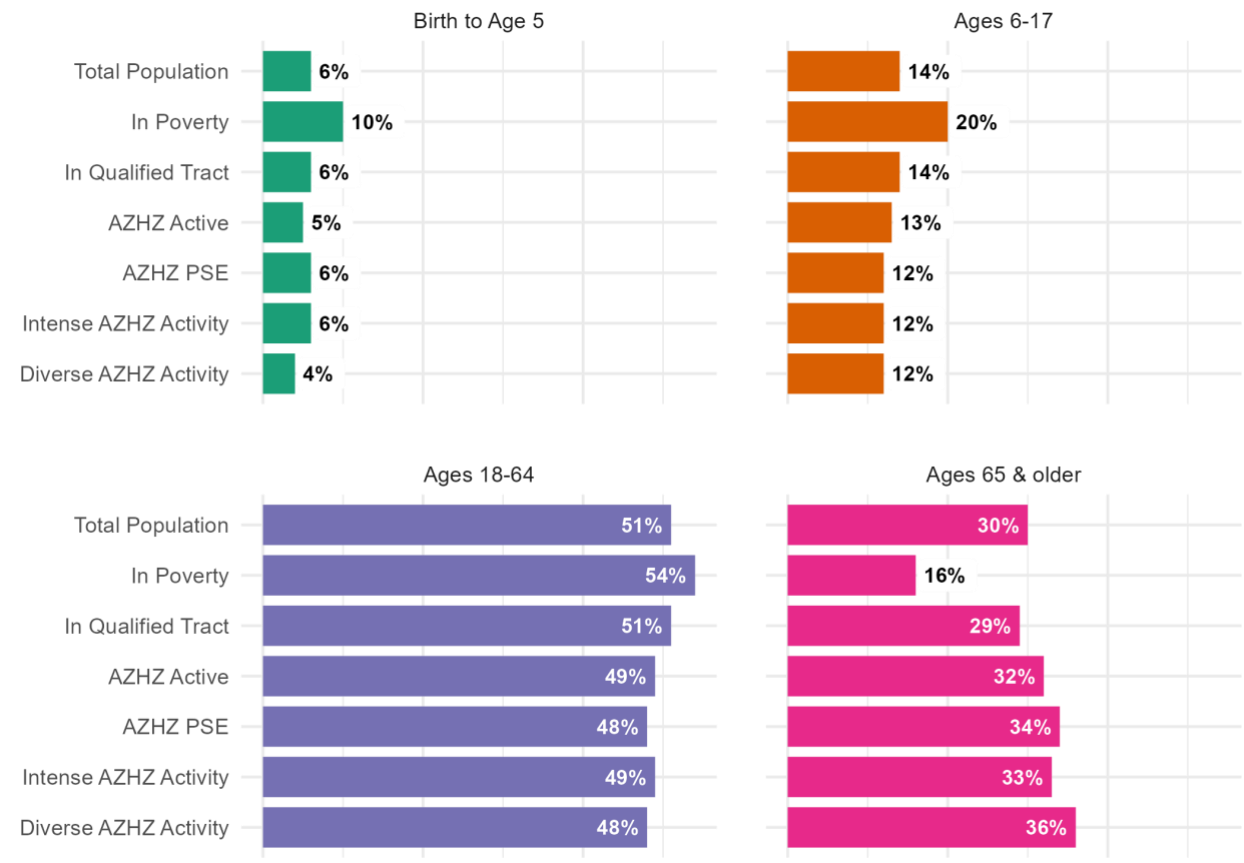
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 16. Comparison of populations by race and ethnicity, Gila County

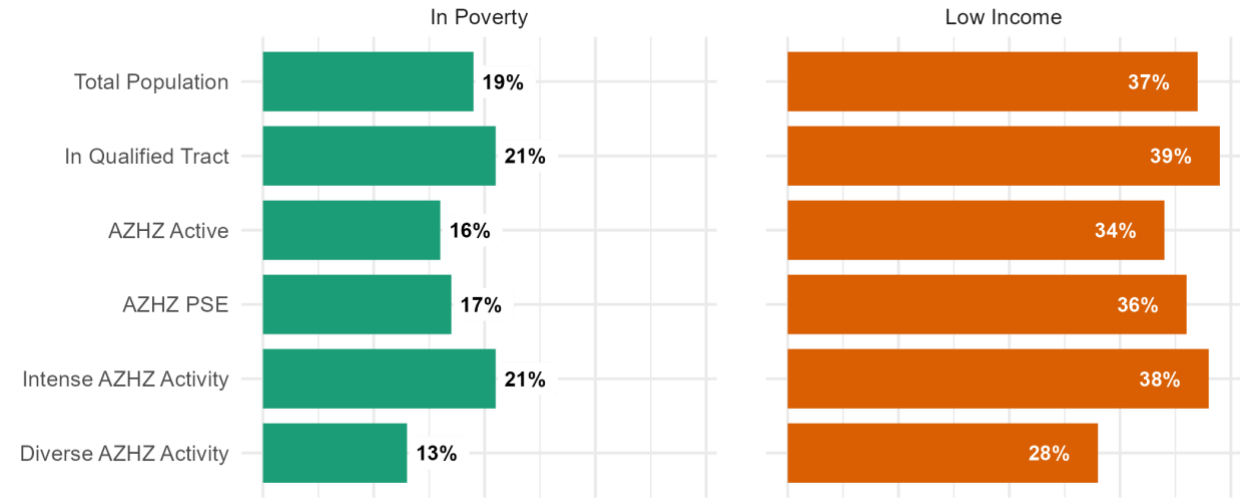
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 17. Comparison of populations by age group, Gila County

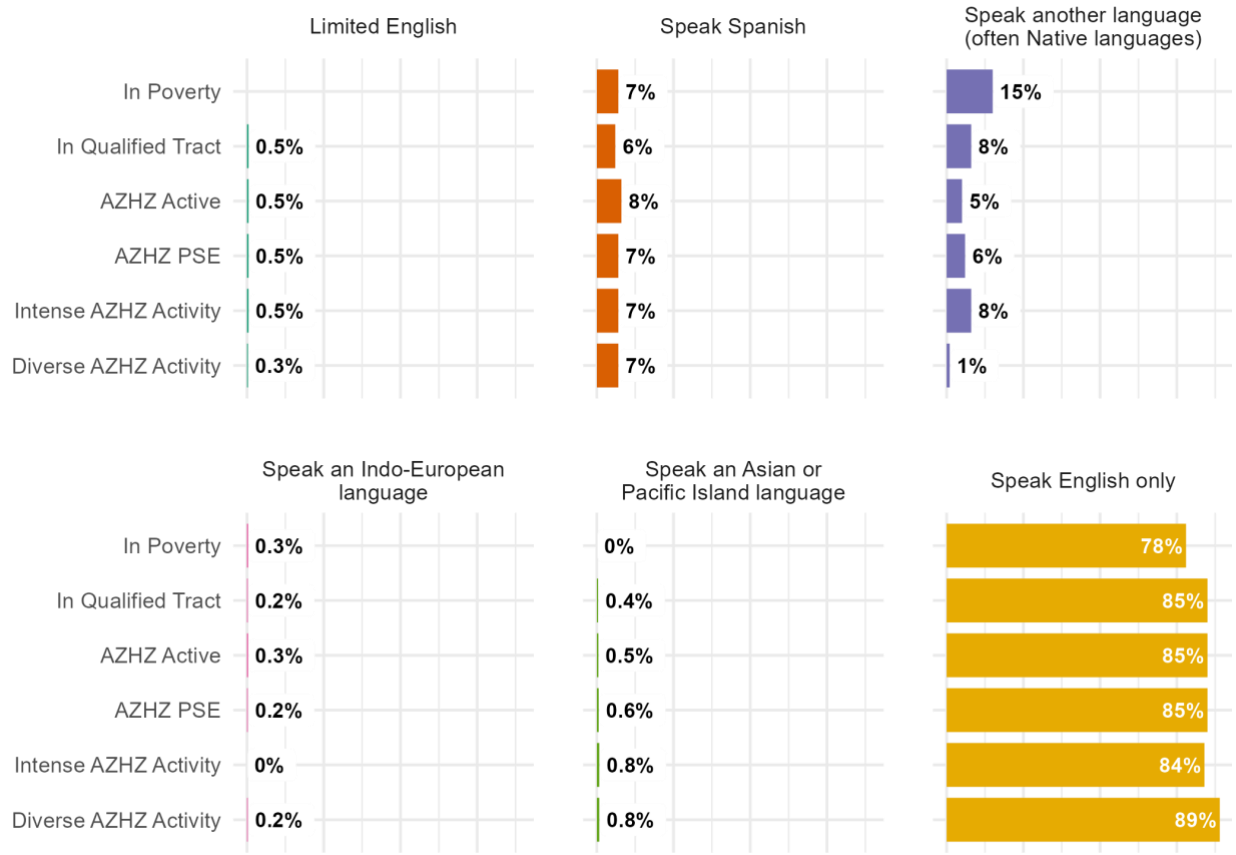
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 18. Comparison of populations by poverty and low-income rates, Gila County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 19. Comparison of populations by home language use and limited English status, Gila County

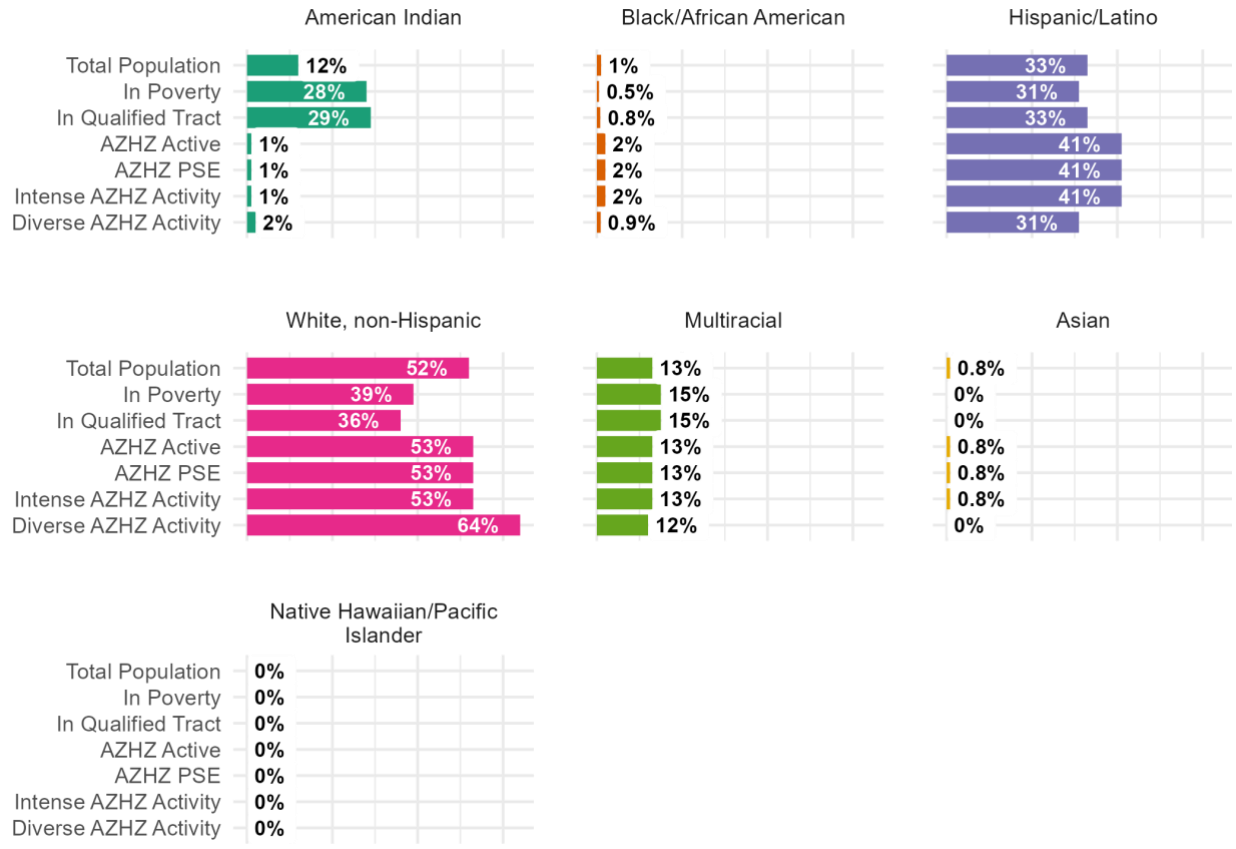
Graham County

Table 20. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Graham County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**3**	**33**	**15,032**	**39**
Overall Population Criteria	1	11	4,333	11
Young Child Criteria	1	11	4,333	11
School-age Child Criteria	3	33	15,032	39
CACFP Criteria	3	33	15,032	39
Adult Criteria	1	11	4,333	11
Senior Criteria	0	0	0	0

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

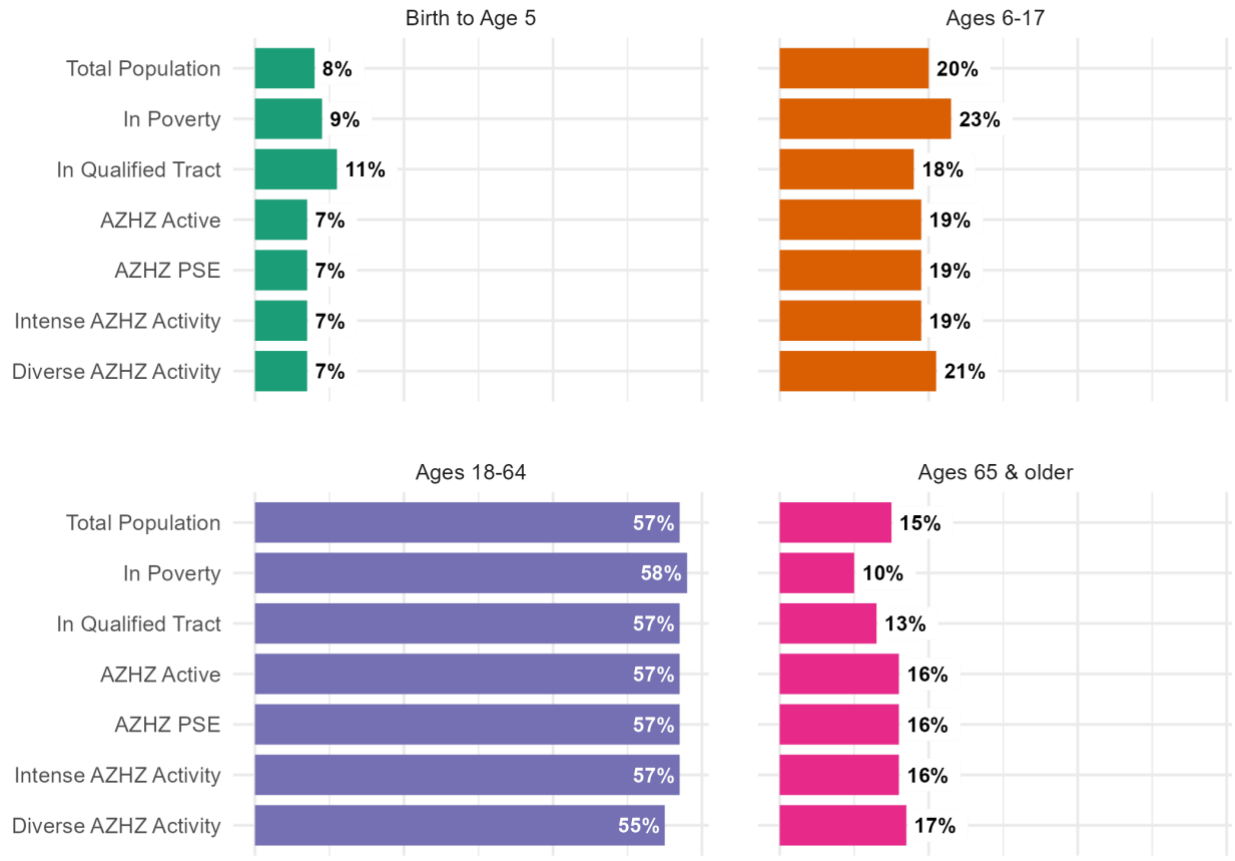
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 20. Comparison of populations by race and ethnicity, Graham County

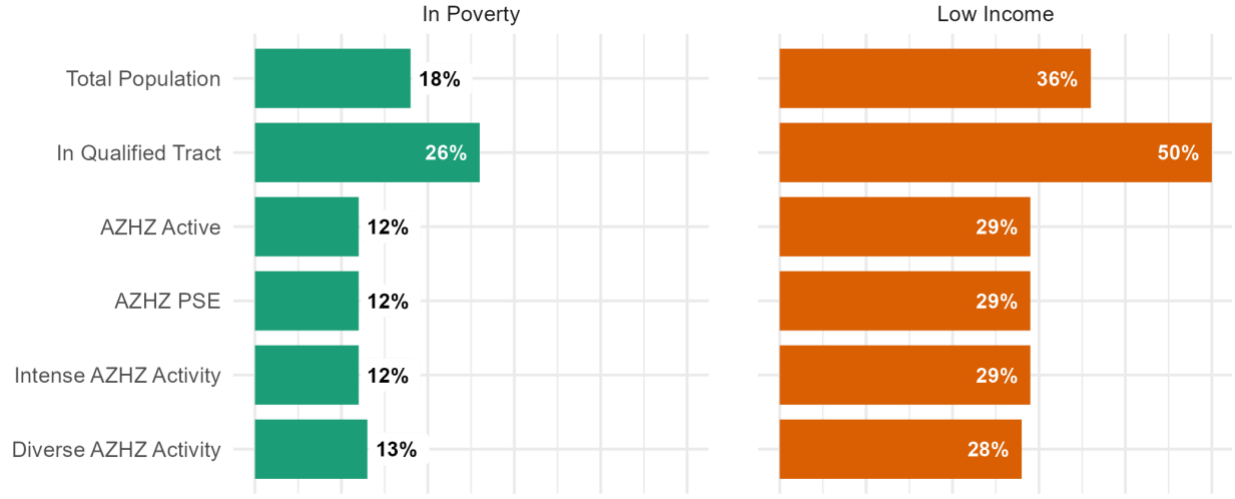
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 21. Comparison of populations by age group, Graham County

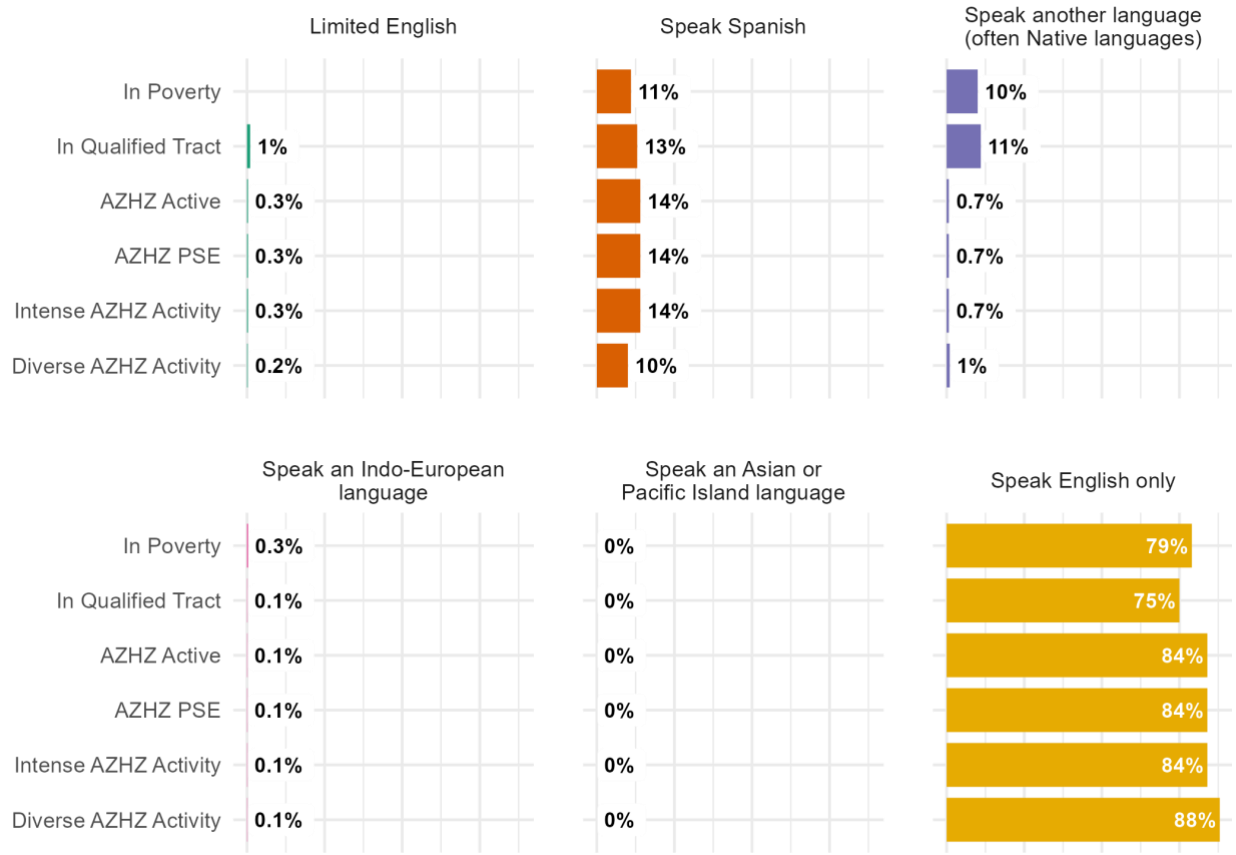
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 22. Comparison of populations by poverty and low-income rates, Graham County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 23. Comparison of populations by home language use and limited English status, Graham County

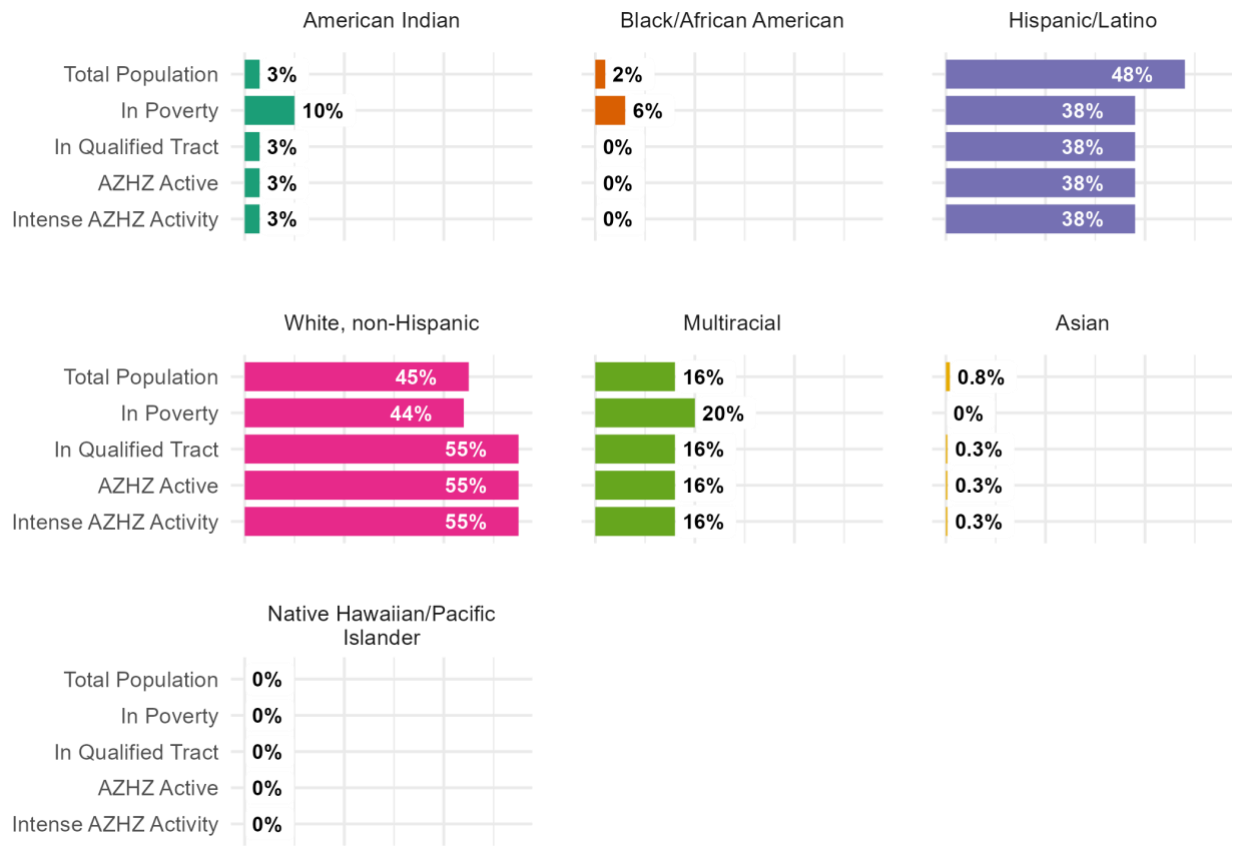
Greenlee County

Table 21. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Greenlee County

Qualification	Tracts		Population	
	#	%	#	%
Meets Any Criteria	**1**	**33**	**2,777**	**29**
Overall Population Criteria	0	0	0	0
Young Child Criteria	1	33	2,777	29
School-age Child Criteria	0	0	0	0
CACFP Criteria	1	33	2,777	29
Adult Criteria	0	0	0	0
Senior Criteria	0	0	0	0

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

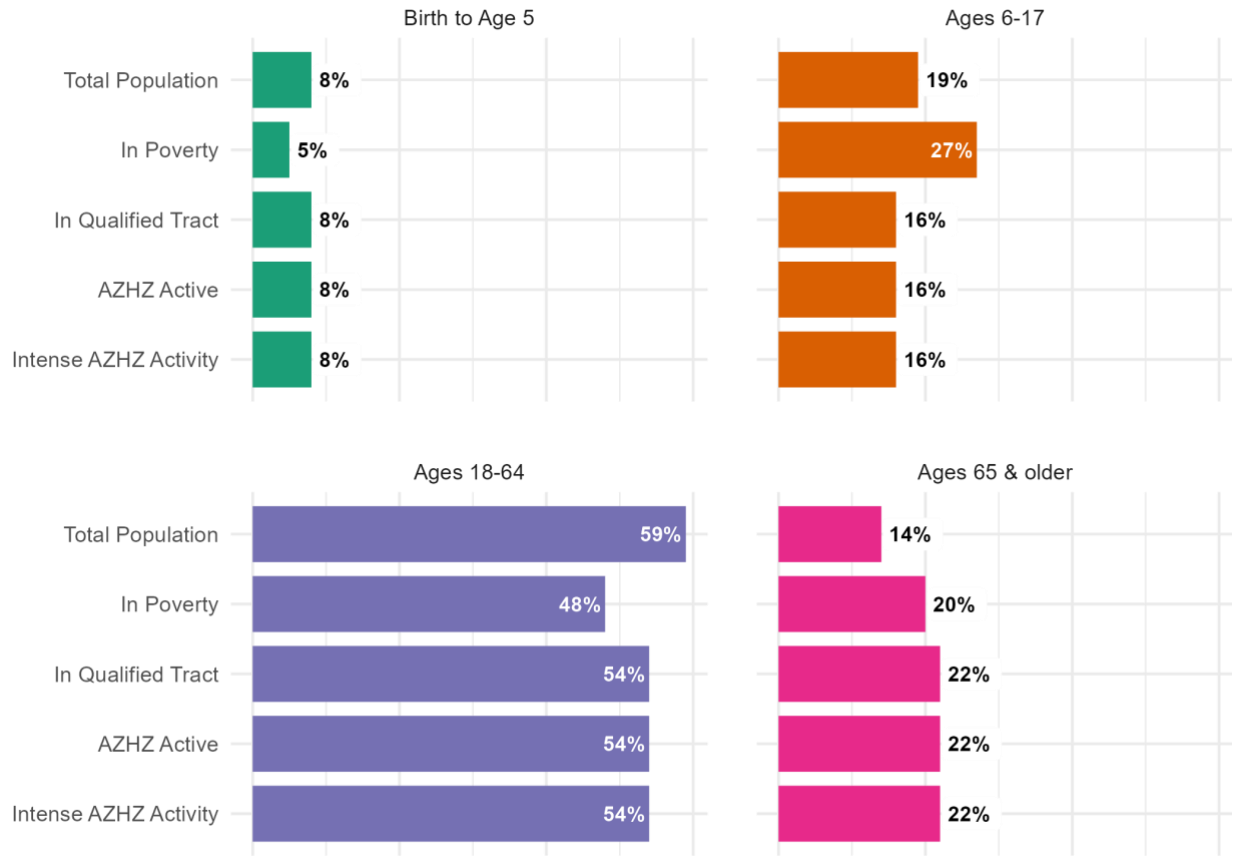
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 24. Comparison of populations by race and ethnicity, Greenlee County

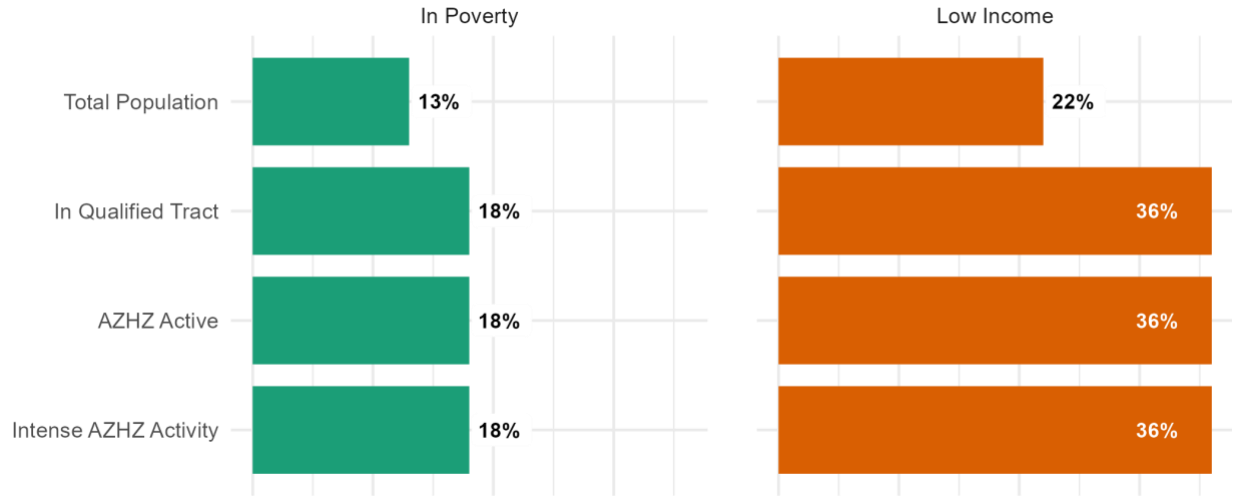
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 25. Comparison of populations by age group, Greenlee County

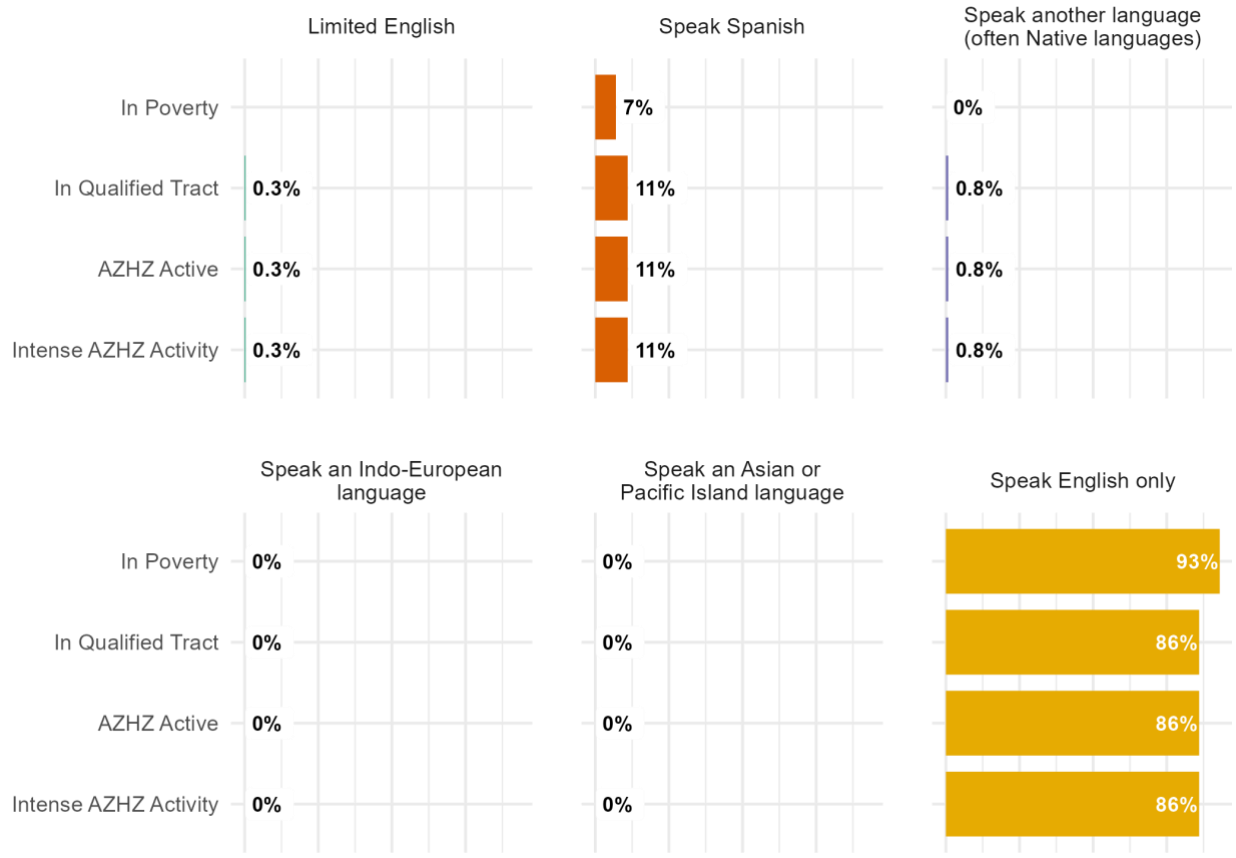
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 26. Comparison of populations by poverty and low-income rates, Greenlee County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 27. Comparison of populations by home language use and limited English status, Greenlee County

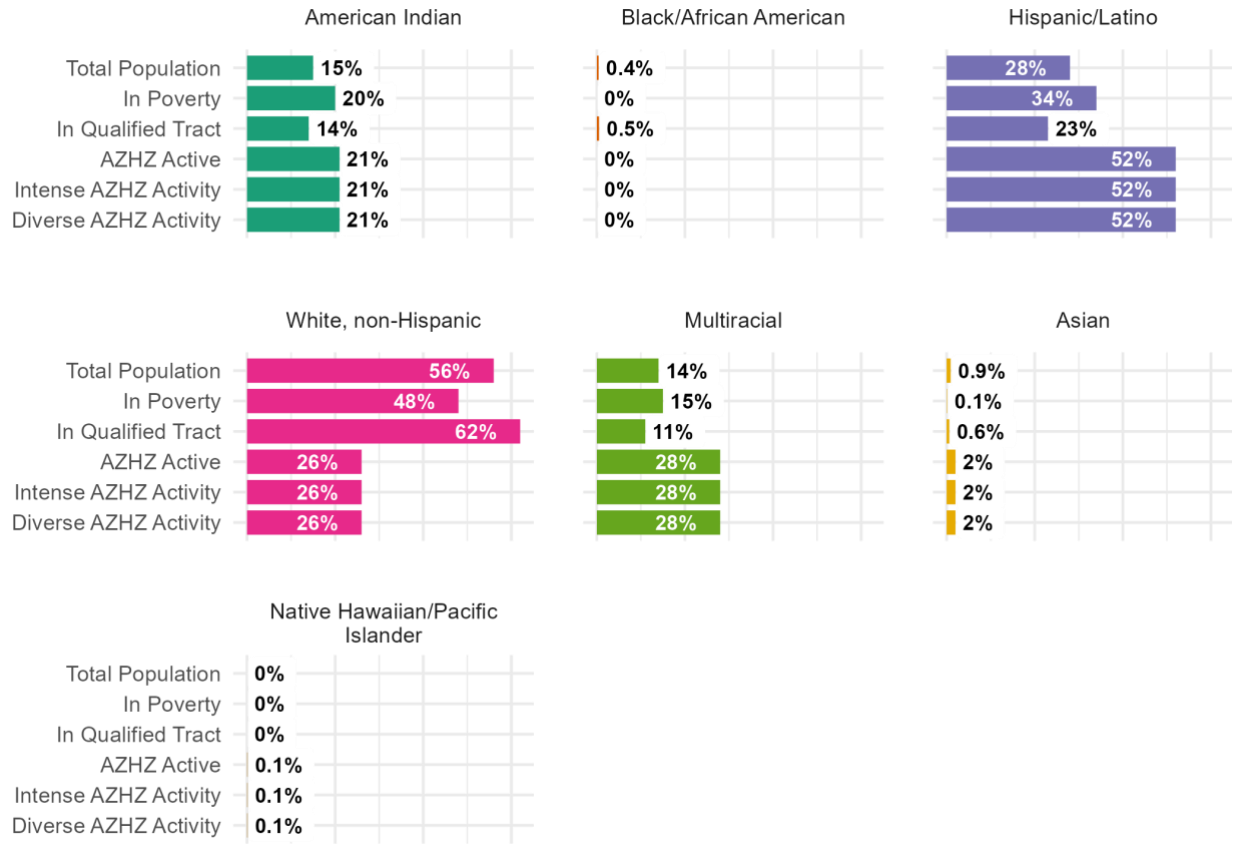
La Paz County

Table 22. Tracts qualifying for AZ Health Zone based on community low-income prevalence, La Paz County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**9**	**75**	**12,483**	**75**
Overall Population Criteria	4	33	6,658	40
Young Child Criteria	3	25	6,686	40
School-age Child Criteria	4	33	7,627	46
CACFP Criteria	3	25	6,686	40
Adult Criteria	3	25	5,475	33
Senior Criteria	5	42	4,856	29

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

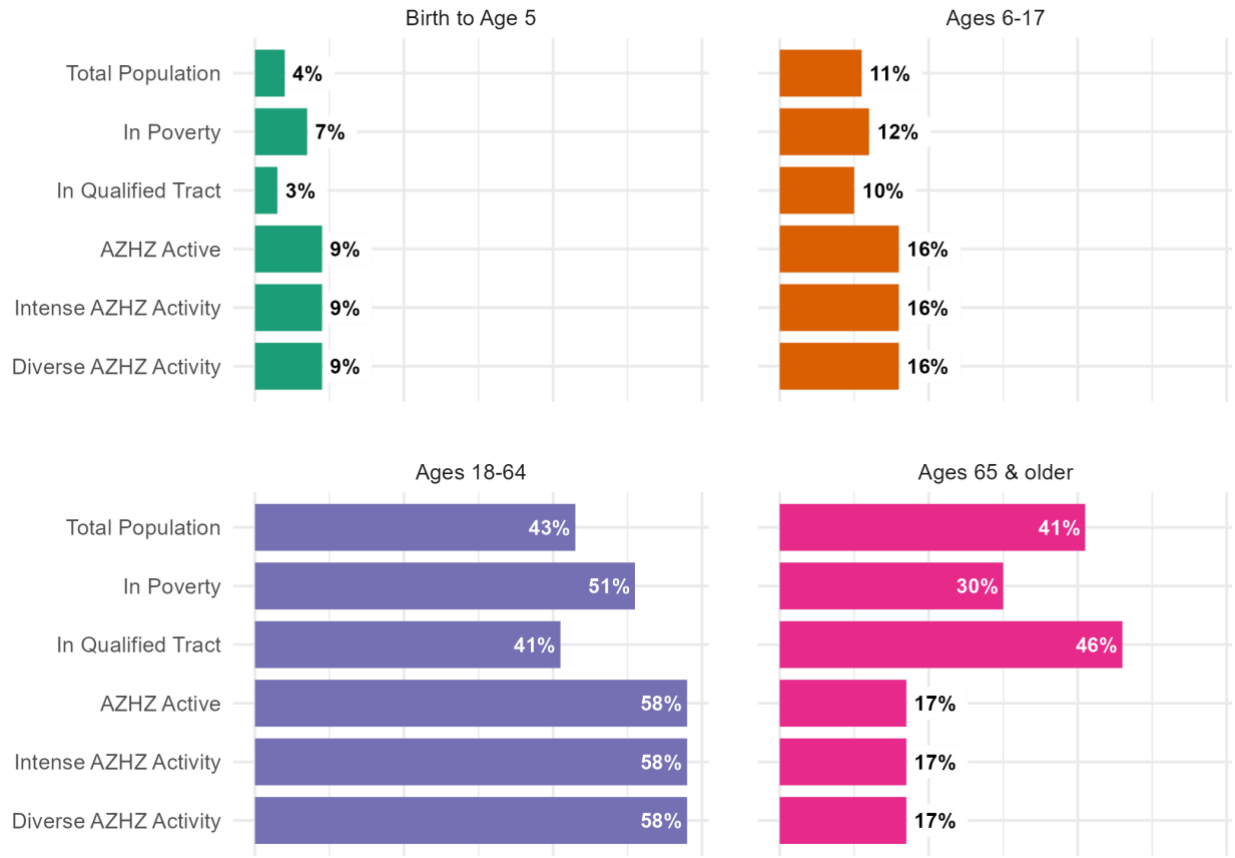
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 28. Comparison of populations by race and ethnicity, La Paz County

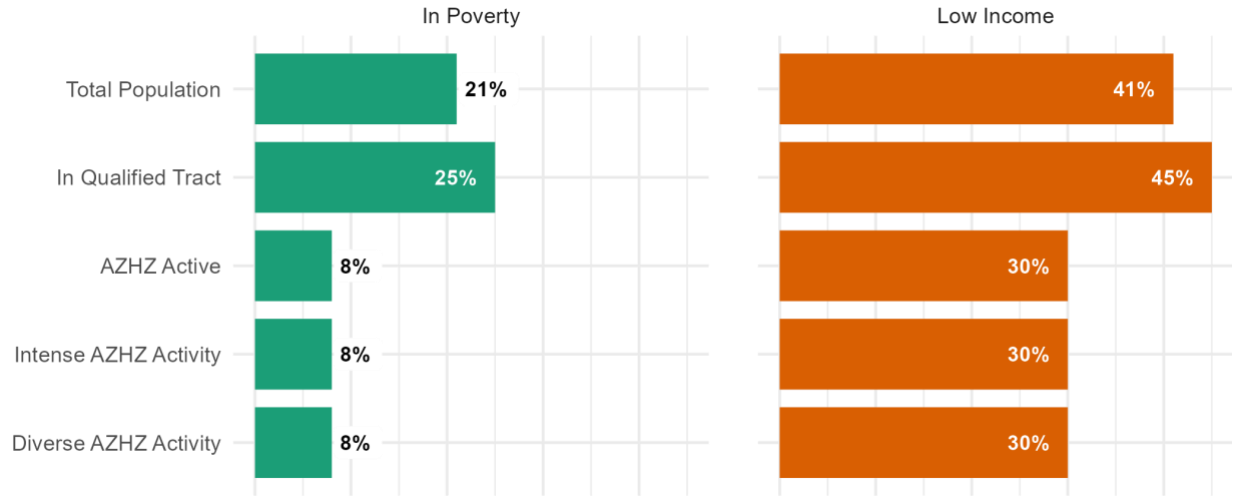
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 29. Comparison of populations by age group, La Paz County

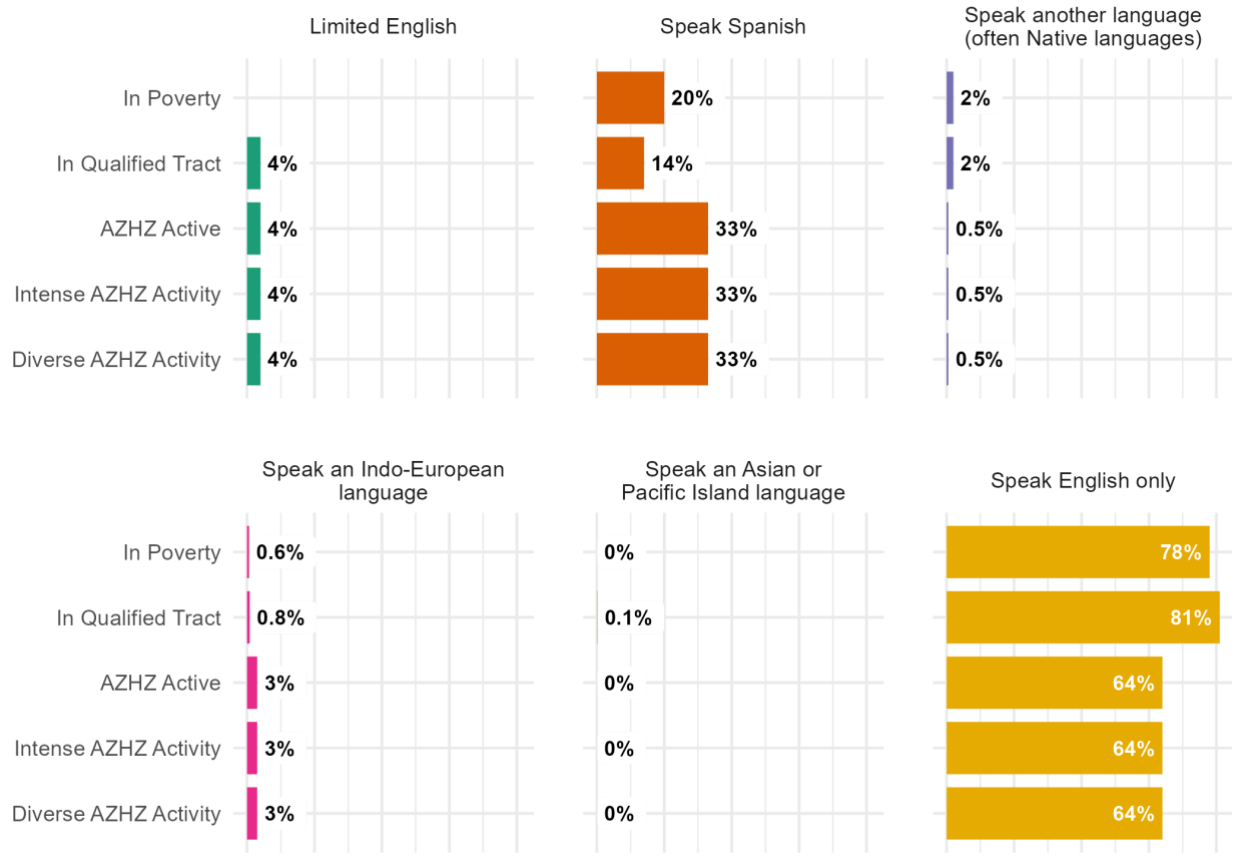
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 30. Comparison of populations by poverty and low-income rates, Greenlee County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 31. Comparison of populations by home language use and limited English status, La Paz County

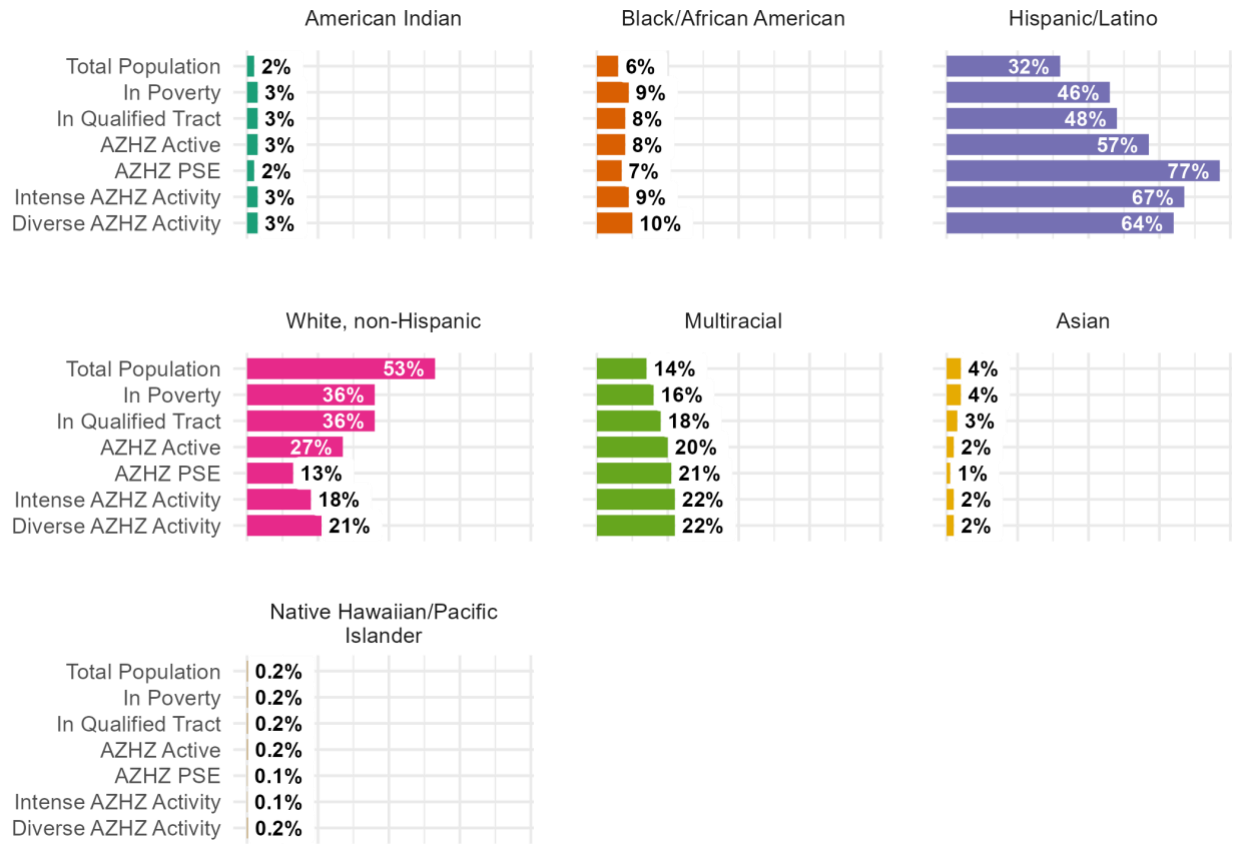
Maricopa County

Table 23. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Maricopa County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**379**	**38**	**1,631,276**	**37**
Overall Population Criteria	101	10	404,239	9
Young Child Criteria	281	28	1,225,044	28
School-age Child Criteria	266	26	1,147,795	26
CACFP Criteria	271	27	1,172,725	26
Adult Criteria	55	6	185,972	4
Senior Criteria	98	10	379,211	9

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

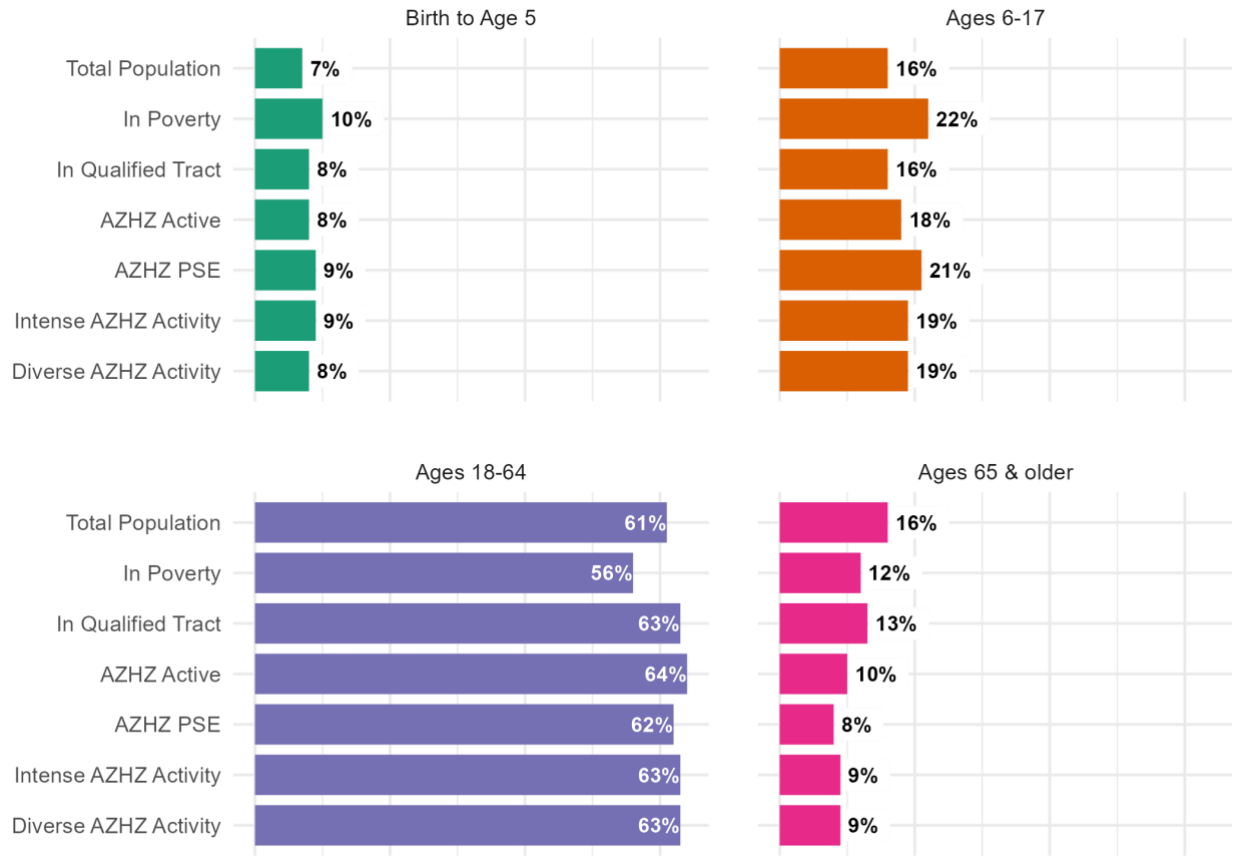
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 32. Comparison of populations by race and ethnicity, Maricopa County

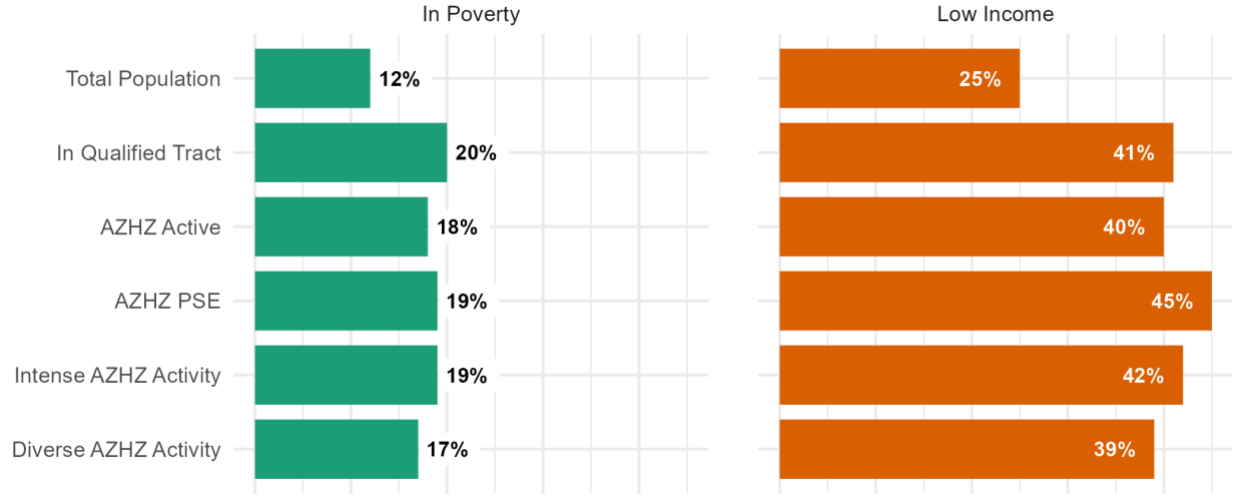
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 33. Comparison of populations by age group, Maricopa County

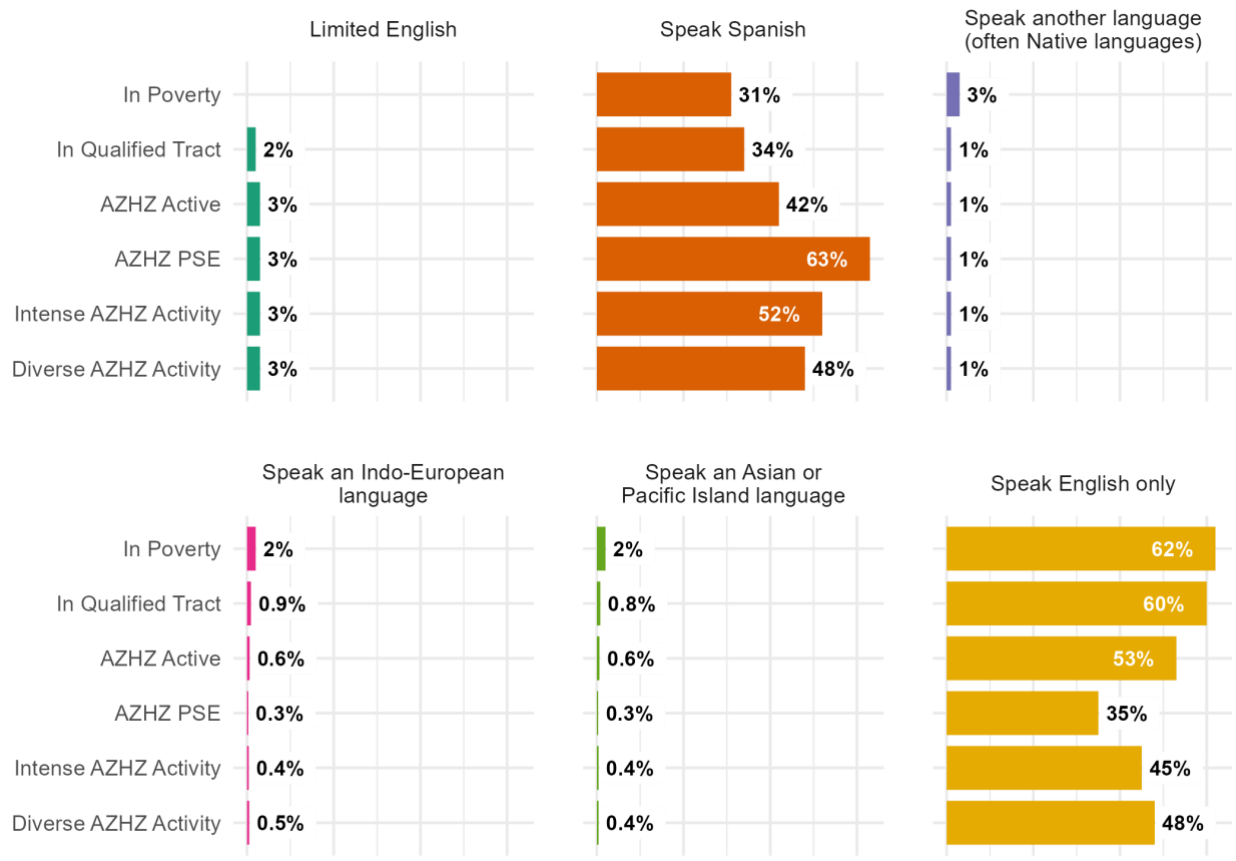
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 34. Comparison of populations by poverty and low-income rates, Maricopa County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 35. Comparison of populations by home language use and limited English status, Maricopa County

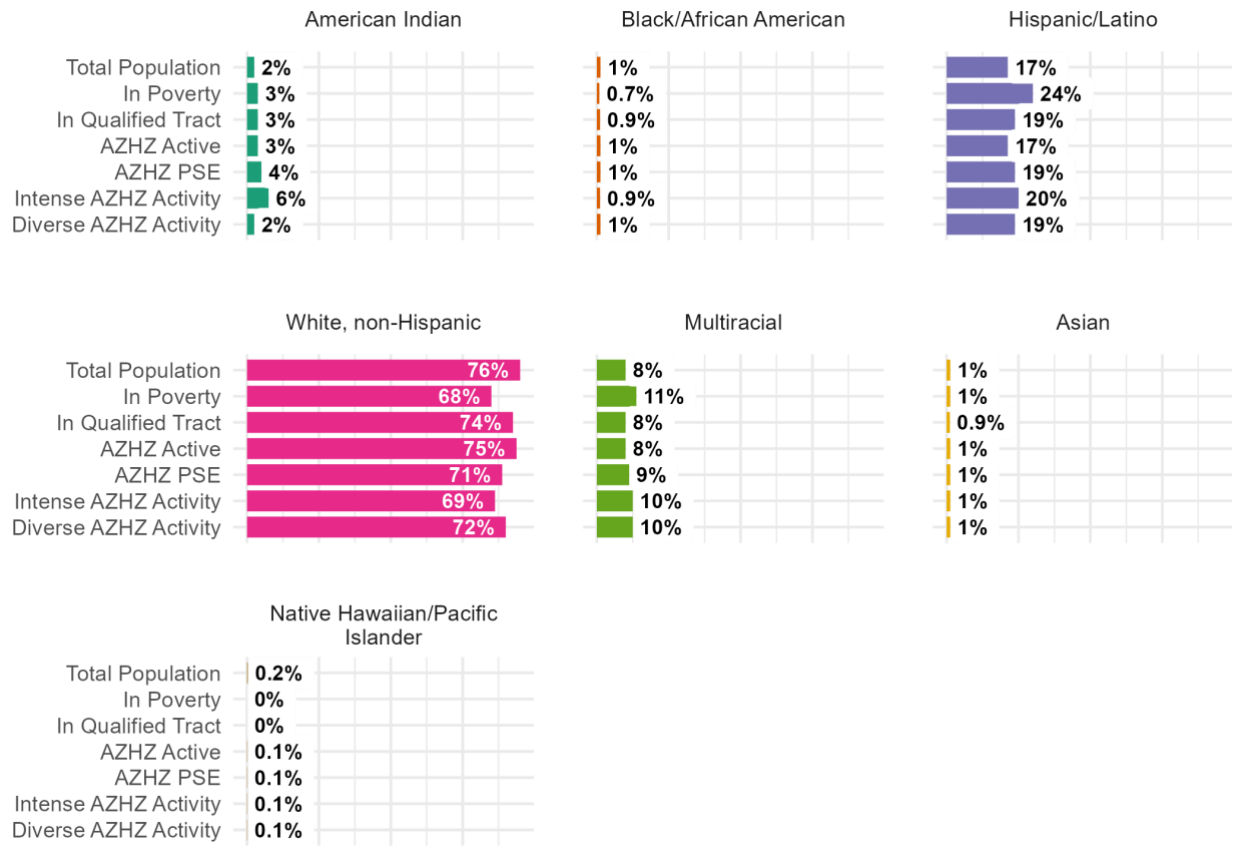
Mohave County

Table 24. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Mohave County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**42**	**64**	**136,561**	**64**
Overall Population Criteria	10	15	32,238	15
Young Child Criteria	33	50	109,996	51
School-age Child Criteria	29	44	93,204	44
CACFP Criteria	32	48	106,745	50
Adult Criteria	12	18	38,709	18
Senior Criteria	2	3	5,263	2

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

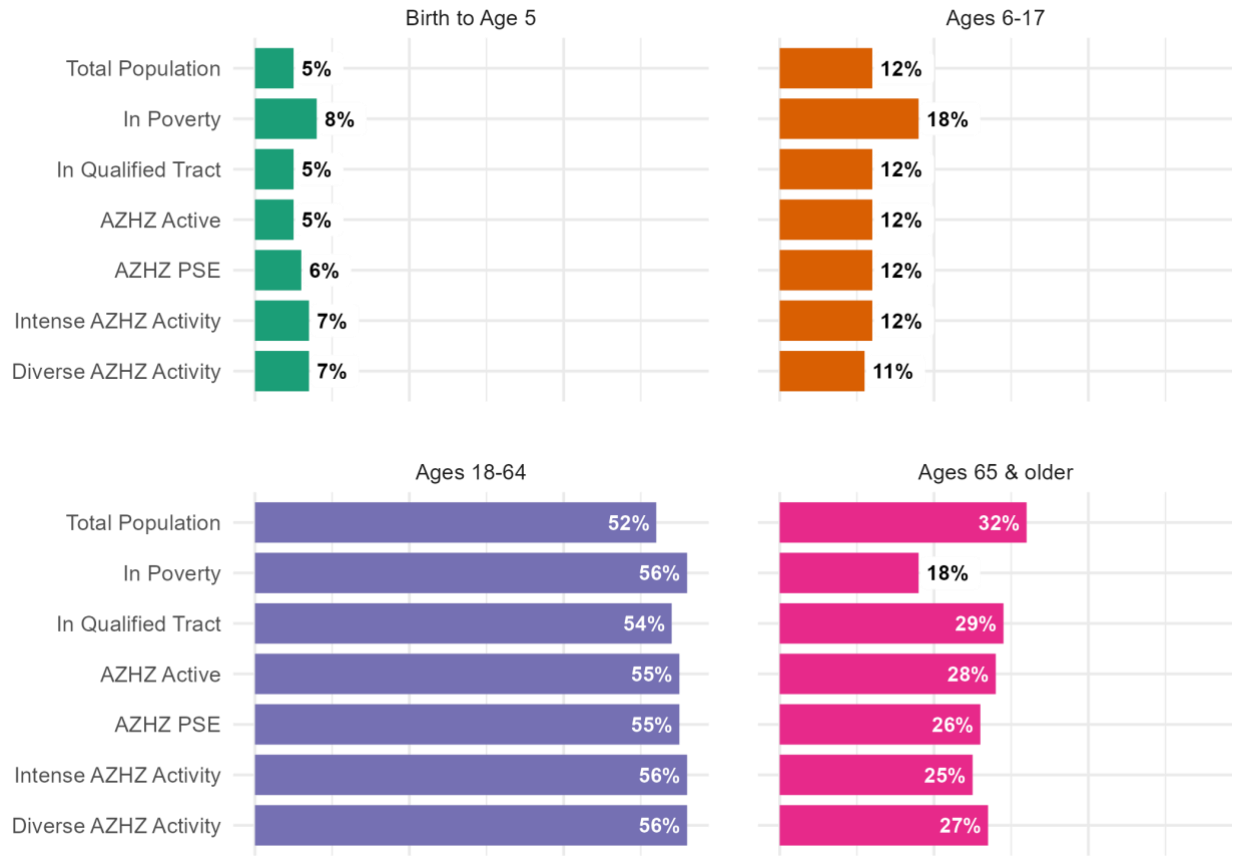
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 36. Comparison of populations by race and ethnicity, Mohave County

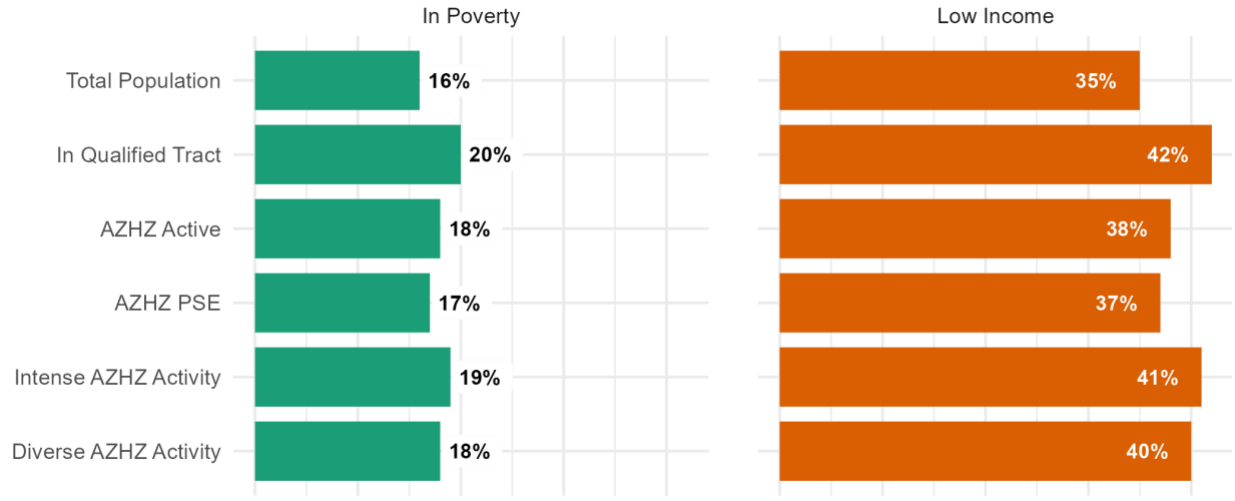
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 37. Comparison of populations by age group, Mohave County

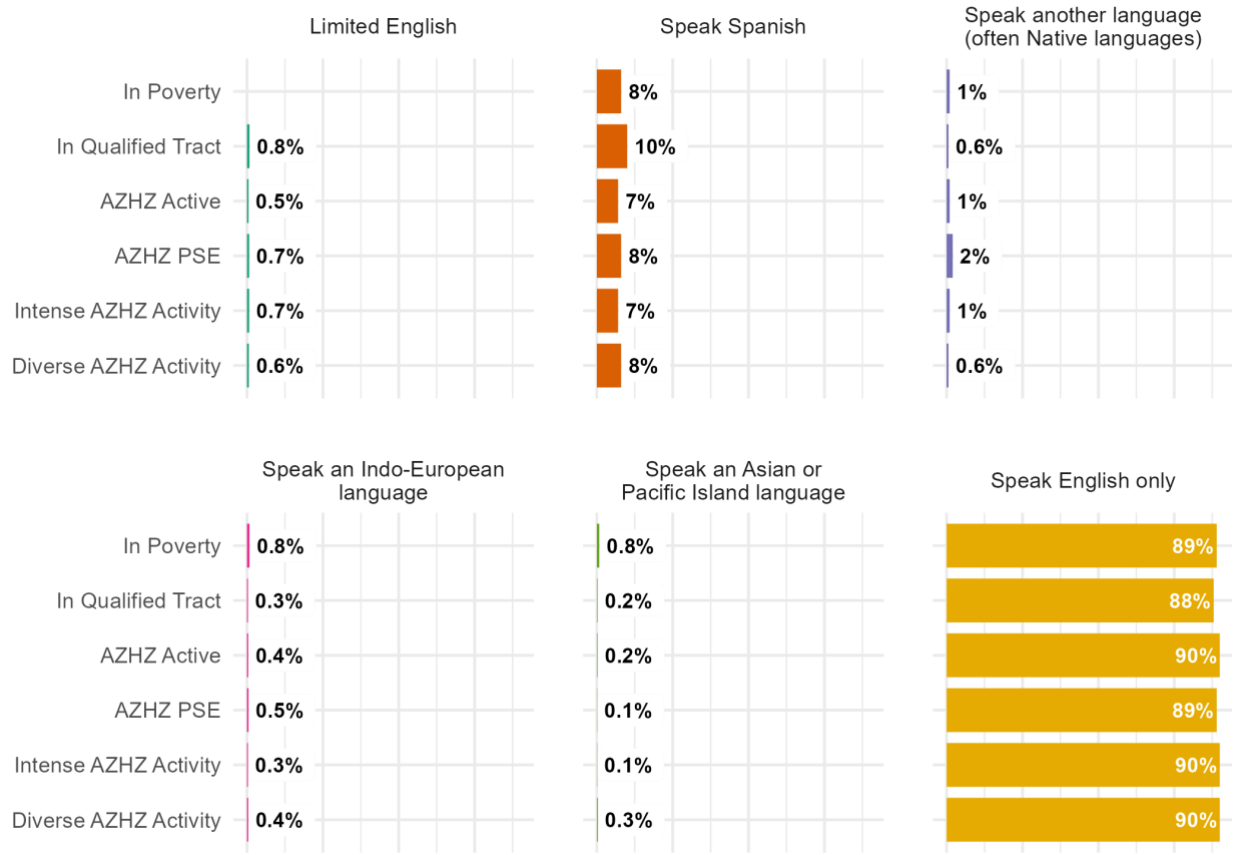
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 38. Comparison of populations by poverty and low-income rates, Mohave County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 39. Comparison of populations by home language use and limited English status, Mohave County

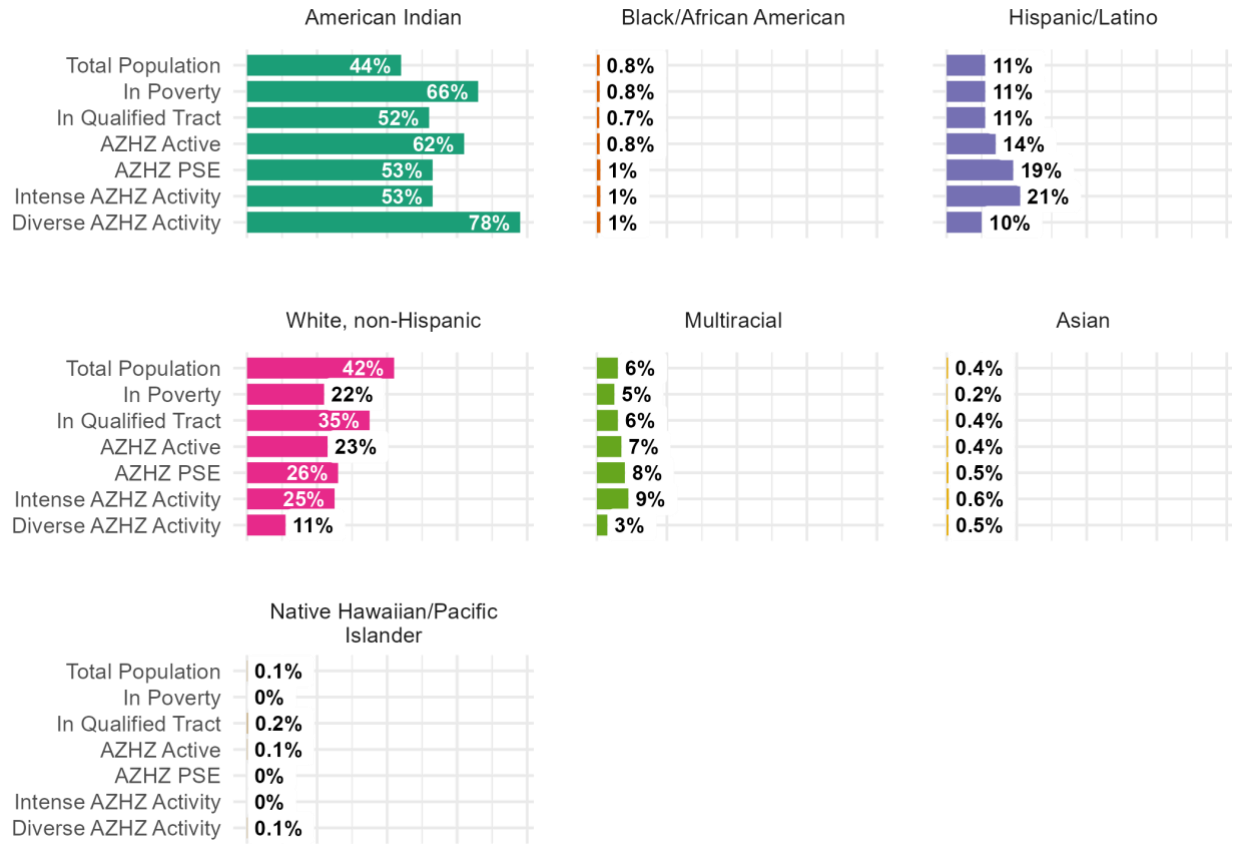
Navajo County

Table 25. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Navajo County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**28**	**76**	**85,690**	**80**
Overall Population Criteria	14	38	44,609	42
Young Child Criteria	23	62	68,348	64
School-age Child Criteria	22	60	68,136	64
CACFP Criteria	24	65	70,831	66
Adult Criteria	11	30	32,842	31
Senior Criteria	13	35	41,798	39

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

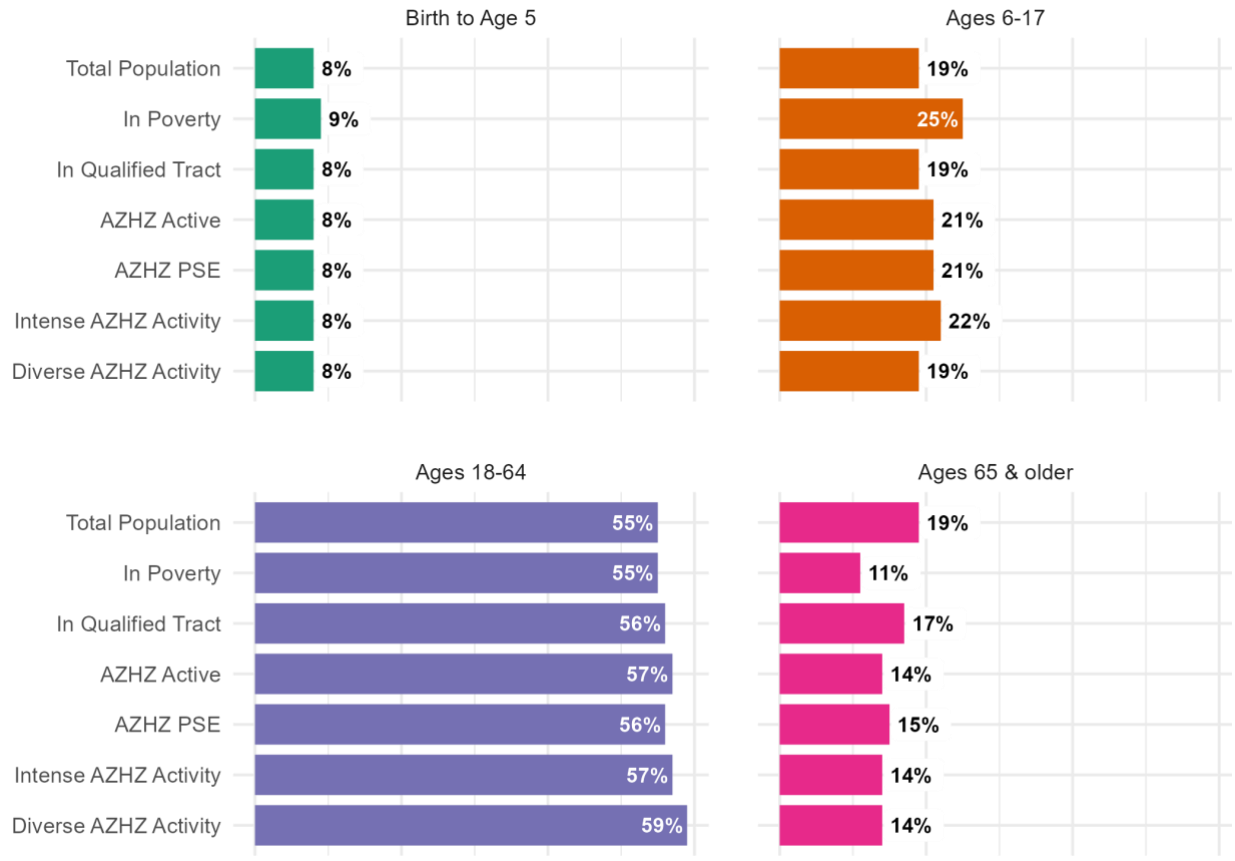
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 40. Comparison of populations by race and ethnicity, Navajo County

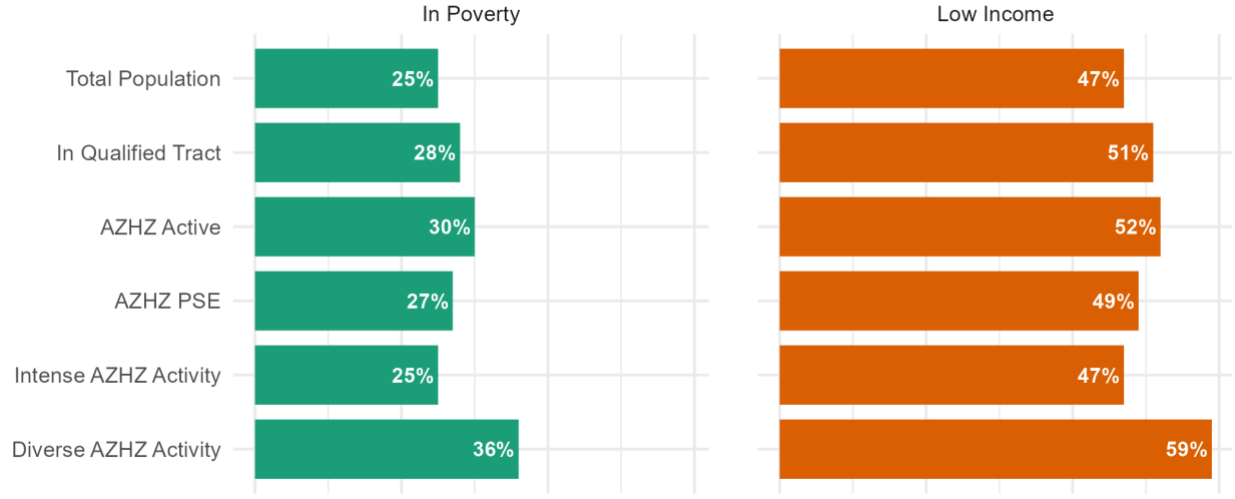
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 41. Comparison of populations by age group, Navajo County

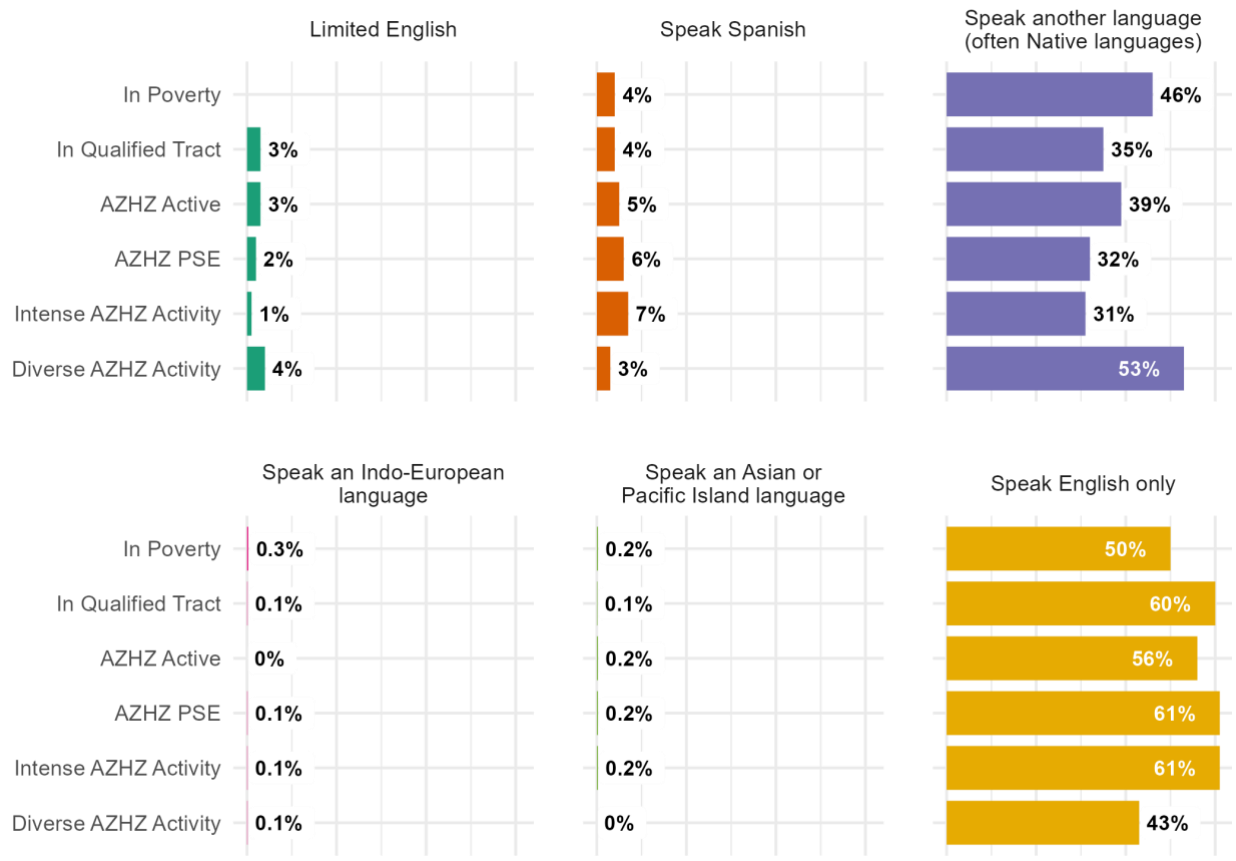
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 42. Comparison of populations by poverty and low-income rates, Navajo County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 43. Comparison of populations by home language use and limited English status, Navajo County

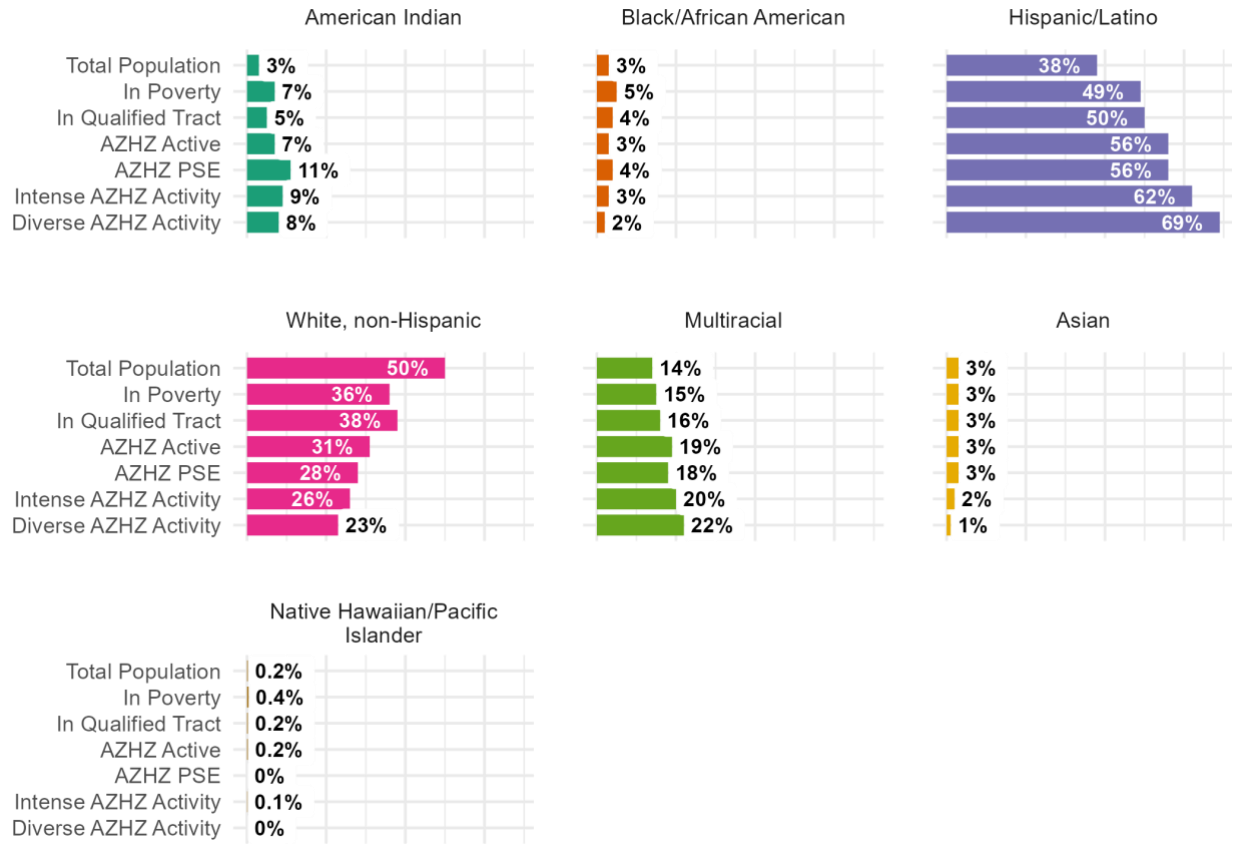
Pima County

Table 26. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Pima County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**138**	**51**	**545,887**	**52**
Overall Population Criteria	52	19	204,961	20
Young Child Criteria	108	40	435,391	42
School-age Child Criteria	93	34	376,230	36
CACFP Criteria	98	36	406,873	39
Adult Criteria	43	16	167,788	16
Senior Criteria	29	11	128,511	12

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

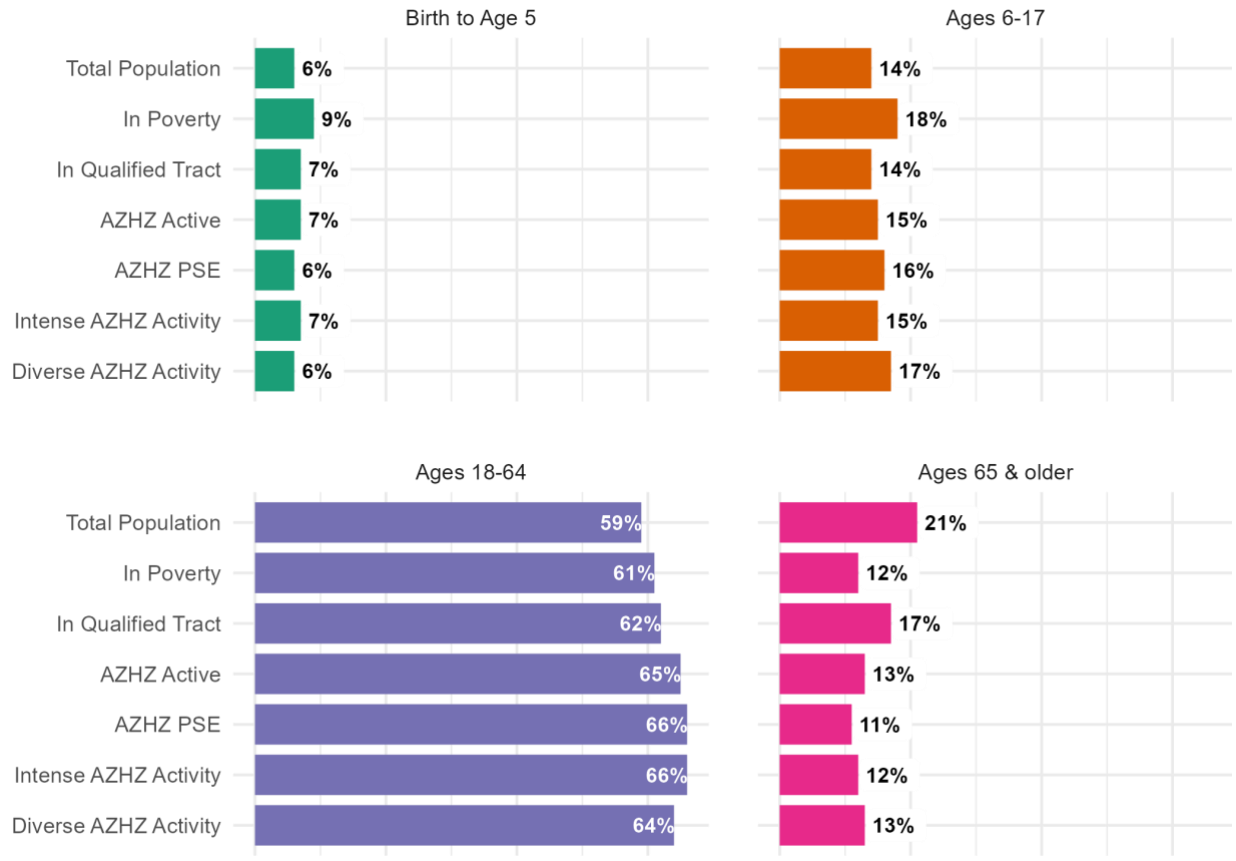
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 44. Comparison of populations by race and ethnicity, Pima County

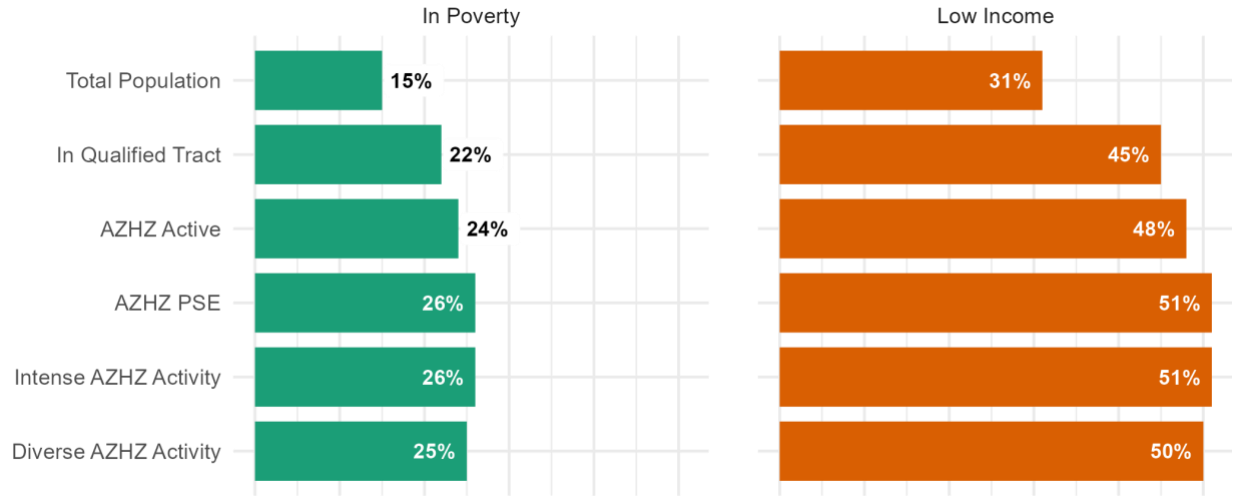
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 45. Comparison of populations by age group, Pima County

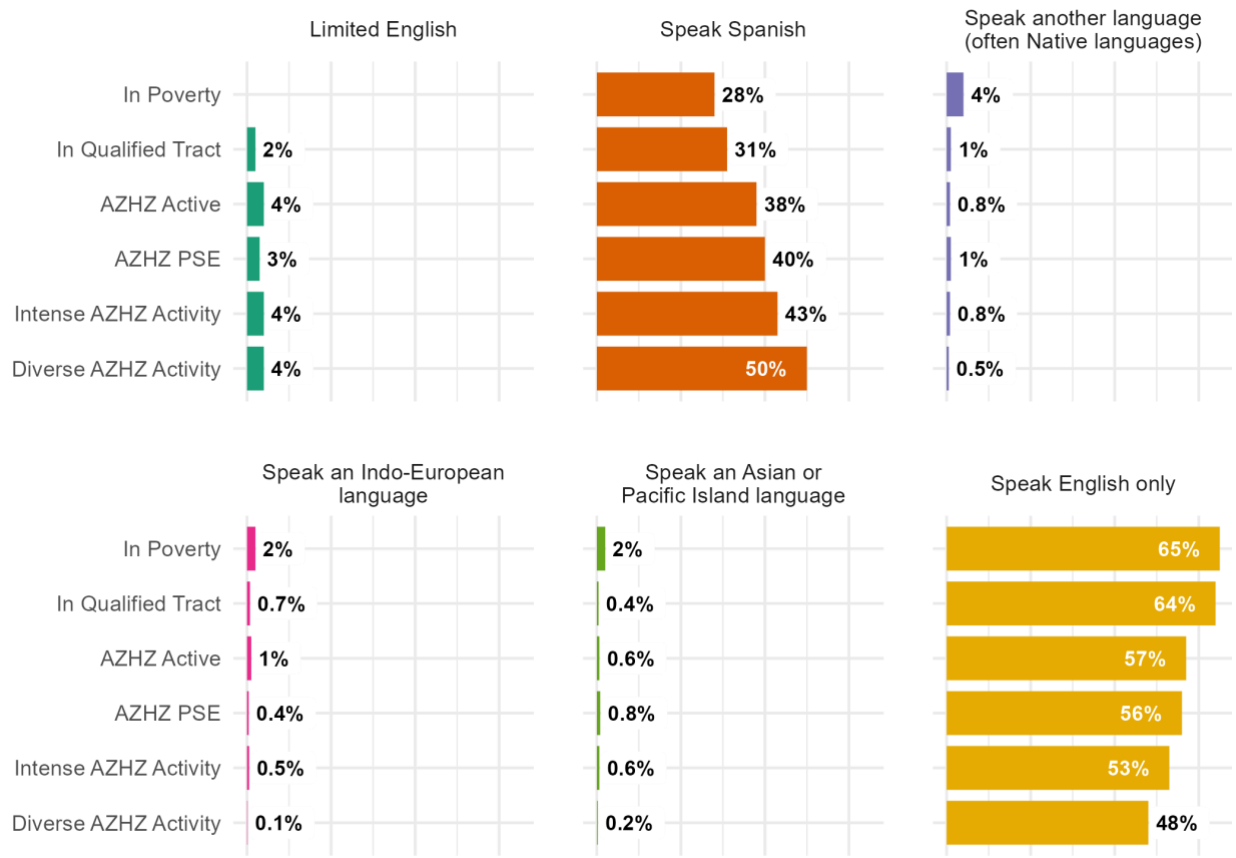
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 46. Comparison of populations by poverty and low-income rates, Pima County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 47. Comparison of populations by home language use and limited English status, Pima County

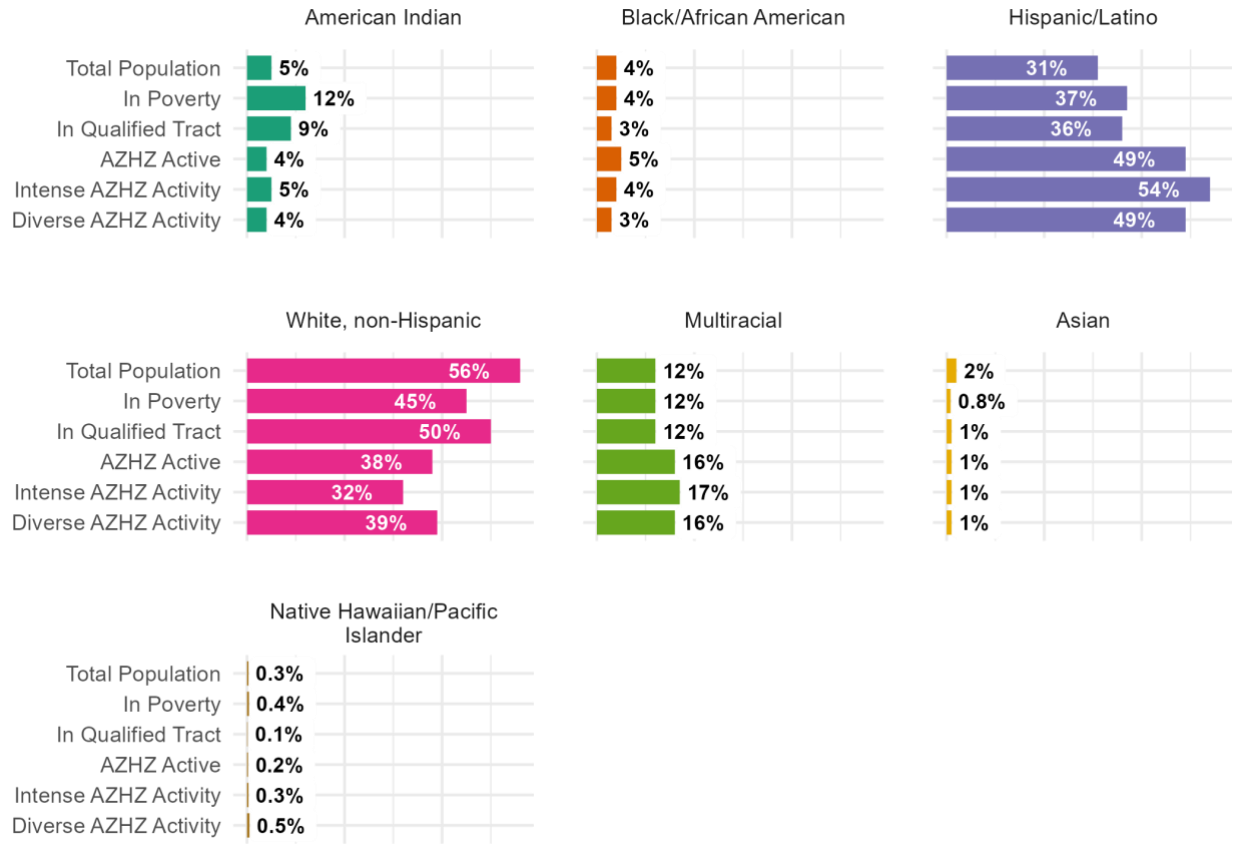
Pinal County

Table 27. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Pinal County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**44**	**46**	**178,129**	**41**
Overall Population Criteria	6	6	25,381	6
Young Child Criteria	36	38	151,349	35
School-age Child Criteria	24	25	100,695	23
CACFP Criteria	35	37	143,542	33
Adult Criteria	6	6	23,660	6
Senior Criteria	4	4	9,464	2

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

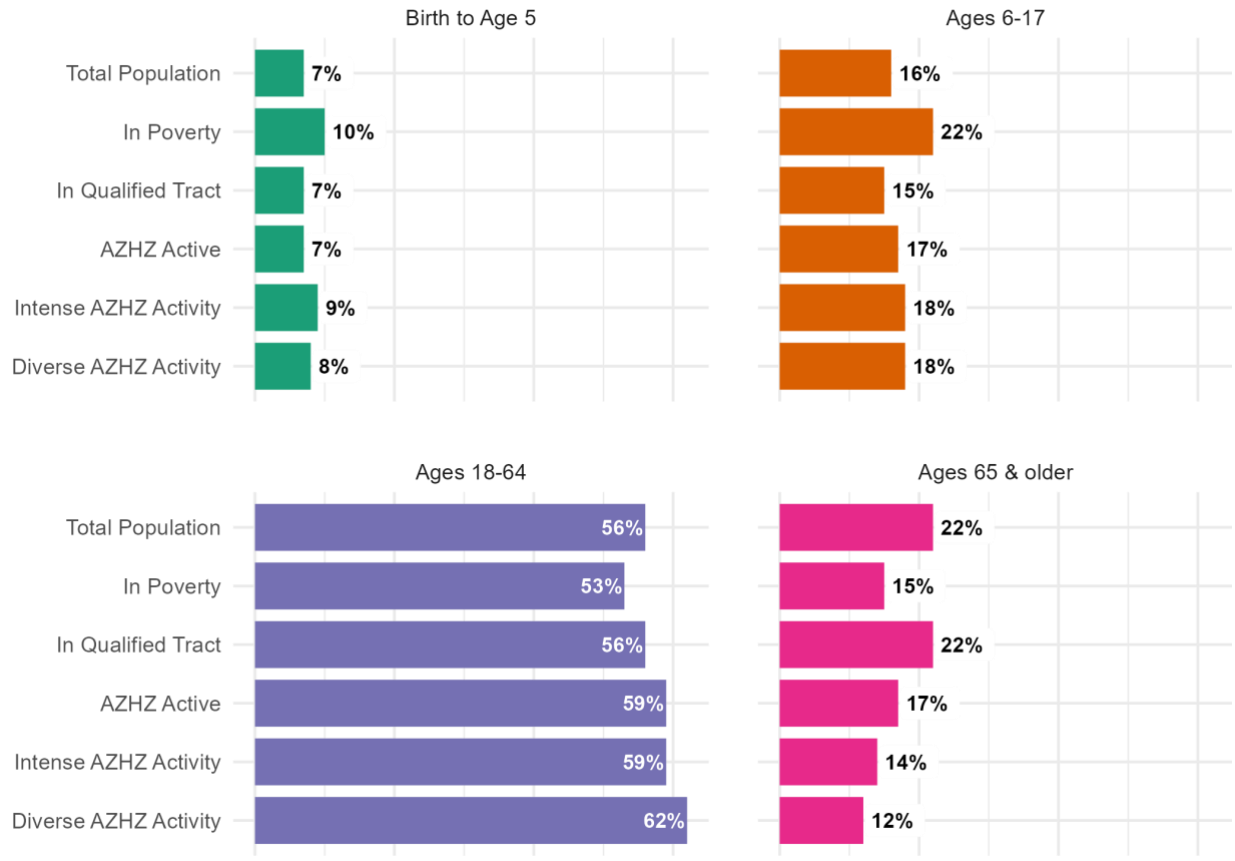
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 48. Comparison of populations by race and ethnicity, Pinal County

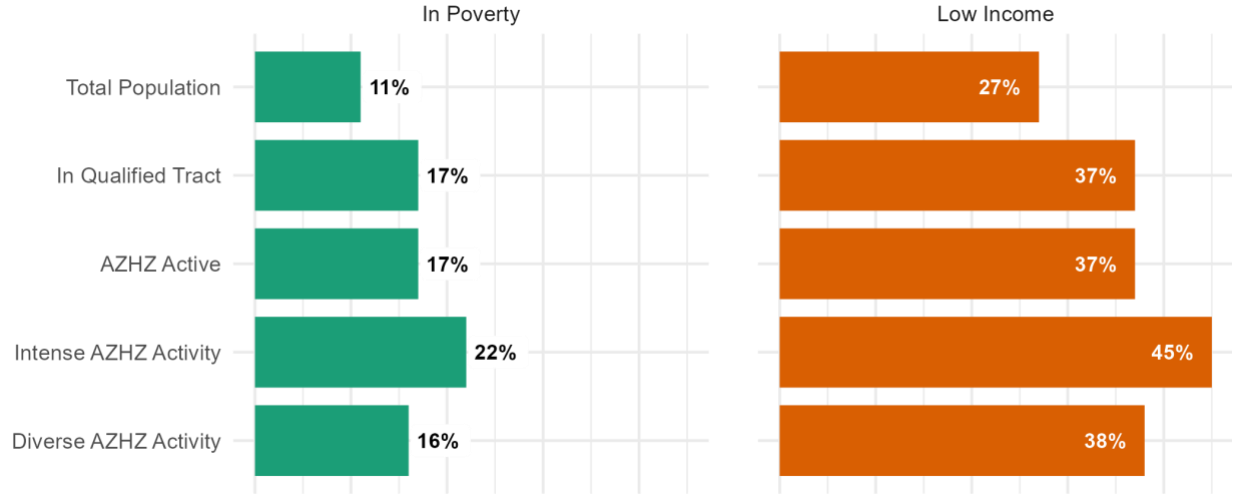
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 49. Comparison of populations by age group, Pinal County

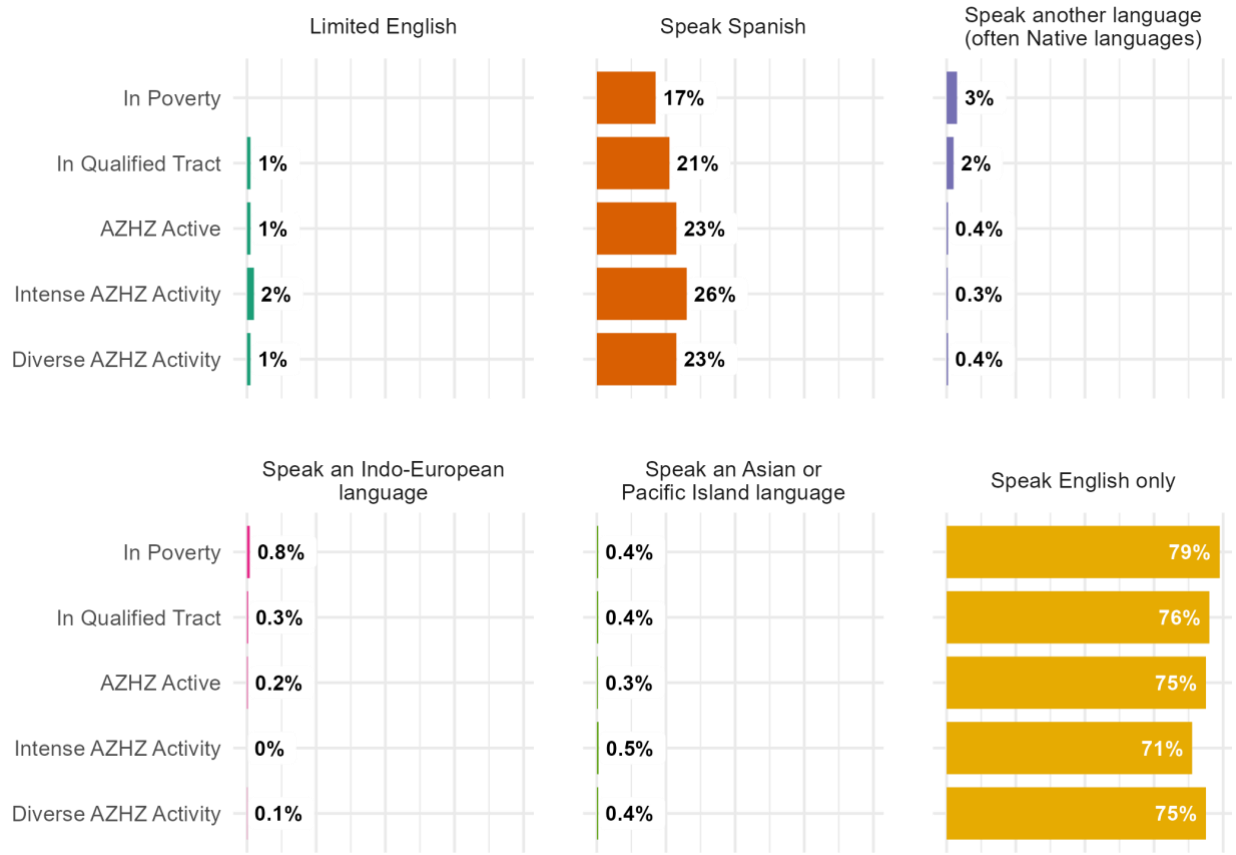
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 50. Comparison of populations by poverty and low-income rates, Navajo County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 51. Comparison of populations by home language use and limited English status, Pinal County

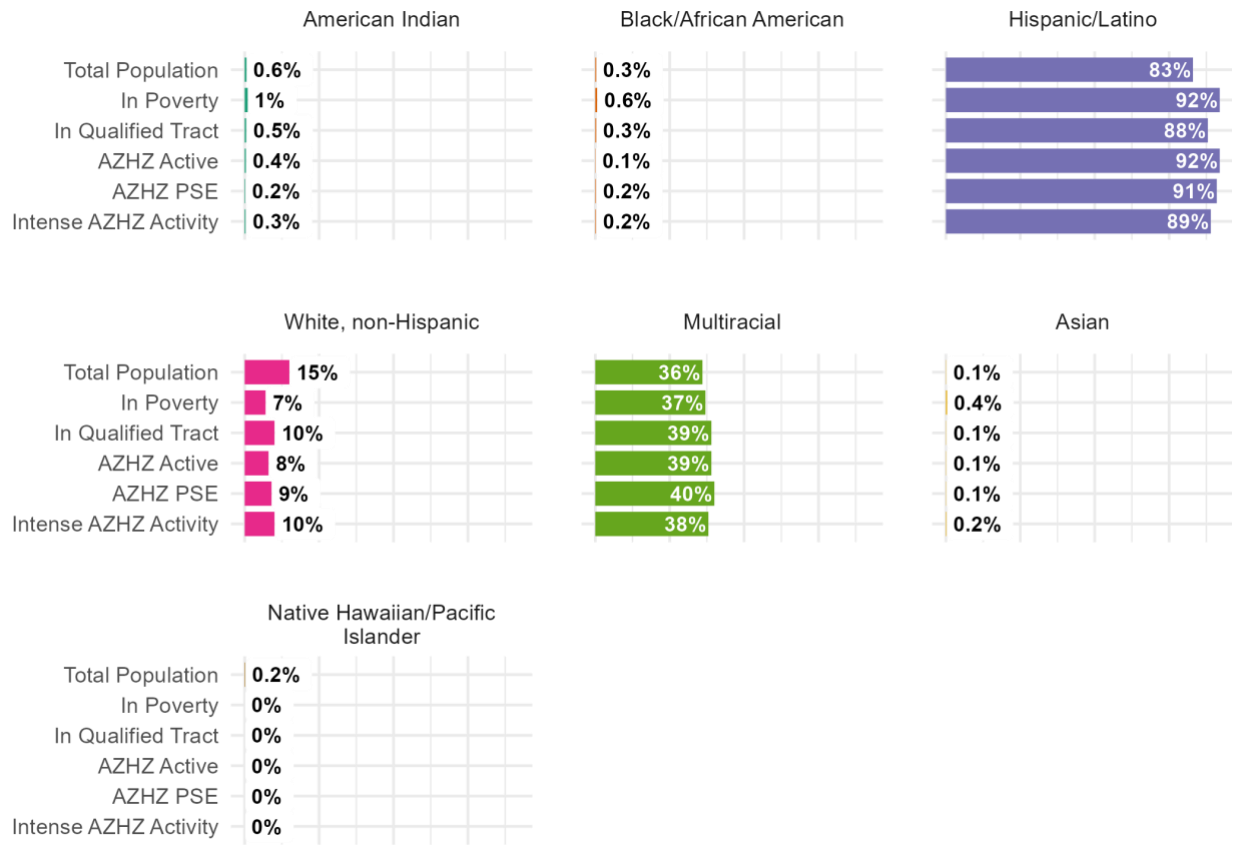
Santa Cruz County

Table 28. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Santa Cruz County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**10**	**71**	**34,837**	**73**
Overall Population Criteria	5	36	16,265	34
Young Child Criteria	8	57	28,432	59
School-age Child Criteria	8	57	27,810	58
CACFP Criteria	7	50	23,479	49
Adult Criteria	4	29	14,318	30
Senior Criteria	4	29	12,005	25

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

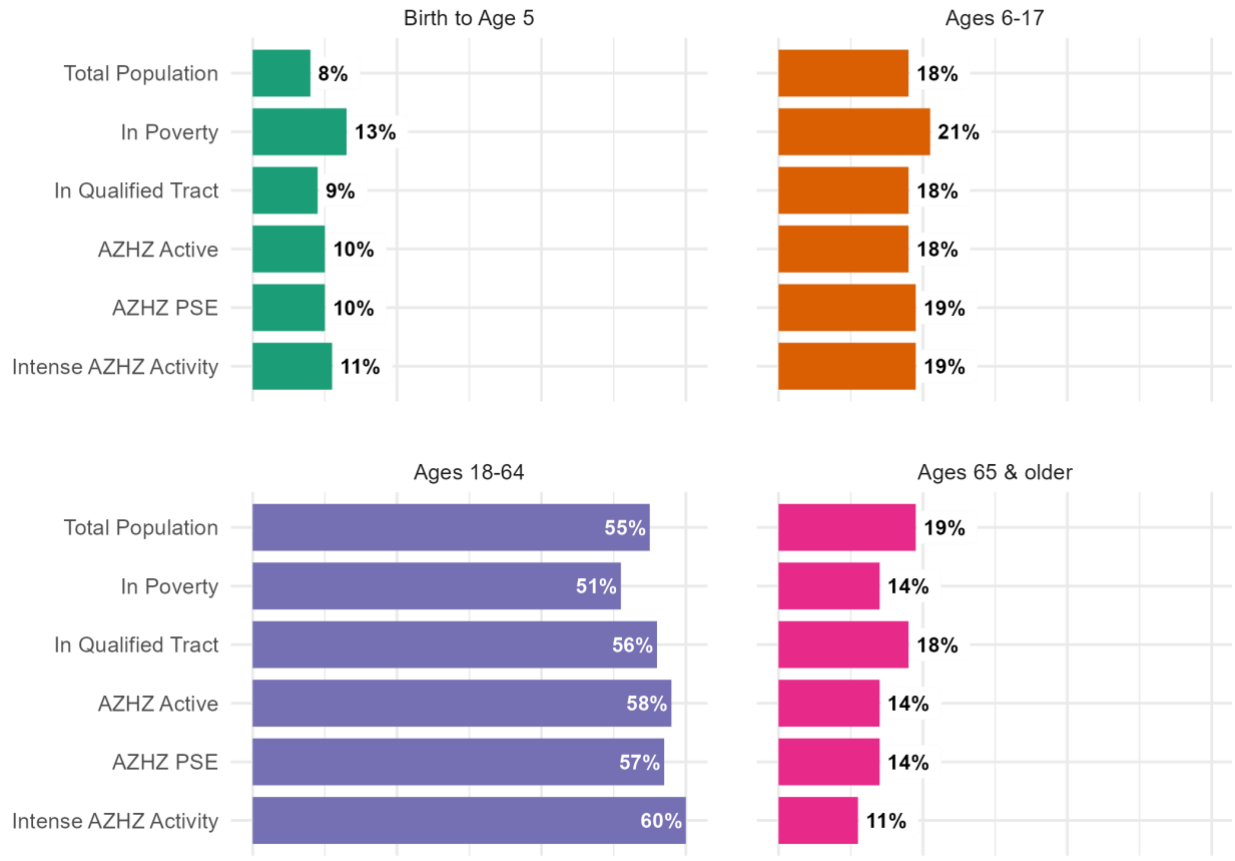
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 52. Comparison of populations by race and ethnicity, Santa Cruz County

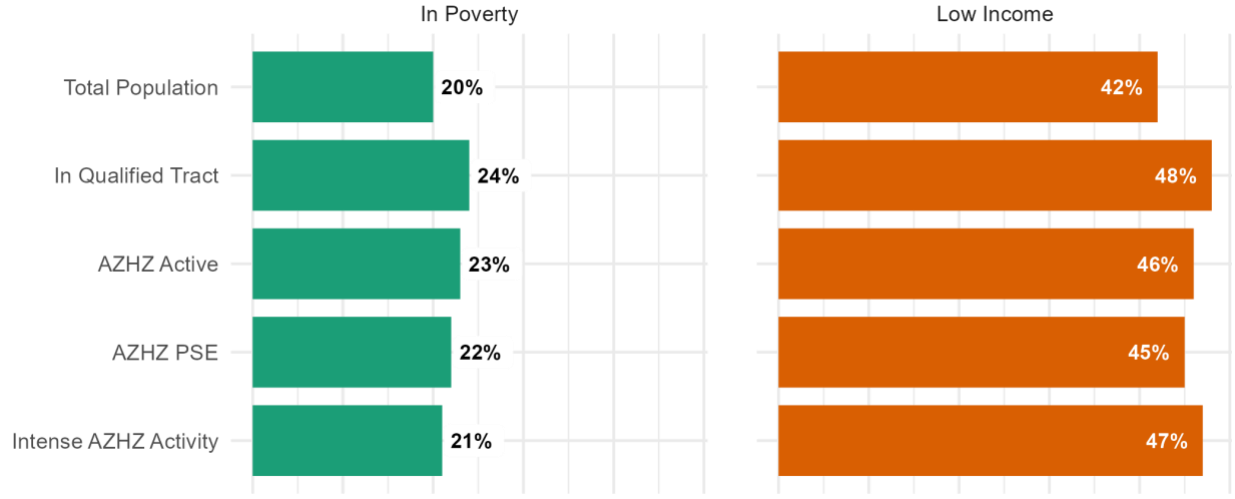
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 53. Comparison of populations by age group, Santa Cruz County

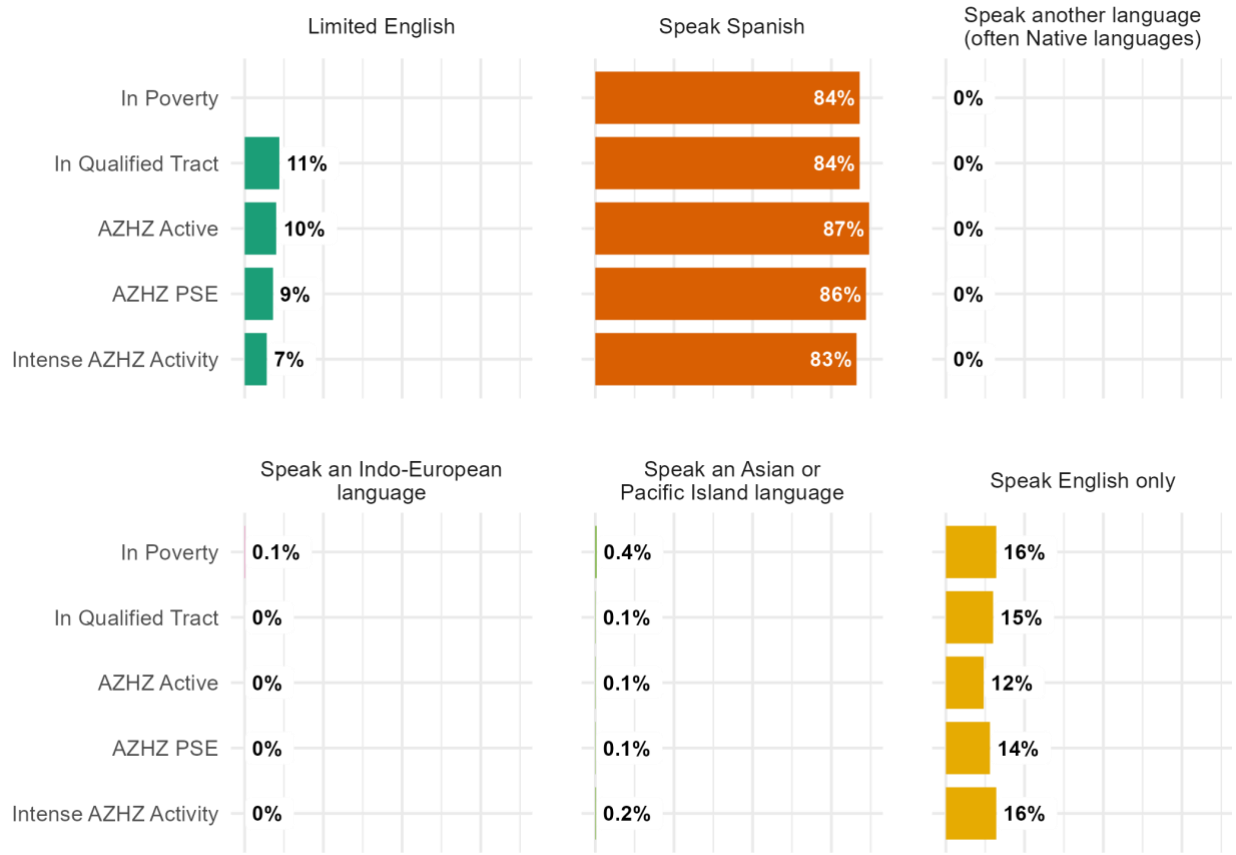
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 54. Comparison of populations by poverty and low-income rates, Santa Cruz County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 55. Comparison of populations by home language use and limited English status, Pinal County

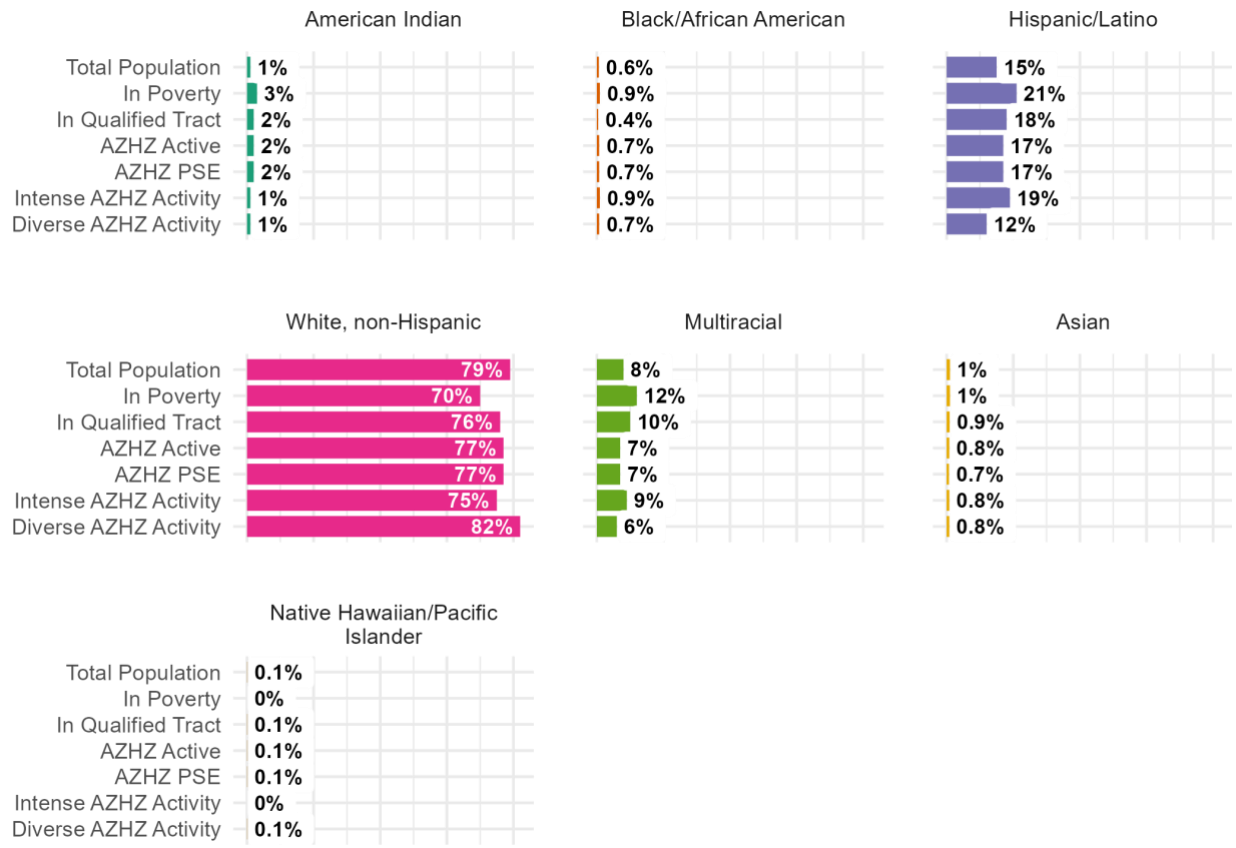
Yavapai County

Table 29. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Yavapai County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**38**	**53**	**124,907**	**52**
Overall Population Criteria	3	4	5,357	2
Young Child Criteria	26	36	91,081	38
School-age Child Criteria	19	26	58,222	24
CACFP Criteria	22	31	73,205	31
Adult Criteria	4	6	8,141	3
Senior Criteria	3	4	13,192	6

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

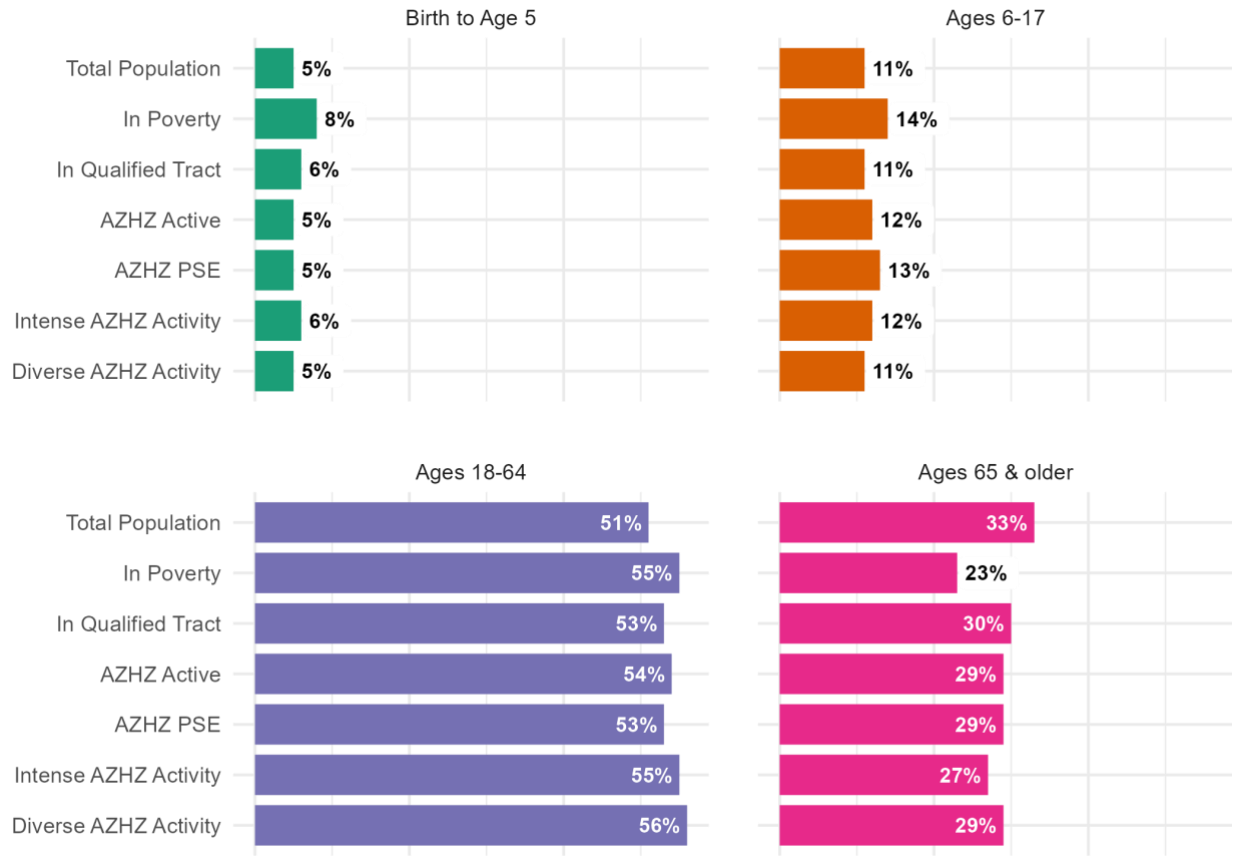
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 56. Comparison of populations by race and ethnicity, Pinal County

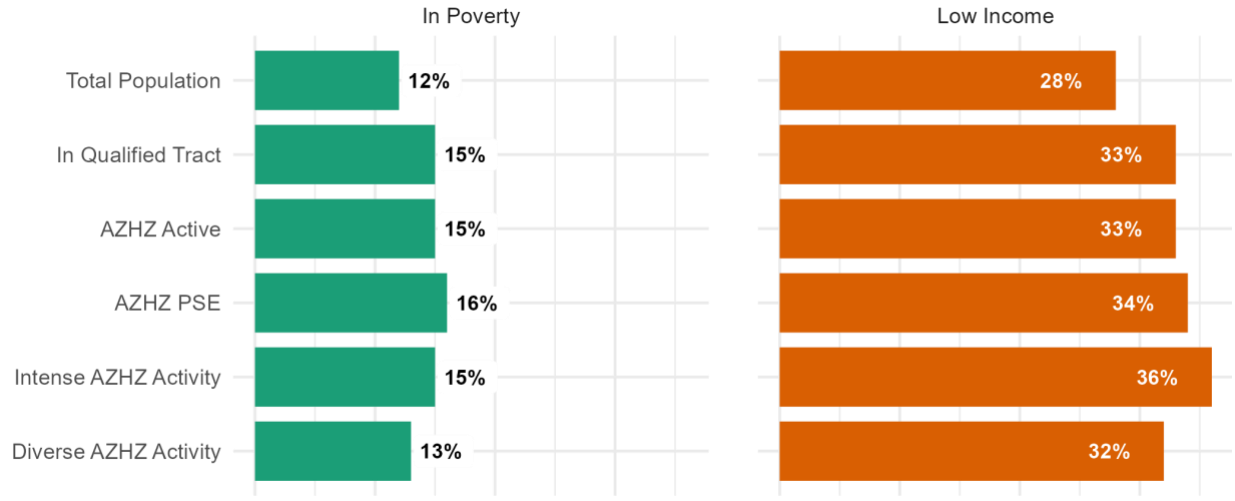
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 57. Comparison of populations by age group, Pinal County

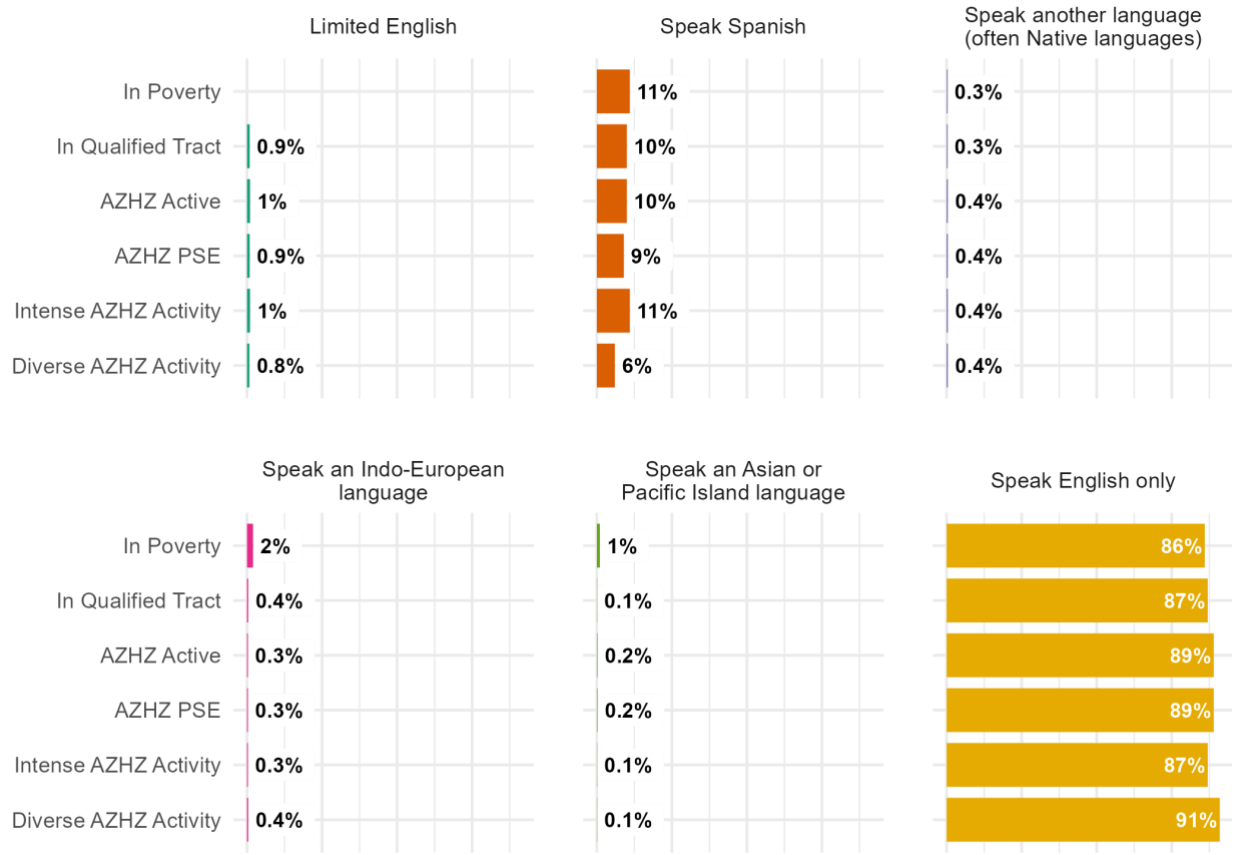
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 58. Comparison of populations by poverty and low-income rates, Navajo County

Home Language Use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 59. Comparison of populations by home language use and limited English status, Pinal County

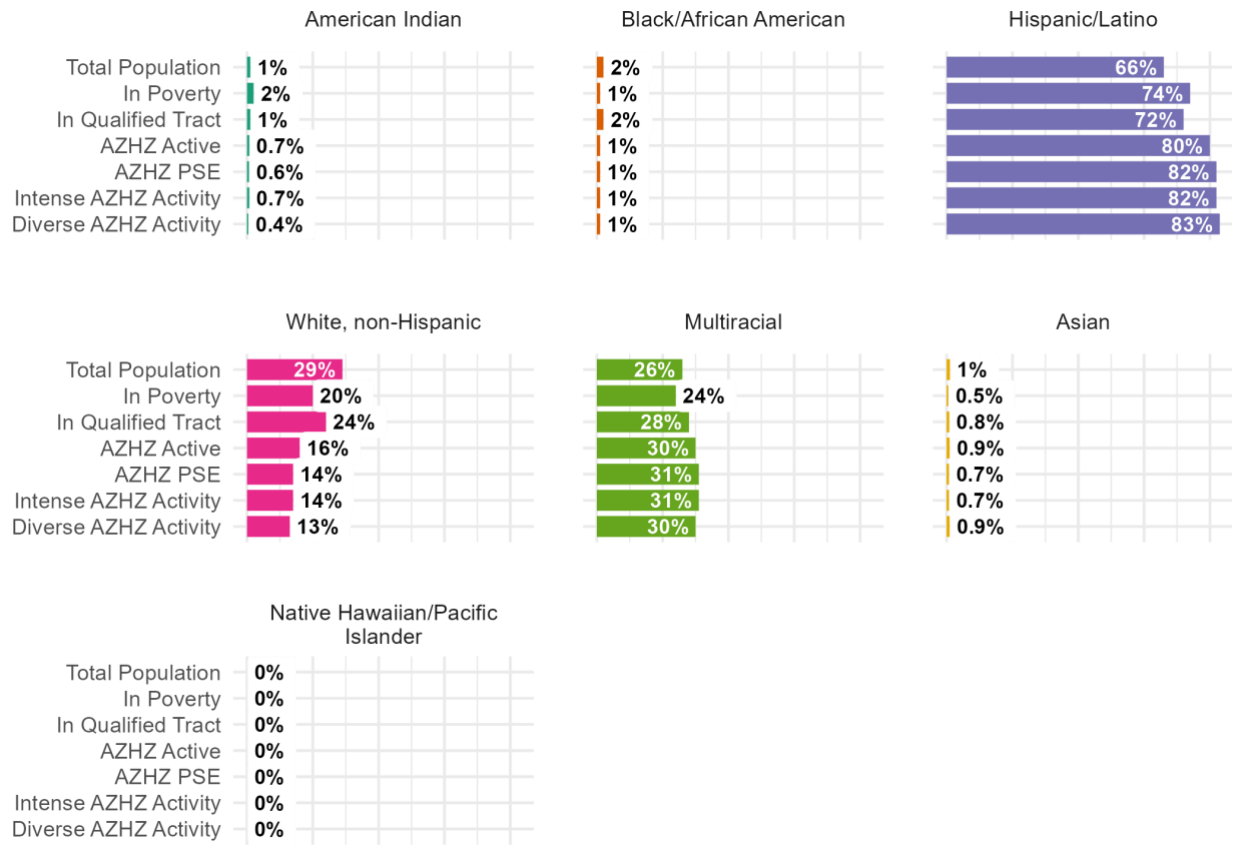
Yuma County

Table 30. Tracts qualifying for AZ Health Zone based on community low-income prevalence, Yuma County

Qualification	Tracts		Total Population	
	#	%	#	%
Meets Any Criteria	**49**	**73**	**158,161**	**77**
Overall Population Criteria	15	22	60,192	30
Young Child Criteria	31	46	106,713	52
School-age Child Criteria	31	46	110,500	54
CACFP Criteria	34	51	120,457	59
Adult Criteria	12	18	47,382	23
Senior Criteria	15	22	57,909	28

Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17024.

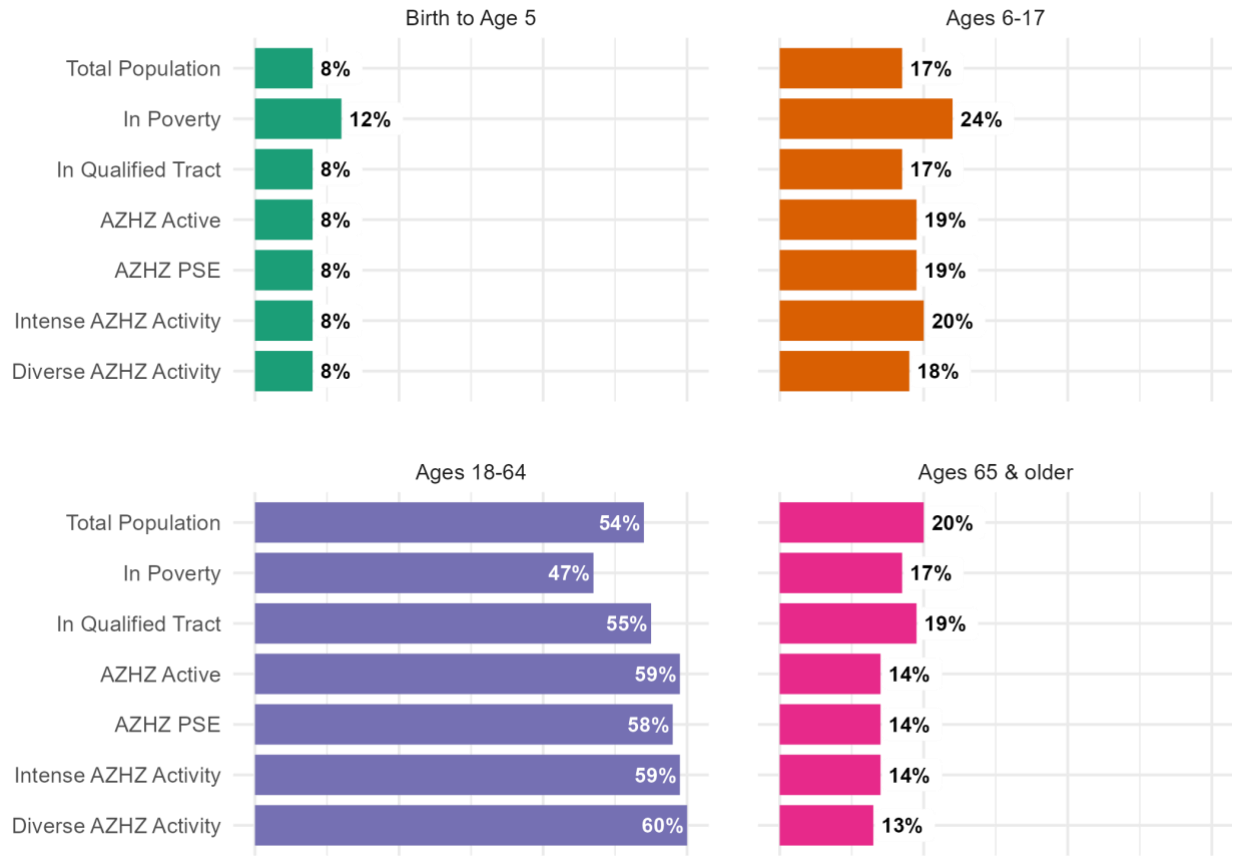
Race & Ethnicity



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 60. Comparison of populations by race and ethnicity, Pinal County

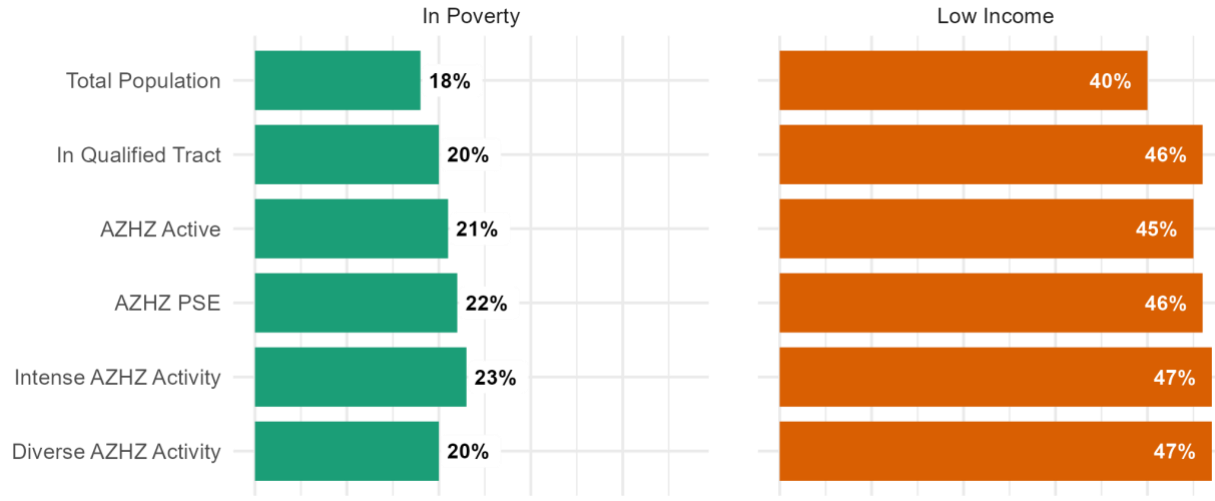
Age Groups



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 61. Comparison of populations by age group, Pinal County

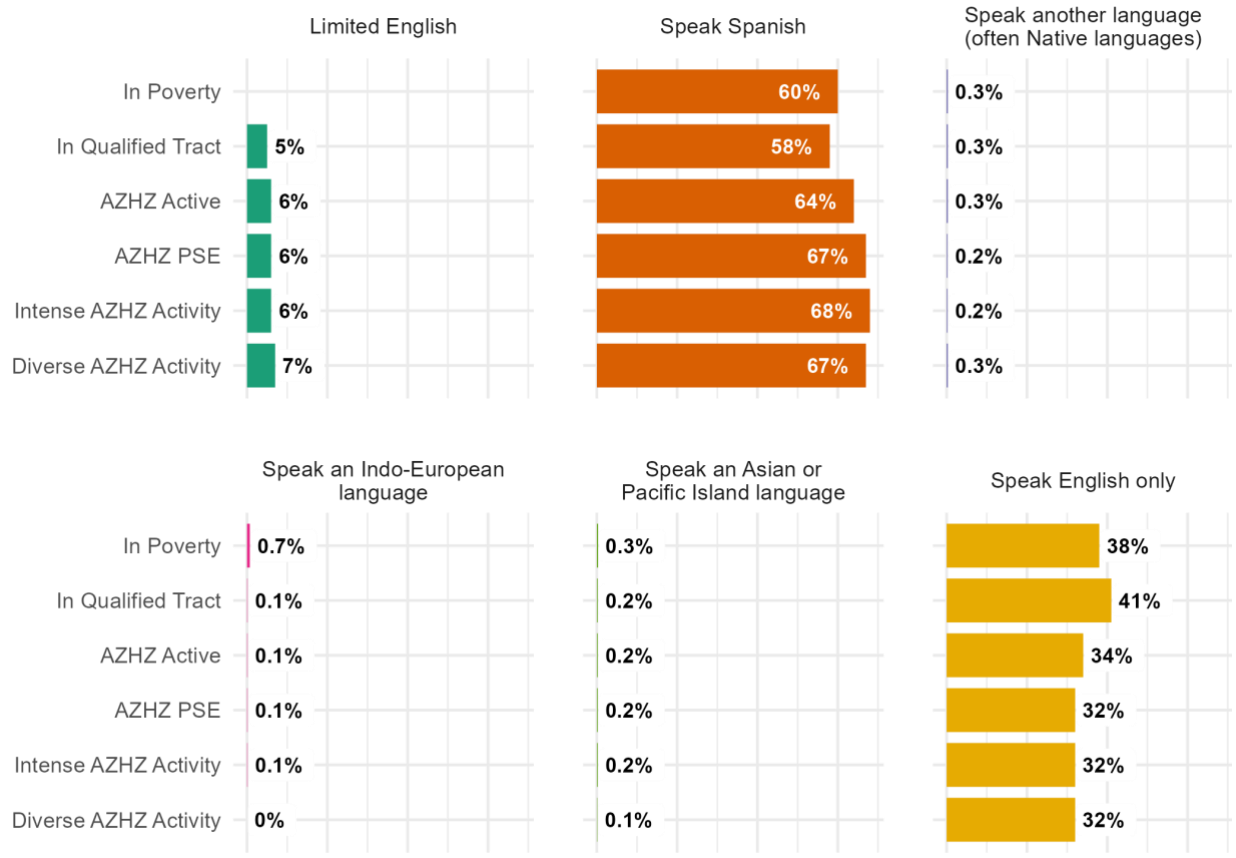
Poverty and Low-Income Rates



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 62. Comparison of populations by poverty and low-income rates, Navajo County

Home language use



Source: U.S. Census Bureau (2023). 2022 American Community Survey 5-Year estimates, Tables B17001A-H.

Figure 63. Comparison of populations by home language use and limited English status, Pinal County