FIRST THINGS FIRST

Coconino

2018 NEEDS AND ASSETS REPORT

COCONINO
REGIONAL PARTNERSHIP COUNCIL
2018
NEEDS AND ASSETS REPORT

Prepared by

Community Research, Evaluation, and Development (CRED)

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College of Agriculture and Life Sciences

University of Arizona

Funded by

First Things First Coconino Regional Partnership Council

LETTER FROM THE CHAIR

January 26, 2018

Message from the Chair:

Since the inception of First Things First, the Coconino Regional Partnership Council has taken great pride in supporting evidence-based and evidence-informed early childhood programs that are improving outcomes for young children. Through both programmatic and other systems-building approaches, the early childhood programs and services supported by the regional council have strengthened families, improved the quality of early learning, and enhanced the health and well-being of children birth to 5 years old in our community.

This impact would not have been possible without data to guide our discussions and decisions. One of the primary sources of that data is our regional Needs and Assets report, which provides us with information about the status of families and young children in our community, identifies the needs of young children, and details the supports available to meet those needs. Along with feedback from families and early childhood stakeholders, the report helps us to prioritize the needs of young children in our area and determine how to leverage First Things First resources to improve outcomes for young children in our communities.

The Coconino Regional Council would like to thank our Needs and Assets vendor, the Community Research, Evaluation, and Development Team at the University of Arizona Norton School, for their knowledge, expertise and analysis of the Coconino region. Their partnership has been crucial to our development of this report and to our understanding of the extensive information contained within these pages.

As we move forward, the First Things First Coconino Regional Partnership Council remains committed to helping more children in our community arrive at kindergarten prepared to be successful by funding high-quality early childhood services, collaborating with system partners to maximize resources, and continuing to build awareness across all sectors on the importance of the early years to the success of our children, our communities and our state.

Thanks to our dedicated staff, volunteers and community partners, First Things First has made significant progress toward our vision that all children in Arizona arrive at kindergarten healthy and ready to succeed.

Thank you for your continued support.

Sincerely,

Coconino, Chair

Coconino Regional Partnership Council

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Introductory Summary and Acknowledgments

90 percent of a child's brain develops before kindergarten and the quality of a child's early experiences impact whether their brain will develop in positive ways that promote learning. Understanding the critical role the early years play in a child's future success is crucial to our ability to foster each child's optimal development and, in turn, impact all aspects of wellbeing of our communities and our state.

This Needs and Assets Report for the Coconino Region helps us in understanding the needs of young children, the resources available to meet those needs and gaps that may exist in those resources. An overview of this information is provided in the Executive Summary and documented in further detail in the full report.

The First Things First Coconino Regional Partnership Council recognizes the importance of investing in young children and ensuring that families and caregivers have options when it comes to supporting the healthy development of young children in their care. This report provides information that will aid the Council's funding decisions, as well as our work with community partners on building a comprehensive early childhood system that best meets the needs of young children in our community.

It is our sincere hope that this information will help guide community conversations about how we can best support school readiness for all children in the Coconino region. This information may also be useful to stakeholders in our area as they work to enhance the resources available to young children and their families and as they make decisions about how best to support children birth to 5 years old in our area.

Acknowledgments:

We want to thank the Arizona Department of Economic Security and the Arizona Child Care Resource and Referral, the Arizona Department of Health Services, the Arizona Department of Education, the Census Bureau, the Arizona Department of Administration- Employment and Population Statistics, and the Arizona Health Care Cost Containment System for their contributions of data for this report, and their ongoing support and partnership with First Things First on behalf of young children.

To the current and past members of the Coconino Regional Partnership Council, your vision, dedication, and passion have been instrumental in improving outcomes for young children and families within the region. Our current efforts will build upon those successes with the ultimate goal of building a comprehensive early childhood system for the betterment of young children within the region and the entire state.

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EXECUTIVE SUMMARY

This needs and assets report is the sixth biennial assessment of early education, health, and family support in the First Things First Coconino Region.

Population Characteristics

According to the U.S. Census, 9,652 children under the age of six reside in the Coconino Region. While the overall population of Coconino County is projected to grow over the next several decades, the population of young children is projected to remain relatively stable around ten-thousand. Twenty-seven percent of young children in the Coconino Region are Hispanic or Latino, 42 percent are white, and 28 percent are American Indian. In the Coconino Region, 16 percent of households have at least one child under 6 years old. Forty-four percent of children in the Coconino Region live with a single parent, and in the Hopi Tribe and Winslow communities, more than two-thirds (77% and 69%, respectively) of children live with a single parent.

About 2 percent of children ages 0 to 5 in the Coconino Region are in kinship or other family arrangements, with extended families, friends, and other non-relatives caring for them. The proportion of young children living in a grandparent's household is slightly higher in the region (16%) than in the state (14%). An estimated 3,136 children ages 0 to 17 live with their grandparents in the region. Thirteen percent of these children do not have a parent present in the household, whereas 46 percent live in multigenerational homes where the grandparent has assumed responsibility for the child, despite the presence of a parent. Given high percentages of grandparents involved in the care of grandchildren in several communities, including Grand Canyon Village-Tusayan-Valle, Winslow, and Williams-Parks, additional supports for grandparents raising grandchildren may be needed.

Nearly four out of five (80%) Coconino Region residents age 5 and older speak English at home, with Spanish (9%) being the second most common home language, followed by native North American languages (8%). A high percentage of residents speak native North American languages at home in the Hopi Tribe (58%) and Havasupai Tribe (92%) communities. In tribal communities, higher proportions of adult speakers of Native North American languages are an asset for cultural preservation and strengthening children's sense of identity.

Economic Characteristics

Coconino County families is $59,216. The median income for families with married parents (husband-wife) and children under age 18 is nearly $20,000 higher ($77,032), and single-parent families make substantially less ($25,777 for households led by a single female). Twenty-three percent of the total population of the Coconino Region lives in poverty, and one-third (33%) the population aged birth to 5 live in poverty in the region. More than half of families (52%) in the region with children aged four and under live below 185 percent of the Federal Poverty Level (FPL), meaning that they are considered low-income. In spite of this need, the number of young children supported by the TANF/Cash Assistance program has declined dramatically in recent years, in the region (-55%), county (-58%) and statewide (-39%). Similarly, thirty percent of children (those under 18 years old) are food insecure, higher than the state's 27 percent, but enrollment has declined in both the Supplemental Nutrition Assistance Program (-18%) and the Special Supplemental Nutrition Program for Women, Infants, and Children (-12%).

The economy has shown signs of improvement in Coconino County. Unemployment rates have steadily decreased to six-year low (6.6%), and several cities, including Flagstaff, Page, and Williams, have unemployment rates under five percent. From 2010 to 2015, Coconino County saw marked increases in the number of full-time and part-time jobs (+9%) and average yearly job earnings (+11%).

Residents of the Coconino Region have a higher housing cost burden than other Arizona residents: 38 percent of Coconino housing units require their residents to contribute more than 30 percent of their household income toward housing, compared to 34 percent statewide. Housing costs are particularly high in the Greater Flagstaff Area as 41 percent of housing units cost more than 30 percent of household income. High housing costs and foreclosures can contribute to homelessness. In Coconino County in 2015, 506 individuals were homeless, an increase of 23 percent from 2013. Despite an overall increase, the number of individuals in families who were homeless in the county decreased by 42 percent from 2013 to 2015.

Educational Indicators

There is a need to support early literacy and to strengthen scholastic achievement for young students in the Coconino Region. In the 2014-2015 school year, 37 percent of Coconino Region students attained a proficient or highly proficient score on the third grade math assessment, which was a lower passing rate than across Arizona as a whole (41%). Performance on the English language arts (ELA) test was similar, with 34 percent of Coconino Region students demonstrating proficiency, compared to 40 percent across the state. The percentage of first through third grade elementary school students who were chronically absent increased from 2014 (41%) to 2015 (45%) in the Coconino Region, and were higher than those percentages across the state (34% in 2014 and 36% in 2015).

Educational attainment is an asset in the Coconino Region. The high school drop-out rate in the region fell slightly to three percent in 2015, from a high of four percent in 2014. Four-year graduation rates in the Coconino Region (e.g., 2014: 78%) from 2011 to 2014 are similar to rates in Arizona (e.g., 2014: 76%). However, a number of districts outperformed both the state and county in four-year graduation rates in 2014, including Winslow Unified District (92%), Grand Canyon Unified District (90%), and Fredonia-Moccasin Unified District (88%). Adults aged 25 and older in the Coconino Region are more likely to have a bachelor's or higher degree (34%) than adults across Arizona (27%)

Early Learning

Access to opportunities for early education and child care remains an ongoing issue in the Coconino Region. According to the most recent data available in 2015 and 2016, there were 77 registered child care providers approved to serve up to 3,533 children in the region. With a regional population of young children of about 9,652, there are likely to be three or four young children for each available child care slot in the region. With more than three times as many children as child care slots, the Fredonia, Williams-Parks, and Hopi Tribe communities could be potential child care deserts. Two-thirds (66%) of young children in the Coconino Region live in a home where all the parents participate in the labor force, and families in this situation are likely to have a high need for child care.

About 30 percent (n=23) of the 77 registered providers in the region are participating in the Quality First program. Most of these programs (15, 65%) have a 2-star or 3-star rating, which are also the most common ratings among sites statewide. Currently there is a waiting list to enroll in Quality First in the Coconino Region, which means that not all interested child care providers can participate. Other child

care and early education providers in the region include public school preschools (n=11), licensed child care centers not enrolled in Quality First (n=18), approved family child care homes (n=6), individual providers (n=1), and Head Start and Early Head Start program operated by the Northern Arizona Council of Governments (n=13) and the Havasupai Tribe (n=1) and Hopi Tribe (n=1).

Families in the Coconino Region are paying a lower proportion (10-13%, depending on the child's age) of their overall income for a child care slot as other families statewide. Single parent homes, particularly those with a single female householder, have a lower median income ($27,522) than other families, resulting in a higher proportion of their income being spent on child care. Subsidies from the Department of Economic Security (DES) can help families shoulder the cost burden of child care. The number of children receiving a DES child care subsidy increased from 199 in 2014 to 358 in 2015.

In the Coconino Region and across Arizona, more children were referred to and served by AzEIP in 2015 than in either of the two years prior, with 179 children ages 0 to 2 served in the region. The number of preschoolers in special education in public schools in Coconino Region schools decreased slightly between 2012 (n=144) to 2015 (n=122). Among these children, nearly equal proportions have a developmental disability (34%), severe delay (35%), or speech or language impairment (31%) as their primary need. Overall in 2015, approximately 451 children ages birth to five received services for special needs across AzEIP, DDD, Head Start, and public school districts in the Coconino Region. This represents 4.7 percent of all children ages birth to five in the region, which is very close to the statewide percentage of 4.8 percent receiving special needs services across these agencies. However, a national survey estimated that 7.6 percent of children from birth to five (and about 17% of school-aged children) in Arizona have special health care needs. In the Coconino Region, the 2.8 percentage point gap in estimated children with special needs and children receiving services for special needs represents over 700 young children who may need services but are not receiving them.

Child Health

Access to care may be a challenge for some families in the Coconino Region. Parts of the Page, Hopi Tribe, and Winslow primary care areas are designated as medically underserved areas (MUAs), which are federally-designated areas that have a need for medical services due to a shortage of primary care providers. The Grand Canyon Village, Page, and the Hopi Tribe primary care areas all had population-provider ratios greater than that seen statewide (449:1), again indicating need for more primary care providers. Young children were more likely to be uninsured in the region (12%) than in the state (10%), especially in the Grand Canyon Village-Tusayan-Valle community (19%).

In 2014, 1,562 Coconino Region residents gave birth, representing 1.8 percent of the births statewide. More than two-thirds of these births were to mothers residing in the Greater Flagstaff Area (1,041). The Coconino Region met Healthy People 2020 goals for pre-term births and breastfeeding rates, but lagged behind in the areas of early prenatal care, low birthweight births, and tobacco use of pregnancy. Rates of tobacco use were extremely high in the Page community at 17.5 percent. Only 42 percent of women of child-bearing age (18-45) in Coconino County reported that a doctor, nurse or other health care worker ever talked with them about ways to prepare for a healthy pregnancy and baby in 2014. The percentage of newborns with hearing loss in the region was double that in Arizona as whole, indicating that there may be a greater need for hearing services in the region. Rates of fetal alcohol syndrome (FAS) in Coconino County were triple that of the state as whole, with approximately one in 1,000 newborns being diagnosed with FAS.

Rates of personal exemptions for vaccinations among children in child care (4.1%) and kindergarten (6.8%) in the region were higher than exemption rates at the state level (3.5% and 4.5% respectively). Untreated decay and need for dental care was identified for 30 percent of kindergarteners in the region, substantially higher than the state rate (27%). In overall decay experience, 63 percent of kindergarteners evidenced decay experience compared to Arizona's 52 percent. Adult obesity has decreased slightly overall in Coconino County between 2011 and 2013 (from 24.0% to 23.0%). Among children participating in WIC in the Coconino Region in 2015, 9 percent had obesity and an additional 11 percent have overweight, suggesting that the region is meeting the Healthy People 2020 target of no more than 9.4 percent of children having obesity.

Family Support and Literacy

According to the 2012 First Things First Family and Community Survey, parents in the Coconino Region were much more likely to report reading to their children (75%), telling stories to their children (68%) and drawing with their child (49%) six or seven days a week compared to parents across the state (51%, 51% and 47% respectively). Parents also showed a better understanding that brain development can be influenced prenatally or right from birth (87%) than did respondents across the state as a whole (80%).

There is an ongoing need for behavioral health service in the region. In 2015, 448 pregnant or parenting women received publicly-funded behavioral health services through the Northern Arizona Regional Behavioral Health Authority in the Coconino Region, a decrease of 12 percent compared to 2012. The number of children ages birth to 5 receiving behavioral health services in the Coconino Region also decreased from 2012 (n=159) to 2015 (n=140), representing a 12 percent decrease. This represents only 4.7 percent of young children in poverty in the Coconino Region (compared to about 9.5 percent of young children in poverty receiving services statewide). A national estimate that about 13 percent of low-income children aged 6 to 11 years old covered by Medicaid have mental health problems suggests that although there is improving coverage in the Coconino Region, there may be an unmet need for services for about 248 additional young children.

Communication, Public Information, and Awareness

Since state fiscal year 2011, First Things First has led a collaborative, concerted effort to build public awareness and support across Arizona. First Things First began a community engagement effort in SFY2014 to recruit, motivate and support community members to take action on behalf of young children. In the Coconino region, these efforts have resulted in the recruitment of 871 Friends, 435 Supporters, and 88 Champions during the period of FY2014 through 2016. First Things First has also led a concerted effort of policymaker awareness-building throughout the state. The Arizona Early Childhood Alliance represent the united voice of the early childhood community in advocating for early childhood programs and services. First Things First recently launched enhanced online information for parents of young children, including the more intentional and strategic placement of early childhood content and resources in the digital platforms that today's parents frequent.

System Coordination among Early Childhood Programs and Services

Half of respondents to the 2016 Coordination and Collaboration Survey in Coconino County described the early childhood system in Coconino County as a well-coordinated system, with another 38 percent describing the system as a partially coordinated system. Most respondents reported that the early childhood system in Coconino County effectively addresses the needs of young children and their

families across all four key areas: family support and literacy (88%), professional development (75%) early learning (75%), and children's health (75%). Survey responses suggests that the Coconino Region is high on the Continuum of Collaboration in the areas of early learning and family support and literacy, with 50 percent of respondents perceiving collaboration and 25 percent perceiving coordination in early learning and 25 percent perceiving collaboration and 50 percent perceiving coordination in family support and literacy. However, respondents also identified several key barriers to further coordination and collaboration in the region, including geography, funding, and communication. High travel times and the remoteness of rural communities make attending meetings in Flagstaff difficult. Lack of funding and consistent communications such as monthly meetings also impede coordination and collaboration between Early Childhood System partners.

2018 NEEDS AND ASSETS REPORT

About this Report

The data contained in this report come from a variety of sources. Some data were provided to First Things First by state agencies, such as the Arizona Department of Economic Security (DES), the Arizona Department of Education (ADE), and the Arizona Department of Health Services (ADHS). Other data were obtained from publically available sources, including the 2010 U.S. Census, the American Community Survey (ACS), the Arizona Department of Administration (ADOA), and the Arizona Department of Child Safety (DCS). In addition to these public sources, this report includes quantitative data obtained from the Indian Health Service, the Inter Tribal Council of Arizona WIC program, the Havasupai Tribe Head Start Program, the Hopi Tribe Head Start Program, and the Kaibab Early Learning Center with approval from the Hopi Tribal Council by Tribal Resolution No. H-113-2015, the Havasupai Tribal Council by Havasupai Resolution No. 11-16, and the Tribal Council of the Kaibab Band of Paiute Indians by Resolution K-64-15. Regional data from local agencies and the 2012 First Things First Family and Community Survey have been included where available and relevant. Not all data will be available at a First Things First (FTF) regional level because not all data sources analyze their data based on FTF regional boundaries or at a resolution fine enough to allow aggregation to the regional level. When regional data are unavailable, this will be noted by **N/A**.

This report follows the First Things First Data Dissemination and Suppression Guidelines. Throughout this report, suppressed counts will appear as either **<10** or **<25** in data tables, and percentages that could easily be converted to suppressed counts will appear as **DS** (data suppressed). The signifier **N/A** indicates where data is not available for a particular geography. Please also note that some data, such as that from the American Community Survey, are estimates that may be less precise for small areas. The ACS is a survey conducted by the U.S. Census Bureau each month by mail, telephone, and face-to-face interviews. The most recent and most reliable ACS data are averaged over the past five years; from surveys conducted from 2010 to 2014. For American Community Survey (ACS) sub-region data throughout the report, estimates based on a sample of fewer than 50 were excluded from presentation. In general, the reliability of ACS estimates is greater for more populated areas. For more detailed information on data sources, methodology, suppression guidelines, and limitation, please see the Appendix.

For the 2018 cycle, the Regional Partnership Council identified the following topics as priority areas. These topics were a focus of a Data Interpretation Session held with the Regional Partnership Council in the fall of 2016, as well as separate Data Interpretation Sessions with representatives of the three tribes that participate in the Coconino Region. Additional information and data are included on these topics whenever possible.

1) Access to and utilization of high quality early care and education by families with young children across the region,
2) Developmental, mental, and/or behavioral health issues for young children and their parents/guardians, and
3) Grandparents raising grandchildren.

As part of the Data Interpretation Sessions, qualitative insights regarding the quantitative data presented in this report were gathered from session participants, including members of the Regional Partnership Council, local First Things First grantees, and interested members of the public. These insights are included in this report to provide further context to the data presented. Participants in the Data Interpretation Sessions are referred to as 'key informants' throughout this report.

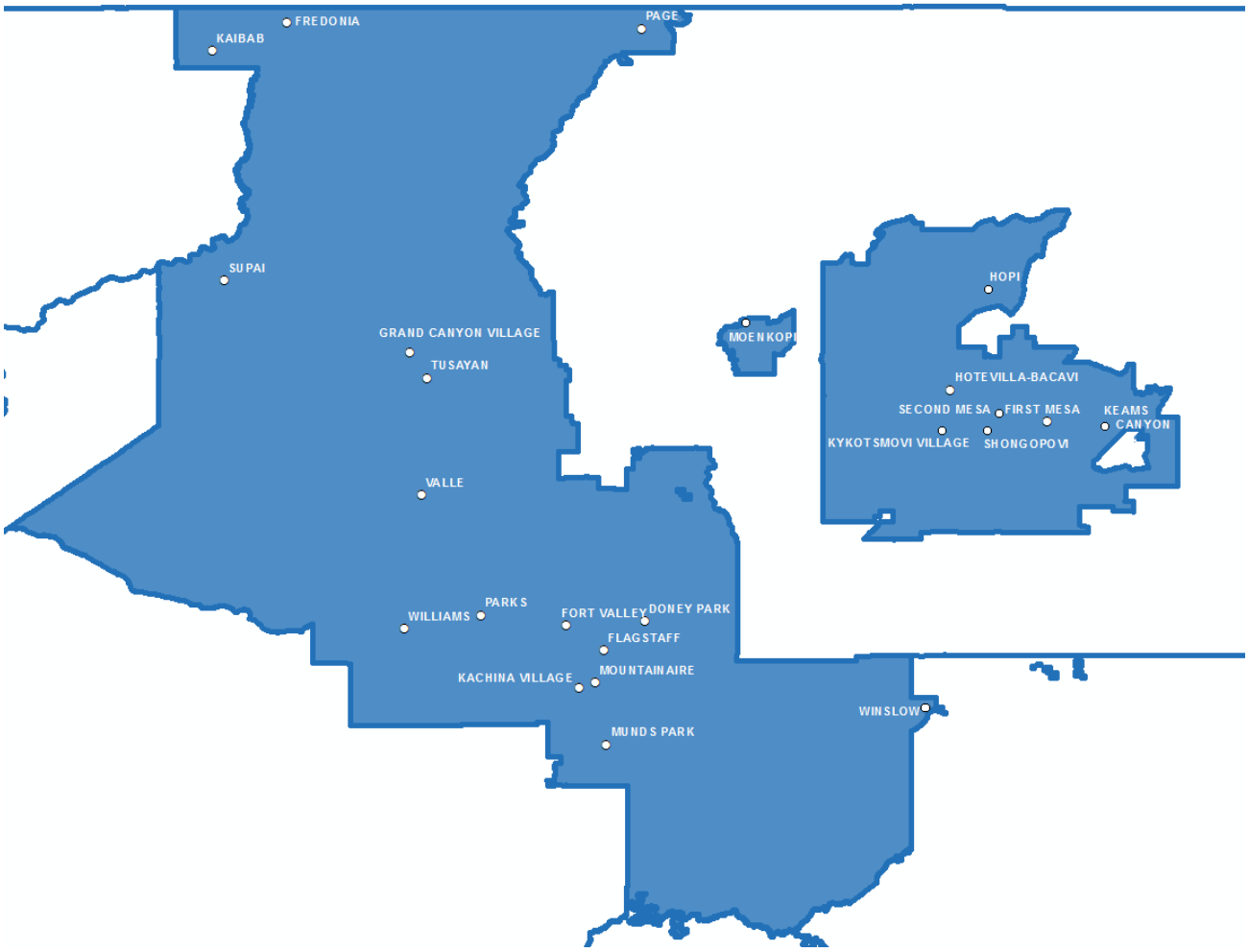
Description of the Region

The First Things First regional boundaries were initially established in 2007, creating 31 regions which were designed to (a) reflect the view of families in terms of where they access services, (b) coincide with existing boundaries or service areas of organizations providing early childhood services, (c) maximize the ability to collaborate with service systems and local governments, and facilitate the ability to convene a Regional Partnership Council, and (d) allow for the collection of demographic and indicator data. First Things First also acknowledged the government-to-government relationship with federally-recognized tribes. Each tribe with lands in Arizona was given the opportunity to participate within a First Things First designated region or elect to be designated as a separate region. The regional boundaries are reviewed every two years. In fiscal year 2015, the boundaries were modified using census blocks, creating 28 regions. This report uses the 2015 definition of the regional boundaries.

The First Things First Coconino Region includes most but not all of Coconino County and parts of neighboring Mohave and Navajo counties. The region includes the lands belonging to the Hopi Tribe (including the part in Navajo County), the Kaibab-Paiute Tribe (which is mostly in Mohave County), and the Havasupai Tribe, as these three tribes have chosen to participate as part of the Coconino Region. This decision must be ratified every two years, and each of these tribes have opted to continue as part of the region, with the opportunity to be represented on the Regional Partnership Council. The region does not include the lands belonging to the Navajo Nation or the Hualapai Tribe. In the southern part of the county, the city of Sedona is assigned to the Yavapai Region and the Forest Lakes community is assigned to the Navajo/Apache Region. The city of Winslow is assigned to the Coconino Region, although it is located in Navajo County.

Figure 1 shows the geographical area covered by the Coconino Region.

Figure 1 The Coconino First Things First Region



Source: First Things First (2016). Map produced by First Things First.

Because communities may vary in terms of needs and assets, the Coconino Regional Partnership Council requested that data be analyzed and reported at the community level in order to provide a more complete picture of the region. Dividing the region in sub-regions helps the Council target strategies to use resources effectively and efficiently. Nine communities within the Coconino Region were identified by the Regional Partnership Council and Director as focus areas.

The **Fredonia** community contains the Town of Fredonia and the Census Designated Place (CDP) of Moccasin.

The **Grand Canyon Village-Tusayan-Valley** community contains the Town of Tusayan and the CDPs of Valle and Grand Canyon Village.

The **Greater Flagstaff Area** community contains the City of Flagstaff and the CDPs of Fort Valley, Doney Park, Mountainnaire, and Munds Park. It also contains the unincorporated communities of

Bellemont, Kachina Village, Gray Mountain, Winona, Happy Jack, Wiggins Crossing, and Mormon Lake. In terms of both population and area, it is the largest sub-regional community in the Coconino Region.

The **Havasupai Tribe** community is defined as the Havasupai Reservation and contains the CDP of Supai. A few Havasupai families live in Supai Camp, which is located near Grand Canyon Village.

The **Hopi Tribe** community is defined as the Hopi Reservation and Off-Reservation Trust Land and contains the CDPs of Moenkopi, Hotevilla-Bacavi, Kykotsmovi Village, Second Mesa, Shongopovi, First Mesa, Keams Canyon, and part of Winslow West.

The **Kaibab Band of Paiute Indians** community is defined as the Kaibab Indian Reservation and contains the CDP of Kaibab.

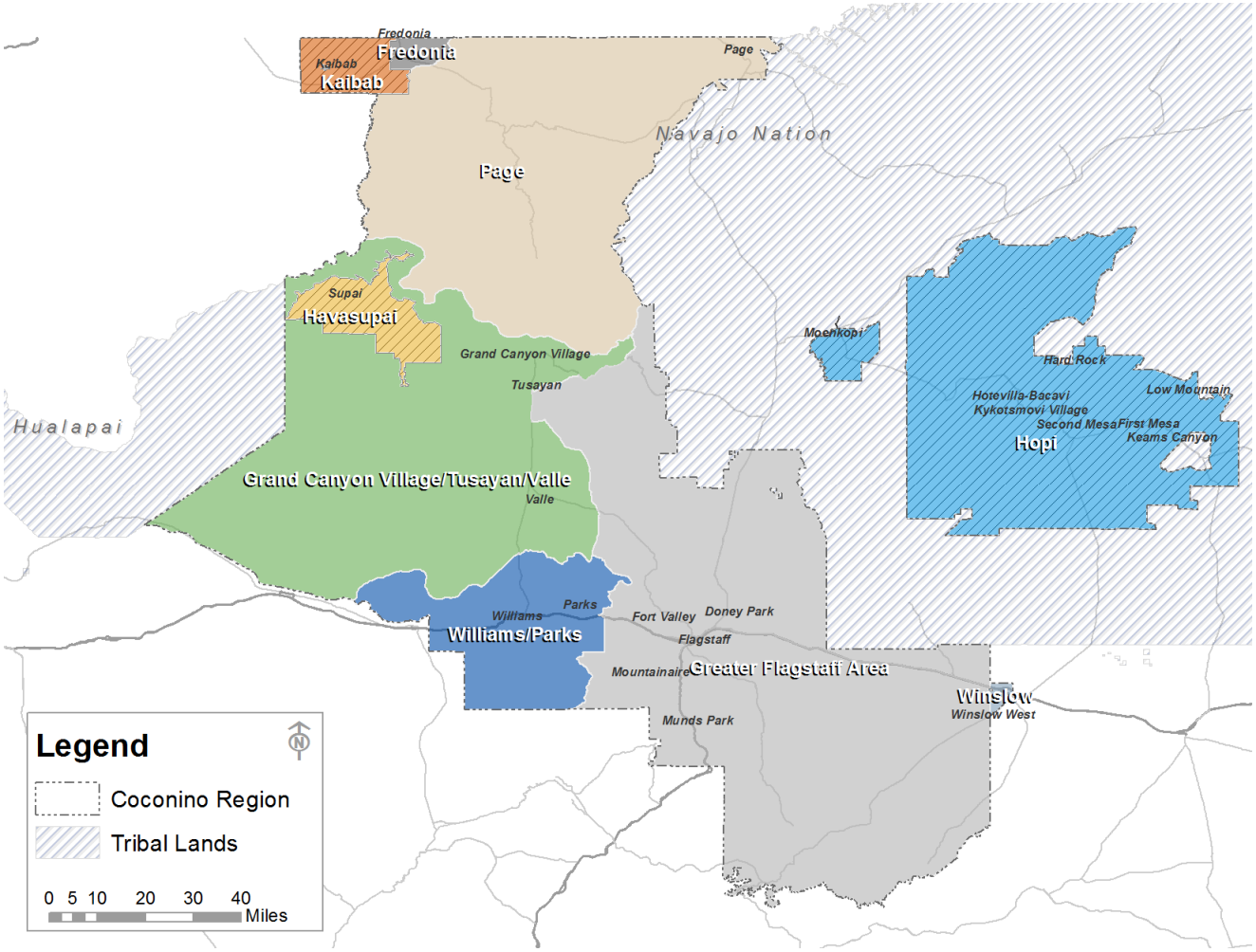
The **Page** community contains the City of Page as well as most of the land in the Coconino Region on the North Rim of the Grand Canyon, including the unincorporated communities of North Rim, Jacob Lake, and Marble Canyon.

The **Williams-Parks** community contains the City of Williams and the CDP of Parks.

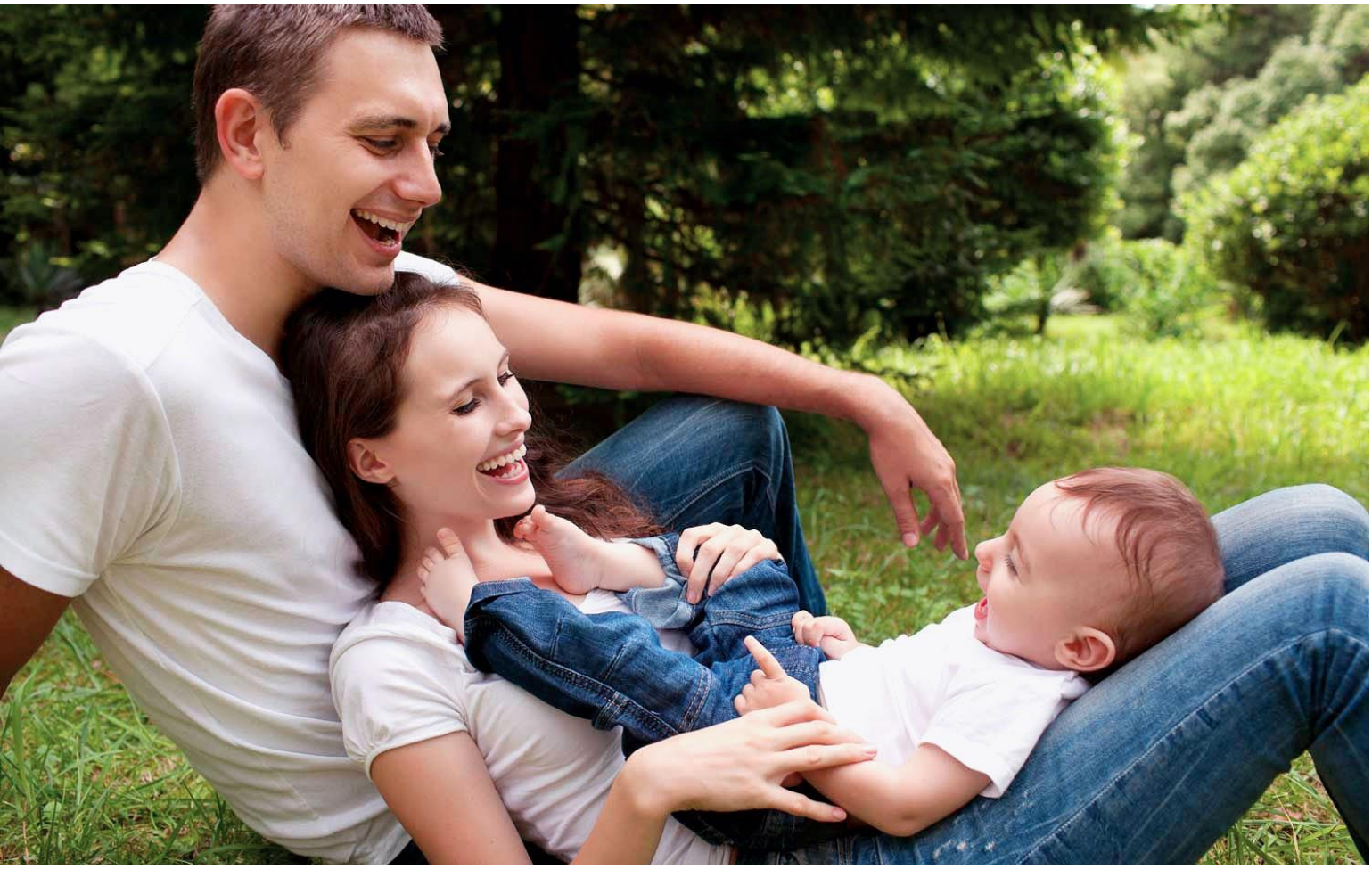
The **Winslow** community contains the City of Winslow and the CDP of Winslow West, excluding Hopi Trust land.

Figure 2 shows the sub-regions in the Coconino Region.

Figure 2 The Coconino First Things First Region by Community



Source: U.S. Census Bureau (2016). TIGER-Line Shapefiles. Map produced by CRED..



POPULATION CHARACTERISTICS

Why Population Characteristics Matter

Knowing the characteristics of families living within a region, and how they change over time, is important for understanding the resources and supports needed by those families.[1] The number of young children and families in a region, their ethnic composition, and the languages they speak can influence the type and location of services within a region such as schools, health care facilities and services, and social services and programs. Some families, such as recently arrived refugees, may have distinct needs for their young children. Accurate and up-to-date information about population characteristics such as these can lead to the development or continuation of relevant resources and assure that they align with the needs of families in the region. Appropriately locating resources and services can support positive child outcomes. Disparities in access to jobs, food resources, schools, health care facilities and providers, and social services have been associated with a number of poor outcomes for children including infant mortality, obesity, and health insurance coverage, among others.[2]

An understanding of the supports and resources *within* a family is another key to helping young children achieve the best possible developmental outcomes.[3,4] Children living with and being cared for by someone other than their parents, such as relatives or close friends, is known as kinship care and is increasingly common.[5] Children living in kinship care can arrive in those situations for a variety of reasons including a parent's absence for work, military service, chronic illness, or incarceration, or due to abuse, neglect, or homelessness, among others. Children in kinship care often face special needs as a result of trauma, and these families often require additional support and assistance to help children adjust and provide the best possible home environment.[6] Caring for young children may pose a particular challenge for aging grandparents, as they often lack information on resources, support services, benefits, and policies available to aid in their caregiving role.[7] Understanding the makeup of families in a region can help better prepare child care, school and agency staff to engage with diverse families in ways that support positive interactions with staff and within families to enhance each child's early learning.[8]

Recognizing variations in regional language use and proficiency is also important to ensuring appropriate access to services and resources and identifying needed supports. Mastery of the language spoken in the home is related to school readiness and academic achievement.[9] Those children who engage in dual language learning have cognitive, social-emotional and learning benefits in early school and throughout their lifetimes.[10] Although dual language learning is an asset, some children come from limited English speaking households (that is, a household where none of the adult members speak English very well). Language barriers for these families can limit access to health care and social services, and can provide challenges to communication between parents and teachers, doctors and other providers, which can affect the quality of services children receive.[11] Assuring that early childhood resources and services are available in a language accessible to the child and caregivers is essential. Although Spanish is the most common second language spoken, Arizona is also home to a large number of Native communities, with numerous Native languages spoken by families in those communities. The U.S. Department of Health & Human Services recognizes that language preservation and revitalization are keys to strengthening culture in Native communities and to encouraging communities to move toward social unity and self-sufficiency.[12] Special consideration

should be given to respecting and supporting the numerous Native languages spoken, particularly in tribal communities around the state.

What the Data Tell Us

Demographics

According to the U.S. Census, 9,652 children under the age of six reside in the Coconino Region (see Table 1). Overall, the region population was 124,238 in 2010, meaning that nearly 1 in every 10 residents is a young child. This ranged from a low of 7 percent young children in the Williams-Park sub-region, to a high of 15 percent on the Kaibab Band of Paiute Indians community.

The Coconino Region's population grew moderately between 2000 and 2010 with a 10 percent increase in the number of young children, but at a rate much lower than that of the entire state, which grew by 19 percent. Several communities grew faster than the region as a whole, including Page (16%), Grand Canyon Village-Tusayan-Valle (14%), and the Greater Flagstaff Area (11%) (Table 2). While the overall population of Coconino County is projected to grow by about 20 thousand over the next several decades, the population of young children is projected to remain relatively stable around ten thousand (see Table 4 and Table 5). In contrast, between 2015 and 2040, the population of young children statewide is projected to increase by about 35 percent.

Twenty-seven percent of young children in the Coconino Region are Hispanic or Latino, 42 percent are white, and 28 percent are American Indian. This is a slightly lower percentage of American Indian children compared to Coconino County (39%) but vastly higher than across the state of Arizona (6%) (Table 7). Within the region, certain communities have greatly varying racial and ethnic compositions. For example, in Grand Canyon Village-Tusayan-Valle, Williams-Parks, and Winslow, there are a higher percentage of young Hispanic or Latino children than in the region, whereas in Fredonia the majority of young children are white. The Coconino Region's three tribal communities, as well as the communities of Page and Winslow have high percentages of young American Indian children (Table 7). Compared to children, a smaller proportion of adults (those aged 18 and older) identify as Hispanic or Latino or American Indian across the region (Table 6). A lower percentage of adults (those aged 18 and older) in the region identify as Hispanic or Latino (14%) than in the state (25%), but a higher percentage of adults in both the region (16%) and the county (23%) identify as American Indian compared to the state (4%).

Arizona is also increasingly a home to those displaced from other parts of the world. The national Office of Refugee Resettlement compiles an annual report of refugee arrival data by country of origin and state of resettlement.[i] The number of refugees resettled in Arizona has increased steadily over time, with 744 refugee entrants to Arizona in 1981, and 4,833 in 2016 (county level resettlement data are not currently available). The country of origin of resettled refugees has changed over time, with the largest number of entrants in the last decade coming from countries such as Burma, the Democratic

[i] *For more information, visit https://www.acf.hhs.gov/orr/resource/refugee-arrival-data*

Republic of Congo, Cuba, Iraq, and Somalia.[ii] In Arizona, most refugees are resettled in the greater Phoenix and Tucson areas.[13] In the Coconino Region, nearly all residents (96%) are U.S. citizens, more than that in the state overall (92%), indicating relatively low international immigration in the area (Table 8).

Table 1 Population of Young Children (Ages 0 to 5) in the 2010 Census

	Ages 0-5	Age 0	Age 1	Age 2	Age 3	Age 4	Age 5
Coconino Region	9,652	1,547	1,572	1,640	1,687	1,548	1,658
Fredonia	126	24	21	10	34	17	20
Grand Canyon Village-Tusayan-Valle	237	39	47	37	35	41	38
Greater Flagstaff Area	6,340	997	1,039	1,086	1,129	984	1,105
Havasupai Tribe	63	12	10	13	12	9	7
Hopi Tribe	774	141	116	145	116	127	129
Kaibab Band of Paiute Indians	35	6	4	6	6	8	5
Page	737	117	110	112	132	132	134
Williams-Parks	460	65	82	89	70	93	61
Winslow	880	146	143	142	153	137	159
Coconino County	10,777	1,732	1,773	1,845	1,882	1,713	1,832
ARIZONA	546,609	87,557	89,746	93,216	93,880	91,316	90,894

Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Table P14

[ii] *For more information, visit https://des.az.gov/sites/default/files/REFREPT_Dec2016.pdf*

Table 2 Change in Population of Young Children (Ages 0 to 5), 2000 to 2010 Census

	Number of children (ages 0-5) in 2000 Census	Number of children (ages 0-5) in 2010 Census	Percent change in population (ages 0-5), 2000 to 2010
Coconino Region	**8,812**	**9,652**	**+10%**
Fredonia	122	126	+3%
Grand Canyon Village-Tusayan-Valle	208	237	+14%
Greater Flagstaff Area	5,689	6,340	+11%
Havasupai Tribe	62	63	+2%
Hopi Tribe	739	774	+5%
Kaibab Band of Paiute Indians	36	35	-3%
Page	637	737	+16%
Williams-Parks	440	460	+5%
Winslow	879	880	+0%
Coconino County	10,117	10,777	+7%
ARIZONA	459,141	546,609	+19%

Source: U.S. Census Bureau (2000). 2000 Decennial Census, SF 1, Table P014

Table 3 Population (All Ages) in the 2010 Census

	All ages	Ages 0 to 5	Children (ages 0-5) as a percentage of the total population
Coconino Region	**124,238**	**9,652**	**8%**
Fredonia	1,448	126	9%
Grand Canyon Village-Tusayan-Valle	3,615	237	7%
Greater Flagstaff Area	86,630	6,340	7%
Havasupai Tribe	465	63	14%
Hopi Tribe	7,185	774	11%
Kaibab Band of Paiute Indians	240	35	15%

Page	7,943	737	9%
Williams-Parks	6,820	460	7%
Winslow	9,892	880	9%
Coconino County	134,421	10,777	8%
ARIZONA	6,392,017	546,609	9%

Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Table P1

Table 4 Projected Population (Ages 0 to 5), 2015 to 2040

	2015	2020	2025	2030	2035	2040
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Coconino County	10,188	10,036	10,034	10,060	10,102	10,155
ARIZONA	522,213	556,443	603,660	648,746	681,380	705,102

Source: Arizona Department of Administration, Employment and Population Statistics (2015). State and county population projections (medium series).

Table 5 Projected Population (All Ages), 2015 to 2040

	2015	2020	2025	2030	2035	2040
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Havasupai Tribe	466	471	475	479	481	482
Hopi Tribe	7,406	7,734	8,090	8,401	8,666	8,893
Kaibab Band of Paiute Indians	253	271	288	304	320	334
Coconino County	141,602	149,769	156,363	161,021	164,844	167,897
ARIZONA	6,758,251	7,346,787	7,944,753	8,535,913	9,128,899	9,706,815

Source: Arizona Department of Administration, Employment and Population Statistics (2015). State and county population projections (medium series).

Table 6 Race and Ethnicity of the Adult Population (Ages 18 and Older) in the 2010 Census

	Number of persons (ages 18 and older)	Hispanic or Latino	White alone (not Hispanic or Latino)	American Indian alone (not Hispanic or Latino)	African-American alone (not Hispanic or Latino)	Asian or Pacific Islander (not Hispanic or Latino)
Coconino Region	**96,015**	**14%**	**65%**	**16%**	**2%**	**2%**
Fredonia	1,053	3%	88%	6%	0%	1%
Grand Canyon Village-Tusayan-Valle	3,028	15%	62%	13%	1%	7%
Greater Flagstaff Area	68,242	14%	71%	9%	2%	2%
Havasupai Tribe	319	3%	2%	92%	0%	0%
Hopi Tribe	4,891	2%	3%	94%	0%	0%
Kaibab Band of Paiute Indians	142	5%	13%	81%	0%	0%
Page	5,740	6%	63%	27%	0%	1%
Williams-Parks	5,351	19%	77%	1%	1%	1%
Winslow	7,249	31%	38%	22%	6%	1%
Coconino County	102,633	12%	60%	23%	1%	2%
ARIZONA	4,763,003	25%	63%	4%	4%	3%

Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Table P11

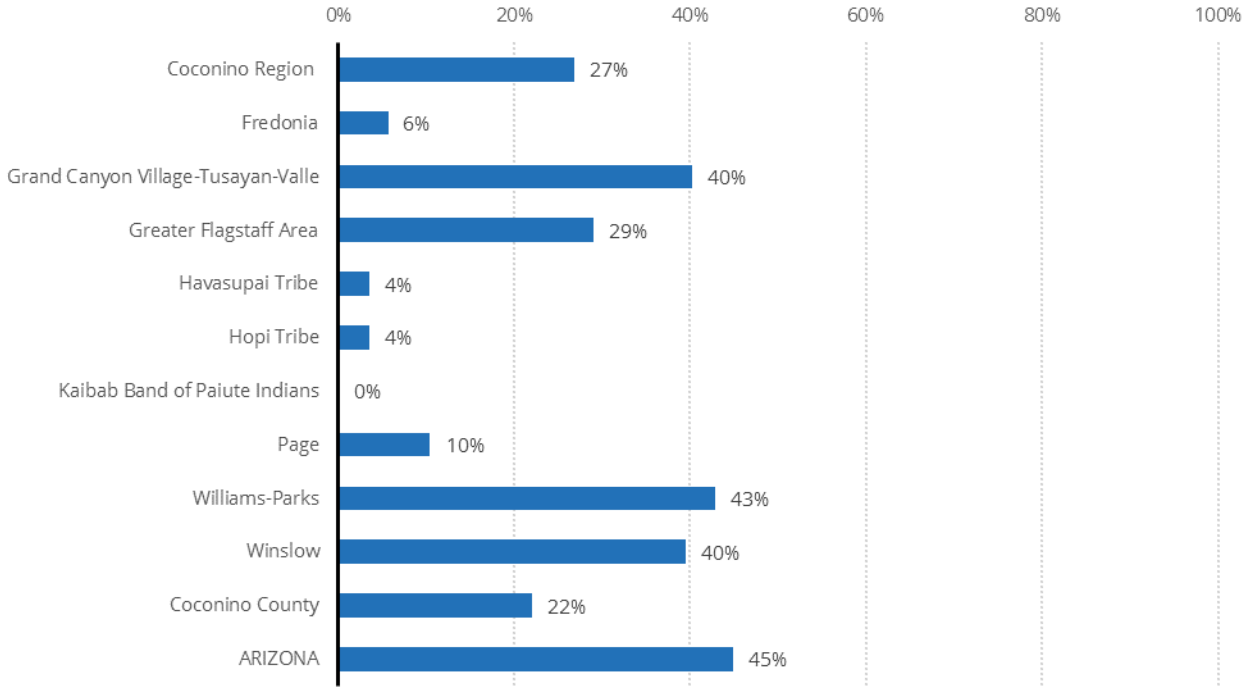
Table 7 Race and Ethnicity of the Population of Children (Ages 0 to 4) in the 2010 Census

	Population of children (ages 0-4)	Hispanic or Latino	White alone (not Hispanic or Latino)	American Indian	African-American	Asian or Pacific Islander
Coconino Region	**7,994**	**27%**	**42%**	**28%**	**1%**	**1%**
Fredonia	106	6%	89%	6%	0%	0%
Grand Canyon Village-Tusayan-Valle	199	40%	36%	15%	1%	2%
Greater Flagstaff Area	5,235	29%	50%	17%	1%	1%
Havasupai Tribe	56	4%	0%	100%	0%	0%
Hopi Tribe	645	4%	1%	96%	0%	0%

Kaibab Band of Paiute Indians	30	0%	0%	83%	3%	0%
Page	603	10%	35%	44%	0%	0%
Williams-Parks	399	43%	49%	3%	1%	1%
Winslow	721	40%	19%	40%	2%	1%
Coconino County	8,945	22%	36%	39%	1%	1%
ARIZONA	455,715	45%	40%	6%	5%	3%

Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Tables P12B, P12C, P12D, P12E, P12H, and P12I

Figure 3 Percent of Children (Ages 0 to 4) Who Are Hispanic or Latino



Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Tables P12B, P12C, P12D, P12E, P12H, and P12I

Table 8 Proportion of Population (All Ages) Who Are United States Citizens

	Estimated total population	Percent of total population who are US citizens (by birth or naturalization)	Estimated population of children (ages 0-17)	Percent of population (ages 0-17) who are US citizens (by birth or naturalization)
Coconino Region	125,523	96%	28,233	99%
Fredonia	1,539	98%	373	100%
Grand Canyon Village-Tusayan-Valle	3,076	96%	435	99%
Greater Flagstaff Area	87,820	96%	17,919	99%
Havasupai Tribe	126	100%	13	100%
Hopi Tribe	8,287	100%	2,689	100%
Kaibab Band of Paiute Indians	277	100%	99	100%
Page	8,006	98%	2,632	99%
Williams-Parks	6,499	96%	1,205	99%
Winslow	9,848	97%	2,876	100%
Coconino County	135,817	97%	30,669	99%
ARIZONA	6,561,516	92%	1,620,492	97%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B05001

Living Arrangements

Based on data from the 2010 U.S. Census, in the Coconino Region, 16 percent of households have at least one child under 6 years old (Table 9). The largest concentration of these families are in Havasupai Tribe community, where 37 percent of households have a young child. The Williams-Park and Grand Canyon Village-Tusayan-Valley communities have relatively fewer households with young children (12% in each).

According to the American Community Survey, 44 percent of children in the Coconino Region live with a single parent, which is higher than the proportion statewide (38%) (Figure 4). In the Hopi Tribe and Winslow communities, over two-thirds (77% and 69%, respectively) of children live with a single parent. Children in the Grand Canyon Village-Tusayan-Valle, Kaibab Band of Paiute Indians, and Greater Flagstaff Area communities are the most likely to come from a two-parent home (66%, 63% and 60%, respectively). The U.S. Census Bureau has recently begun to collect data on the number of families with children (0-18) headed by same-sex parents. In Coconino County, 1.3 percent of families are same-sex households, similar to 0.9 percent in Arizona as a whole.[14]

About 4 percent of children ages 0 to 5 in the Coconino Region are in kinship or other family arrangements, with extended families, friends, and other non-relatives caring for them. This practice is especially common in the Fredonia community, where 7 percent of children live with relatives and an additional 18 percent of children live with non-relatives (Figure 4). The Kaibab Band of Paiute Indians and the Hopi Tribe communities also have 17 percent and 7 percent of children living with relatives, respectively, and 3 percent of children live with non-relatives in the Hopi Tribe community.

The proportion of young children living in a grandparent's household is slightly higher in the region (16%) than in the state (14%), but lower than the county (21%) (Figure 5). It is important to note that these households may be multigenerational – i.e., the grandparent is considered the head-of-house, but the child's parent may also live there. Table 10 provides more information about the estimated 3,136 children ages 0 to 17 living with grandparents in the Coconino Region.[iii] Thirteen percent of these children who live with their grandparents do not have a parent present in the household, whereas 46 percent of these children live in multigenerational homes where the grandparent has assumed responsibility for the child, despite the presence of a parent. This indicates that, where children are living with their grandparents, a slightly lower proportion of those grandparents are directly involved in raising their grandchildren in the Coconino region than grandparents across the state. However, a particularly high percentage of children ages 0-17 living with their grandparents do not have a parent present in the Kaibab Band of Paiute Indians (50%), Grand Canyon Village-Tusayan-Valle (37%), and Winslow communities (35%).

Extended families that involve multiple generations and relatives along both vertical and horizontal lines are an important characteristic of many American Indian families. The strengths associated with this open family structure -mutual help and respect- can provide members of these families with a network of support which can be very valuable when dealing with socio-economic hardships.[15] Key informants in the Havasupai Tribe, Hopi Tribe, and Kaibab Band of Paiute Indians communities indicated that in these communities, multigenerational households are common, often for economic reasons. A shortage of available housing may lead multiple families to live together, or in some cases, grandparents may care for grandchildren while their parents leave the community to look for work. Additionally, grandparents may take responsibility for grandchildren due to social services intervention when parents are deemed unsuitable guardians.

The patterns in grandparent caregiving highlighted above may hold true across the sub-regions, but data on specific reasons for grandparent caregiving was not available for this report. Families may live in multigenerational households to share the costs of housing and child care, or grandparents may step in when parents are unable to care for children. Given particularly high percentages of grandparents involved in the care of grandchildren in several communities, additional supports for grandparents raising grandchildren may be needed. Rates of grandparents responsible for grandchildren are particularly high in the Grand Canyon Village-Tusayan-Valle (85%), Winslow (66%), and Williams-Parks (60%).

There are fewer children living with foreign-born parents in the region compared to the state, which is consistent with the higher rates of citizenship in the region compared to the state (Table 11). In the

[iii] *Please note that Table 12 and Table 11 draw from two different data sources and are not directly comparable.*

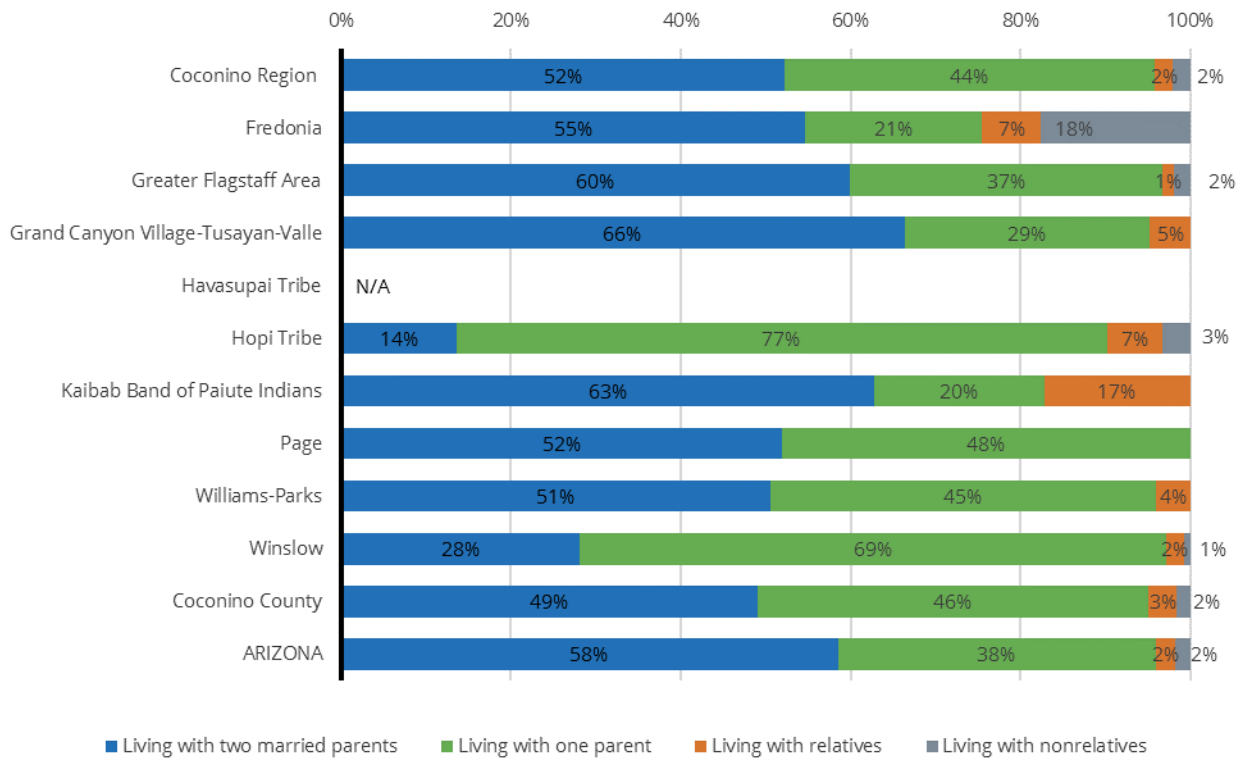
Coconino Region, 13 percent of children ages 0 to 5 live with a foreign-born parent. This is considerably lower than the statewide rate (27%), although the percentages of children living with a foreign-born parent are much higher in Grand Canyon Village-Tusayan-Valle (23%), Williams-Parks (19%), and Greater Flagstaff communities (17%) (Table 11).

Table 9 Composition of Households in the 2010 Census

	Total number of households	Total number of households with child(ren) under 6 years old	Percent of households with child(ren) under 6 years old	Households with child(ren) under 6 years old, husband-wife householders	Households with child(ren) under 6 years old, single male householder	Households with child(ren) under 6 years old, single female householder
Coconino Region	**43,764**	**6,795**	**16%**	**62%**	**11%**	**26%**
Fredonia	534	81	15%	77%	7%	16%
Grand Canyon Village-Tusayan-Valle	1,432	173	12%	63%	16%	21%
Greater Flagstaff Area	30,872	4,520	15%	67%	11%	23%
Havasupai Tribe	100	37	37%	43%	16%	41%
Hopi Tribe	2,081	517	25%	38%	13%	49%
Kaibab Band of Paiute Indians	79	23	29%	39%	13%	48%
Page	2,869	503	18%	63%	13%	25%
Williams-Parks	2,817	337	12%	72%	7%	21%
Winslow	2,980	604	20%	44%	15%	41%
Coconino County	46,711	7,474	16%	63%	11%	26%
ARIZONA	2,380,990	384,441	16%	65%	11%	24%

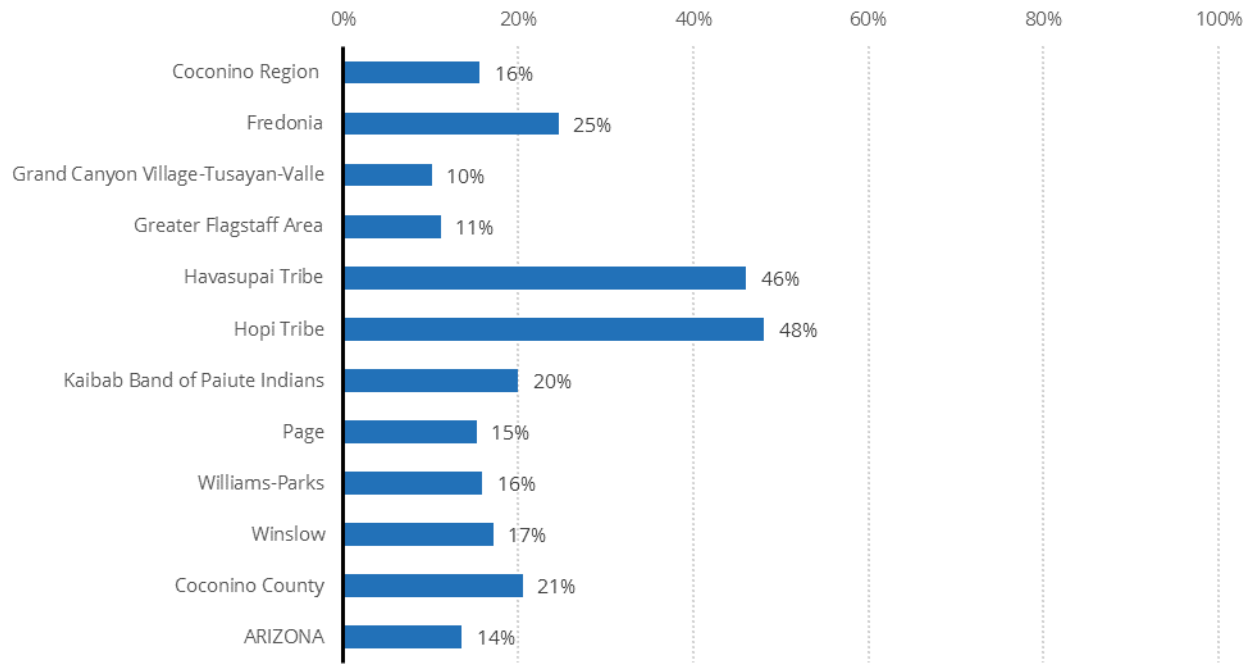
Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Table P20

Figure 4 Living Arrangements for Young Children (Ages 0 to 5)



Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Tables B05009, B09001, B17006

Figure 5 Children (Ages 0 to 5) Living in a Grandparent's Household in the 2010 Census



Source: U.S. Census Bureau (2010). 2010 Decennial Census, SF 1, Table P41

Table 10 Children (Ages 0 to 17) Living in a Grandparent's Household

	Number of children (ages 0-17) living in a grandparent's household	Percent of children (ages 0-17) living in a grandparent's household where the grandparent is responsible for the child	Percent of children (ages 0-17) living in a grandparent's household where the grandparent is responsible for the child (with no parent present)
Coconino Region	**3,136**	**46%**	**13%**
Fredonia	76	27%	17%
Grand Canyon Village-Tusayan-Valle	45	85%	37%
Greater Flagstaff Area	1,112	32%	6%
Havasupai Tribe	0		
Hopi Tribe	1,221	46%	10%
Kaibab Band of Paiute Indians	12	50%	50%
Page	162	38%	1%

Williams-Parks	204	60%	25%
Winslow	348	66%	35%
Coconino County	4,679	48%	8%
ARIZONA	140,038	53%	14%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B10002

Table 11 Children (Ages 0 to 5) Living with Foreign-Born Parents

	Children (ages 0-5) living with one or two parents	Children (ages 0-5) living with one or two foreign-born parents
Coconino Region	**8,850**	**13%**
Fredonia	133	0%
Grand Canyon Village-Tusayan-Valle	122	23%
Greater Flagstaff Area	5,838	17%
Havasupai Tribe	0	N/A
Hopi Tribe	826	0%
Kaibab Band of Paiute Indians	29	0%
Page	819	4%
Williams-Parks	369	19%
Winslow	748	5%
Coconino County	9,818	12%
ARIZONA	510,658	27%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B05009

Language Use

Nearly four out of five (80%) Coconino Region residents age 5 and older speak English at home, with Spanish (9%) being the second most common home language, followed by native North American languages (8%) (Table 12). A high percentage of residents speak native North American languages at home in the Hopi Tribe community (58%), and in the Havasupai Tribe community 92 percent of adults speak Native North American languages.[iv] These two communities also have the highest percentage of residents report that they do not speak English very well (17%) compared to the region overall (6%) and the state (9%) (Table 13).

In tribal communities, higher percentages of adult speakers of Native North American languages can be considered an asset for cultural preservation and strengthening children's sense of identity. According to key informants from the community, Hopi Head Start programs have been implementing language preservation programs with language and cultural curriculum. Following a First Things First-funded assessment that found that many younger parents were not speaking the Hopi language, a language immersion program based on the Language Nest model[v] was developed. The program will be piloted in one of the villages in the community.

At a household level, 3 percent of households in the Coconino Region are classified as limited-English-speaking; this is lower than the proportion of households with that designation (5%) statewide (Table 14). Similar trends are seen in the proportion of English Language Learners (ELL) in schools in the region (Table 15). The percent of kindergarten through third grade students in the region who are English Language Learners in the Coconino region (5%) is half that of the statewide rate (10%). However, in certain districts, the proportion of English Language Learners is considerable higher; 18 percent of students in the Grand Canyon Unified District are English language learners, four times the regional rate. Seven percent of students in the Flagstaff Unified School District are English Language Learners.

[iv] *In speaking with key informants in the region and examining the process for coding language data in the American Community Survey, it became apparent that the Havasupai language was misclassified and thus ended up in the "other languages" category. In the 2011-2015 American Community Survey, 100% of adults spoke a Native North American language at home. Thus the 48% of individuals reported speaking "other languages" should be counted as speaking a Native North American language.*

[v] *For more information on the language nest program, see http://www.fpcc.ca/language/Programs/Language-nest.aspx*

Table 12 Language Spoken at Home (Ages 5 and Older)

	Estimated population (ages 5 and older)	Speak English at home	Speak Spanish at home	Speak a native North American language at home	Speak another language at home
Coconino Region	**117,798**	**80%**	**9%**	**8%**	**3%**
Fredonia	1,427	91%	2%	4%	3%
Grand Canyon Village-Tusayan-Valle	2,969	86%	8%	4%	3%
Greater Flagstaff Area	82,867	83%	10%	3%	3%
Havasupai Tribe	126	3%	5%	44%	48%
Hopi Tribe	7,523	40%	2%	58%	0%
Kaibab Band of Paiute Indians	244	81%	1%	18%	0%
Page	7,269	80%	6%	13%	1%
Williams-Parks	6,161	85%	11%	2%	2%
Winslow	9,114	70%	14%	16%	1%
Coconino County	127,236	76%	8%	14%	3%
ARIZONA	6,120,900	73%	20%	2%	5%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B16001

Note: In speaking with key informants in the region and examining the process for coding language data in the American Community Survey, it became apparent that the Havasupai language was misclassified and thus ended up in the "other languages" category. In the 2011-2015 American Community Survey, 100% of adults spoke a Native North American language at home. Thus the 48% of individuals reported speaking "other languages" should be counted as speaking a Native North American language.

Table 13 Proficiency in English (Ages 5 and Older)

	Population (ages 5 and older)	Speak English at home	Speak another language at home, and speak English "very well"	Speak another language at home, and do not speak English "very well"
Coconino Region	**117,798**	**80%**	**15%**	**6%**
Fredonia	1,427	91%	7%	2%
Grand Canyon Village-Tusayan-Valle	2,969	86%	11%	4%
Greater Flagstaff Area	82,867	83%	12%	4%
Havasupai Tribe	126	3%	80%	17%

Hopi Tribe	7,523	40%	43%	17%
Kaibab Band of Paiute Indians	244	81%	15%	4%
Page	7,269	80%	15%	4%
Williams-Parks	6,161	85%	10%	6%
Winslow	9,114	70%	21%	9%
Coconino County	127,236	76%	17%	8%
ARIZONA	6,120,900	73%	17%	9%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B16001

Table 14 Limited-English-Speaking Households

	Number of households	Households which speak a language other than English	Limited-English-speaking households (Total)	Limited-English-speaking households (Spanish)
Coconino Region	**43,072**	**24%**	**3%**	**1%**
Fredonia	508	10%	0%	0%
Grand Canyon Village-Tusayan-Valle	1,252	14%	2%	2%
Greater Flagstaff Area	31,005	20%	2%	1%
Havasupai Tribe	43	91%	5%	0%
Hopi Tribe	2,047	81%	11%	0%
Kaibab Band of Paiute Indians	96	28%	7%	1%
Page	2,609	31%	2%	2%
Williams-Parks	2,768	15%	2%	2%
Winslow	2,764	36%	4%	2%
Coconino County	46,391	29%	4%	1%
ARIZONA	2,387,246	27%	5%	4%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B16002

Table 15 English Language Learners Enrolled in Kindergarten through Third Grade, October 2015

	Number of students enrolled (K to 3)	Number of English Language Learners (ELL)	Percent of students who are ELL
Coconino Region Schools	**5,889**	**317**	**5%**
Flagstaff Unified District	3,261	234	7%
Fredonia-Moccasin Unified District	76	0	0%
Grand Canyon Unified District	96	17	18%
Maine Consolidated School District	49	0	0%
Page Unified District	794	36	5%
Williams Unified District	175	0	0%
Winslow Unified District	669	0	0%
Coconino Region Charter School	769	30	4%
Coconino County Schools	5,616	335	6%
All Arizona Schools	342,307	34,256	10%

Source: Arizona Department of Education (2016). [Enrollment dataset]. Unpublished data.

ECONOMIC CIRCUMSTANCES

Why Economic Circumstance Matter

The economic well-being of a family is a powerful predictor of child well-being. Children raised in poverty are at a greater risk of adverse outcomes including low birth weight, lower school achievement, and poor health.[16,17,18,19,20] They are also more likely to remain poor later in life.[21] More than a quarter (26%) of Arizona's children lived in poverty in 2014, compared to just over a fifth (21%) six years earlier.[22]

Poverty rates alone do not tell the full story of economic vitality in a region. Income and unemployment rates are also important indicators. According to the National Center for Children in Poverty, families typically need an income of about twice the federal poverty level to meet basic needs.[23] As a benchmark, the 2015 Federal Poverty Guideline for a family of four was $24,250; a typical family of four making less than $48,500 is likely struggling to make ends meet. Under- and unemployment can affect a family's ability to meet the expenses of daily living, and their access to resources needed to support their children's well-being and healthy development. A parent's job loss can affect children's school performance, leading to poorer attendance, lower test scores, and higher risk of grade repetition, suspension or expulsion.[24] Unemployment can also put families at greater risk for stress, family conflict, and homelessness. [25]

Housing instability and homelessness can have deleterious effects on the physical, social-emotional, and cognitive development of young children.[26] Housing that requires more than 30 percent of a household's income is an indicator of a housing affordability problem in a region, leaving inadequate funds for other family necessities, such as food and utilities.[27] High housing costs, relative to family income, are associated with increased risk for overcrowding, frequent moving, poor nutrition and homelessness.[28] Examining indicators related to housing quality, costs, and availability can reveal additional factors affecting the health and well-being of families in a region.

Public assistance programs are one way of counteracting the effects of poverty and providing supports to children and families in need. The Temporary Assistance for Needy Families (TANF) Cash Assistance program provides temporary cash benefits and supportive services to children and families. Eligibility is based on citizenship or qualified resident status, Arizona residency, and limits on resources and monthly income. In 2014, seven out of 10 TANF participants in Arizona were children, and the average monthly benefit was $93.[29]

Other public assistance programs available in Arizona affect access to food. Food insecurity – a limited or uncertain availability of food – is negatively associated with many markers of health and well-being for children, including a heightened risk for developmental delays.[30] Food insecurity is also associated with overweight and obesity.[31] The Supplemental Nutrition Assistance Program (SNAP, also referred to as "Nutrition Assistance" and "food stamps") has been shown to help reduce hunger and improve access to healthier food.[32] SNAP benefits support working families whose incomes simply do not provide for all their needs. For low-income working families, the additional income to access food from SNAP is substantial. For example, for a three-person family with one person whose wage is $10 per hour, SNAP benefits boost take-home income by ten to 20 percent.[33]

In addition to SNAP, food banks and school-based programs such as the National School Lunch Program[34] and Summer Food Service Program[35] are important resources aimed at addressing food insecurity by providing access to free and reduced-price food and meals in both community and

school settings. The National School Lunch Program[36] provides free and reduced-price meals at school for students whose family incomes are at or less than 130 percent of the federal poverty level (FPL) for free lunch and 185 percent of the FPL for reduced price lunch. The Arizona Department of Education's Child and Adult Care Food Program (CACFP) reimburses eligible child care centers, adult daycare centers, Head Starts, emergency shelters, and afterschool programs serving at-risk youth for providing healthier meals and snacks. Participants enhance their current menus to offer more fresh fruits and vegetables, whole grains, and low-fat dairy products. The goals of the CACFP program are to support the health and nutrition status of children and adults and promote good eating habits.[vi] A growing body of research suggests CACFP has positive effects on young children's health and wellbeing. Children who attend care facilities that participate in CACFP have been found to have healthier diets[37,3839] and decreased risk of under and overweight.[40]

Another food and nutrition resource, the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) program, is a federally funded program that serves economically disadvantaged pregnant, postpartum, and breastfeeding women, as well as infants and children under the age of five. The program offers supplemental nutritious food, breastfeeding and nutrition education, and referrals to health and social services.[vii] In Arizona in 2015, half of all children aged birth through four were enrolled in WIC.[41] Participation in WIC has been shown to be associated with healthier births, lower infant mortality, improved nutrition, decreased food insecurity, improved access to health care and improved cognitive development and academic achievement for children.[42]

What the Data Tell Us

Income

The median income for Coconino County families is $59,216. The median income for families with married parents (husband-wife) and children under age 18 is nearly $20,000 higher ($77,032), and single-parent families make substantially less. The median income for households run by a single female in Coconino County is $25,777; households led by single males make about 46 percent more ($37,527) (Table 16). Median family incomes are much lower on reservation lands and in the city of Winslow than in the county or the state as a whole. Figure 6 illustrates the distribution of median incomes throughout the region, by census tract. Higher median incomes are seen around the Flagstaff area, Munds Park, and part of Page, though areas of very low median incomes are also seen in Flagstaff as well as the southern part of Page. Williams, Winslow, and the Hopi Tribe also have low median incomes.

[vi] *For more information on the CACFP, visit http://www.azed.gov/health-nutrition/cacfp/*

[vii] *For more information on the Arizona WIC Program, visit http://azdhs.gov/prevention/azwic/*

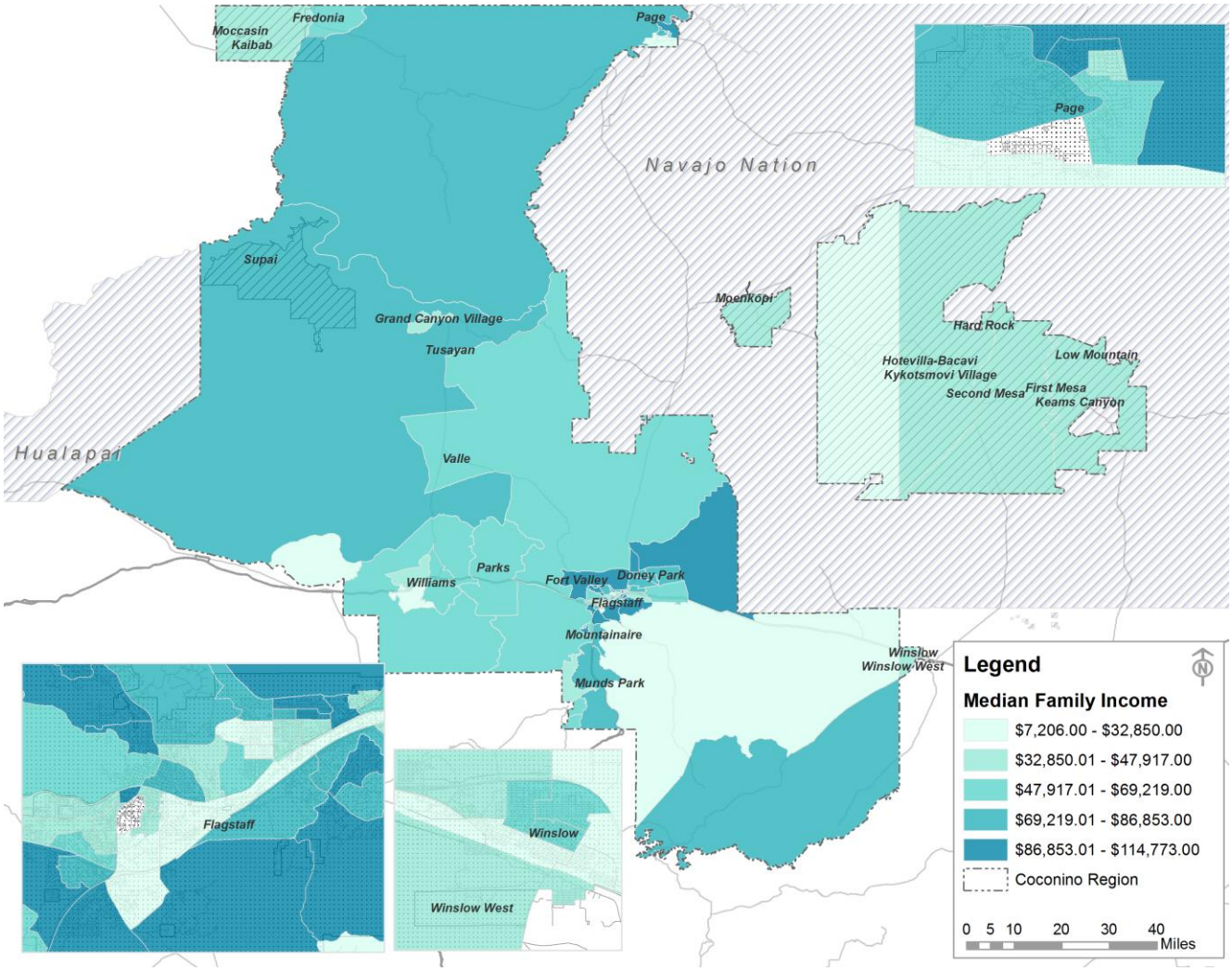
Table 16 Median Annual Family Income

	Median family income for all families	Median family income for husband-wife families with child(ren) under 18	Median family income for single-male-householder families with child(ren) under 18	Median family income for single-female-householder families with child(ren) under 18
Coconino Region	N/A	N/A	N/A	N/A
Fredonia town	$58,527.00	$51,250.00	N/A	N/A
Grand Canyon Village-Tusayan-Valle	N/A	N/A	N/A	N/A
Flagstaff city	$64,207.00	$77,138.00	$38,381.00	$27,097.00
Havasupai Reservation	$44,750.00	N/A	N/A	N/A
Hopi Reservation	$36,658.00	$56,250.00	N/A	$22,045.00
Kaibab Indian Reservation	$28,542.00	$40,875.00	N/A	$18,750.00
Page city	$54,806.00	$72,583.00	N/A	N/A
Williams city	$56,000.00	$43,750.00	N/A	N/A
Winslow city	$43,818.00	$63,068.00	$22,738.00	$19,211.00
Coconino County	$59,216.00	$77,032.00	$37,527.00	$25,777.00
ARIZONA	$59,088.00	$73,563.00	$37,103.00	$25,787.00

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B19126

Note: Median family income figures are for cities, towns, and reservations, and geography differs slightly than the community definitions for other tables. Median income figures cannot be aggregated to a custom geography for which the original income data is not available; thus no median income estimates could be provided for the region.

Figure 6 Map of Median Household Income in the Coconino Region



Source: U.S Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B19126. Map produced by CRED.

Poverty

Twenty-three percent of the total (all-age) population of the Coconino Region lives in poverty, which is slightly lower than elsewhere in Coconino County (24% in poverty) but higher than the state (18%) (Table 17). The percentage of the population aged 0-5 in poverty in the Coconino Region (33%) is higher than the total population in the region in poverty (23%) and higher than the population of children aged 0-5 living in poverty across state (29%) (Table 17). Sub-regional data illustrates that there is a great deal of heterogeneity across the region. While young children in some areas, such as the Fredonia community are better off (22% in poverty), over half of children in the Williams-Park

community (57%) live in poverty (Table 17). Figure 7 illustrates the census blocks in the region with the highest numbers of children in poverty.

In addition to the families whose incomes fall below the federal poverty level, a proportion of households in the region and county are considered low-income (i.e., near but not below the federal poverty level (FPL)). Over half of families (52%) in the region with children aged four and under live below 185 percent of the FPL (i.e., earned less than $3,677 a month for a family of four), which is similar to the 53 percent in the county and 49 percent across the state (Table 19). Families with children in the Grand-Canyon-Tusayan-Valle community are faring better (40%), whereas 95 percent of families in the Kaibab Band of Paiute Indians community and 73 percent in the Hopi Tribe community are low-income or in poverty.

According to the Cost of Living Index (COLI), which is published quarterly by The Council for Community and Economic Research (C2ER)[4344], data for the first three quarters of 2016 indicated that Flagstaff had an index score of 113.6, meaning its composite cost of living is 13.6 percent higher than the national average. The index reflects the different categories of consumer expenditures and provides additional context regarding the economic circumstances in Flagstaff.

The TANF/Cash Assistance program can be an important short-term support to families in dire financial need. The number of young children supported by this program has steadily declined in recent years, both in the Coconino Region and statewide, dropping by over half in the region over the past four years (Table 20). The 134 young children receiving TANF in the Coconino Region represent only 1 percent of the total children in the region, a lower percentage than the percent of young children receiving TANF statewide. The proportion of children receiving TANF varies between communities, with double the proportion of children (2%) receiving TANF in the Greater Flagstaff Area and Winslow communities than in the region as a whole, and the highest proportion of children (10%) receiving TANF in the Hopi Tribe community (Figure 8). The Hopi Tribe administers their own TANF program, which may account for the higher proportion of children receiving TANF. Fewer than 25 children received TANF in each of the other communities of the Coconino Region.

Between 1996 and 2015, Arizona reduced TANF benefits more than any other state in the nation, and now ranks 42nd in the level of assistance to those participating in TANF.[45] In Arizona, TANF eligibility is capped at $335 per month, or $4020 annually for a family of four. Beginning in 2016, Arizona became the first and only state that limits a person's lifetime benefit to 12 months. [46] In addition, since 2009, a steadily decreasing percentage of Arizona TANF funds have been spent on three of the key assistance categories: cash assistance to meet basic needs, helping connect parents to employment opportunities, and child care. In 2013, Arizona ranked 51st, 47th, and 46th respectively in proportional spending in those categories across all states and the District of Columbia. Meanwhile, since 2009, an increasing percentage of Arizona TANF funds have been spent on other costs such as child protection, foster care, and adoption.[47]

In recognition of tribal sovereignty, the federal agency in charge of overseeing the TANF program, the U.S. Department of Health and Human Services, Administration for Children and Families (ACF), gives federally-recognized tribes the option to administer their own TANF program. The Hopi Tribe is one of the six Arizona tribes that operate a Tribal TANF program, administered by the Hopi Department of Social and Behavioral Services. Some Tribal TANF program requirements are different from those in state programs (e.g. time limit on receipt of TANF cash assistance). Tribal TANF programs also have

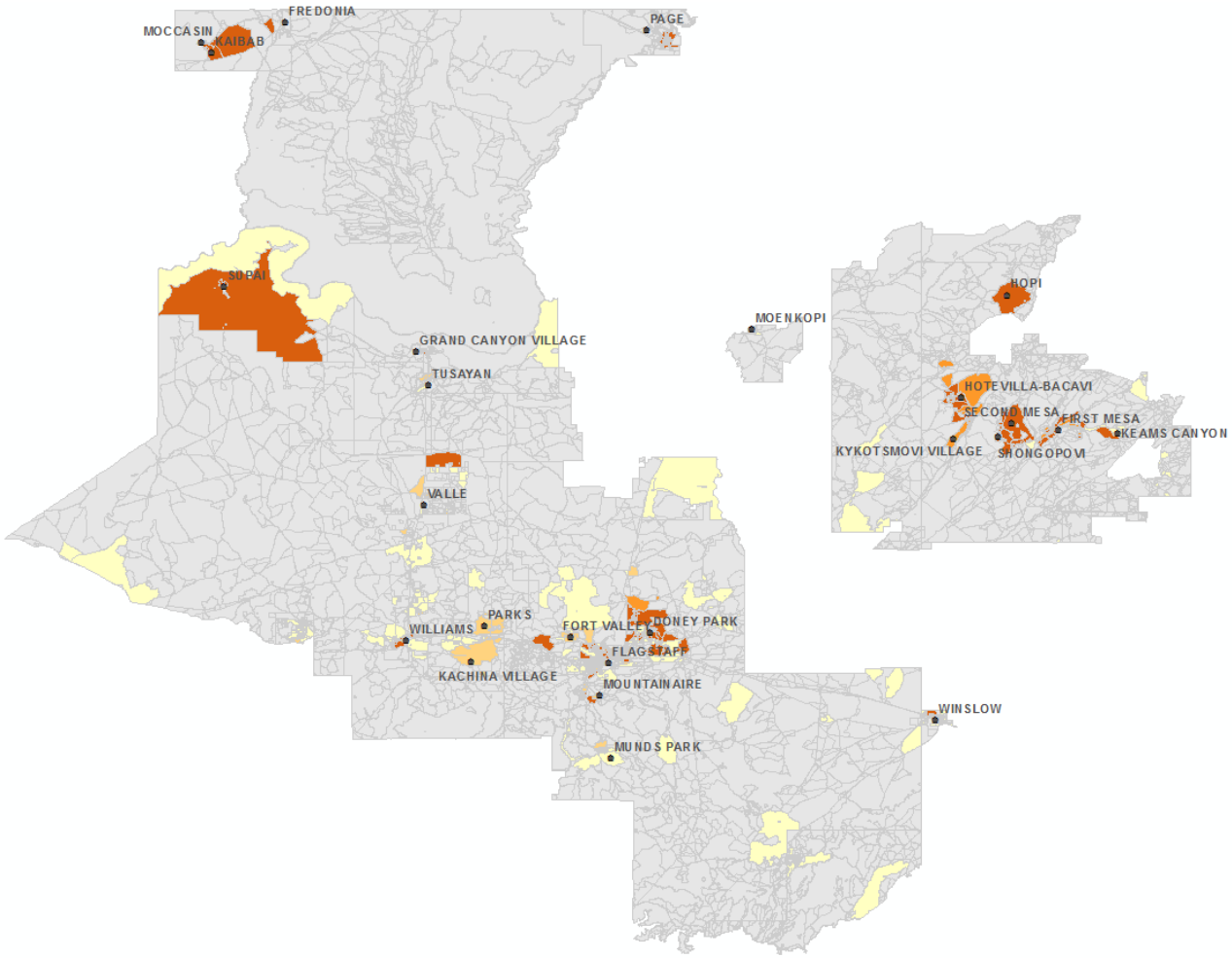
more flexibility in determining program requirements, which allows them, for instance, to incorporate socially and culturally appropriate activities into their self-sufficiency plans for clients.[48]

Table 17 Persons Living in Poverty

	Number of persons (all ages) for whom poverty status is known	Persons (all ages) below poverty level	Number of young children (ages 0-5) for whom poverty status is known	Young children (ages 0-5) below poverty level	Number of older children (ages 6-17) for whom poverty status is known	Older children (ages 6-17) below poverty level
Coconino Region	115,728	23%	9,049	33%	18,418	25%
Fredonia	1,513	19%	145	22%	283	13%
Grand Canyon Village-Tusayan-Valle	3,002	21%	128	28%	301	20%
Greater Flagstaff Area	79,342	21%	5,926	30%	11,611	21%
Havasupai Tribe	126	40%	0		13	100%
Hopi Tribe	8,219	32%	886	42%	1,744	40%
Kaibab Band of Paiute Indians	277	18%	35	14%	64	31%
Page	7,992	19%	820	25%	1,685	23%
Williams-Parks	6,403	27%	384	57%	765	24%
Winslow	8,815	26%	764	42%	1,845	37%
Coconino County	127,035	24%	10,170	34%	20,030	26%
ARIZONA	6,411,354	18%	522,513	29%	1,071,471	25%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B17001

Figure 7 Map of Population in Poverty in the Coconino Region



Legend	# of Census Blocks	Poverty 0-5	Population 0-5	% Poverty
High Poverty-High Population	724	2,437	7,100	34%
High Poverty-Low Population	180	251	387	65%
Low Poverty-High Population	187	91	841	11%
Low Poverty-Low Population	717	250	984	25%
No Poverty	13,108	0	340	0%
Total	**14,916**	**3,029**	**9,652**	**31%**

Source: First Things First (2016). Map produced by First Things First.

Note: In order to arrive at the 5 categories below, FTF IT utilized the number of children, birth to age 5 from the 2010 Census according to the census block data and proportionally allocated the 2007-2011 American Community Survey poverty numbers to census blocks. The decision was made to go with older ACS estimates as they better align with the population at that time (i.e. 2010 Census).
Each category is based on quartiles: 1 = top 25%, 2 = 51-75%, 3= 25-50%, 4= Bottom 25%. The ranking is within a single council.

Table 18 Families Living in Poverty

	Number of families with children (ages 0-17)	Percent of families with children (ages 0-17) in poverty	Number of families with children (ages 0-4)	Percent of families with children (ages 0-4) in poverty	Number of families with children (ages 5-17)	Percent of families with children (ages 5-17) in poverty
Coconino Region	13,504	24%	5,280	32%	10,849	24%
Fredonia	130	20%	58	29%	102	19%
Grand Canyon Village-Tusayan-Valle	242	24%	79	22%	189	24%
Greater Flagstaff Area	9,149	21%	3,550	30%	7,278	21%
Havasupai Tribe	4	100%	0	0%	4	100%
Hopi Tribe	999	36%	531	38%	885	38%
Kaibab Band of Paiute Indians	37	30%	19	16%	32	34%
Page	1,132	26%	507	23%	880	24%
Williams-Parks	665	32%	214	54%	536	21%
Winslow	1,139	32%	368	37%	934	32%
Coconino County	14,784	25%	5,984	33%	11,895	25%
ARIZONA	757,704	21%	301,165	27%	624,426	21%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B17010

Note: Please note that the columns in this table are cumulative. In other words, the 20% of families that are below 100% of the FPL are also counted in the 46% of families that are below 185% of the FPL

Table 19 Ratio of Income to Federal Poverty Level (FPL) for Families with Young Children (Ages 0 to 4)

	Estimated number of families with children (ages 0-4)	Families with children (ages 0-4) below 100% FPL	Families with children (ages 0-4) below 130% FPL	Families with children (ages 0-4) below 150% FPL	Families with children (ages 0-4) below 185% FPL
Coconino Region	**5,283**	**32%**	**39%**	**45%**	**52%**
Fredonia	80	27%	28%	34%	53%
Grand Canyon Village-Tusayan-Valle	83	22%	22%	35%	40%
Greater Flagstaff Area	3,537	30%	35%	40%	47%
Havasupai Tribe	0	N/A	N/A	N/A	N/A
Hopi Tribe	531	38%	54%	60%	73%
Kaibab Band of Paiute Indians	19	16%	26%	84%	95%
Page	480	23%	35%	48%	48%
Williams-Parks	207	55%	55%	62%	71%
Winslow	375	37%	52%	62%	65%
Coconino County	5,984	33%	39%	45%	53%
ARIZONA	301,165	27%	35%	41%	49%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B17022

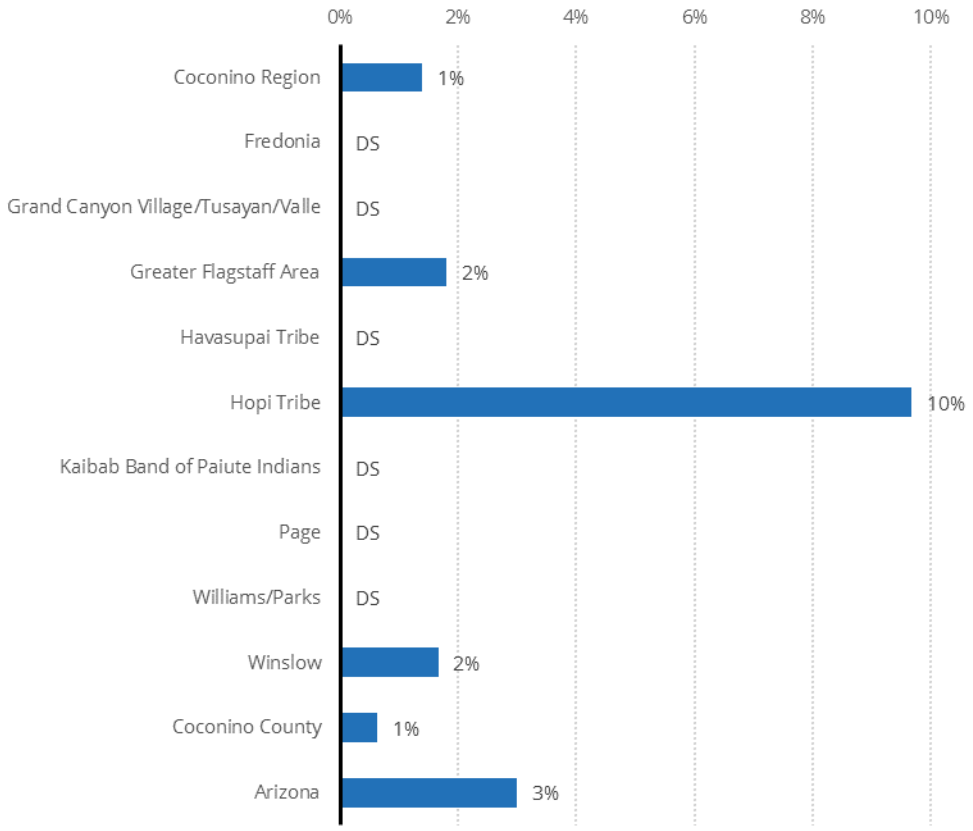
Note: Due to small sample size in the American Community Surveys, data on families in poverty was not available for the Havasupai Tribe.

Table 20 Number of Children (Ages 0 to 5) Receiving Temporary Assistance to Needy Families (TANF)

	CY 2012	CY 2013	CY 2014	CY 2015	Change from 2012 to 2015
Coconino Region	**297**	**269**	**175**	**134**	**-55%**
Coconino County	161	146	91	67	-58%
ARIZONA	26,827	24,889	19,884	16,336	-39%

Source: Arizona Department of Economic Security (2016). [Family Assistance Administration dataset]. Unpublished data.

Figure 8 Estimated percent of children (ages 0-5) receiving TANF, 2015



Source: Arizona Department of Economic Security (2016). [Family Assistance Administration dataset]. Unpublished data.

Note: Estimated percent was calculated by dividing the number of children (ages 0-5) receiving TANF in each community by the total number of children (ages 0-5) residing in the community according to the 2010 Census (see Table 1)

Employment and Unemployment

Unemployment rate in Coconino County have been slightly higher than the state rate since 2012. It is worth noting, however, that unemployment rates have been dropping steadily in both Coconino County and the state since 2010 (Table 21). In 2015, the unemployment rate in Coconino County was 6.6%. A closer look within Coconino reveals a diversity of experiences. Since 2011, the city of Winslow has consistently had higher rates of unemployment than other cities in the region such as Flagstaff, Page, or Williams, which have had lower unemployment rates than the county or the state (Figure 9).[viii]

[viii] *Note that the areas listed are those for which the Arizona Local Area Unemployment Statistics have calculated unemployment rates. The definitions of these places follow Census definitions of cities and towns. Geographic definitions were revised by the Bureau of Labor Statistics in 2016 and recalculated for the periods of 1976-2016. Tribal unemployment statistics as well as estimates for small towns and places are no longer available.*

Other employment indicators suggest that the economy in Coconino County is improving. According to the Bureau of Economic Analysis, the number of full-time and part-time jobs in 2015 was 83,350. This was a 9 percent increase in jobs from 2010, when there were 76,433 jobs. Average yearly job earnings also increased in that same period from $40,852 to $45,423, an 11 percent increase.[49,ix] This increase in average earnings was greater than the 8 percent increase in average earnings seen statewide in the same period. In 2015, the U.S. Bureau of Labor Statistics estimated that the average hourly wage for workers in the Flagstaff Metropolitan Statistical Area (which includes all of Coconino County) was $19.98, 14 percent lower than the U.S. average hourly wage of $23.23. Major employment sectors in the county include food preparation and serving (15.0% of total employed workers), office and administrative support (14.1%), sales (10.7%), and healthcare (8.1%).[50]

For young children living with both parents in the region, both parents are more likely to be in the labor force (32%) than only one parent (22%) (Table 22).[x] This pattern is similar for the county and the state. Thirty-four percent of young children in the Coconino Region live with a single parent who is employed (Table 22). Taken together, this means that two-thirds (66%) of young children in the region live in a home where all the parents participate in the labor force. This rate is higher in the Greater Flagstaff Area and Grand Canyon Village-Tusayan-Valle communities (70% and 68%, respectively). Families in this situation are likely to have a high need for child care. Beyond employment driving the demand for child care, child care availability can also influence the ability of parents to participate in the labor. Lack of child care, or the prohibitive cost of child care, can keep parents from participating in the labor force.[51] About 12 percent of children do not have a parent is participating in the labor force, which is nearly the same as the statewide rate (11%). However, rates are much higher in the Hopi Tribe (31%), Grand Canyon Village-Tusayan-Valle (19%), Page (18%), and Williams-Parks (18%) communities. The Kaibab Band of Paiute Indians community has particularly high percentages of children living in homes where all parents are participating in the labor force (83%), which surprised key informants in the community. However, it is important to note that parents are considered in the labor force if they currently have a job or are looking for a job, so high rates of labor force participation may indicate that many parents in the community are looking for work, even if they are not currently employed.

[ix] *For more economic statistics for Coconino County, see the University of Arizona Eller Economic and Business Research Center, https://ebr.eller.arizona.edu/current-indicators/arizona-counties/coconino-county*

[x] *Note: "In the labor force" includes persons who are employed and persons who are unemployed but looking for work. Persons who are "not in the labor force" include stay-at-home parents, students, retirees, and others who are not working or looking for work.*

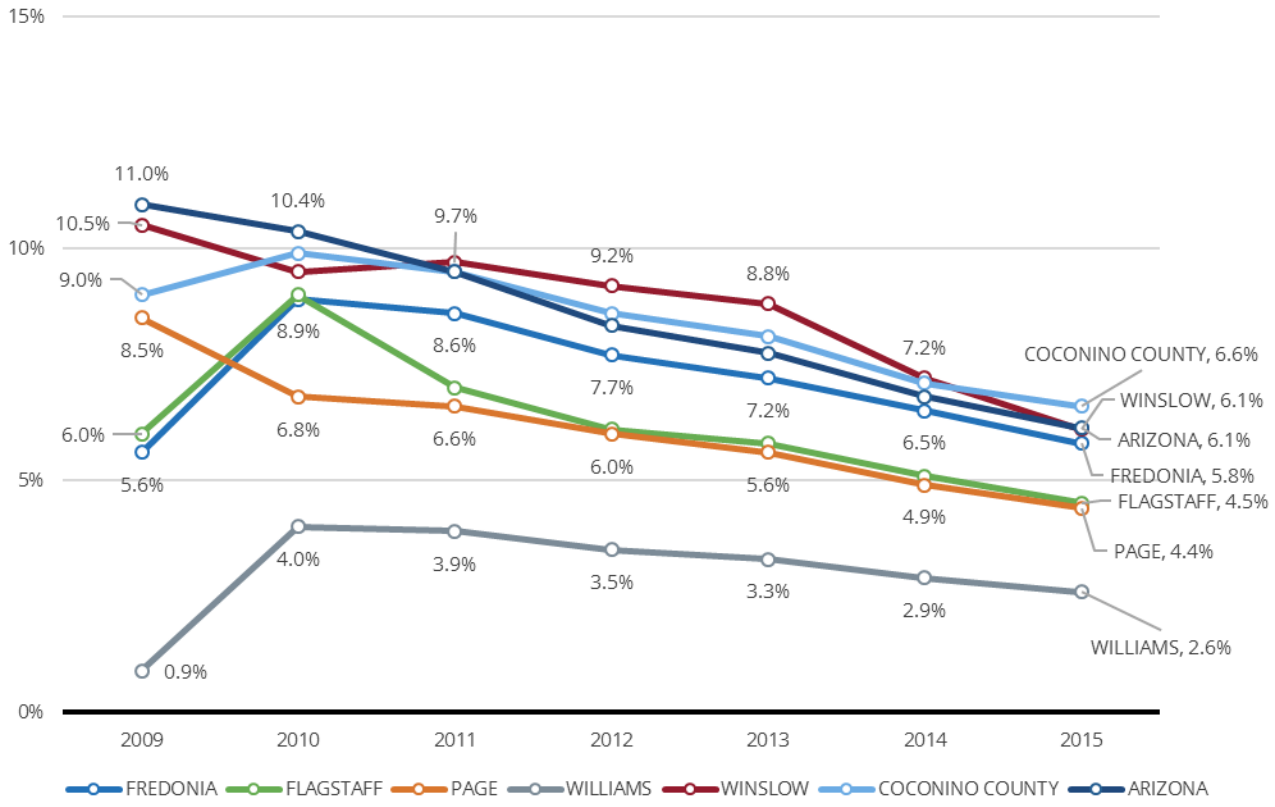
Table 21 Annual Unemployment Rates, 2009 to 2015

	CY 2009	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fredonia Town	5.6%	8.9%	8.6%	7.7%	7.2%	6.5%	5.8%
Flagstaff City	6.0%	9.0%	7.0%	6.1%	5.8%	5.1%	4.5%
Page City	8.5%	6.8%	6.6%	6.0%	5.6%	4.9%	4.4%
Williams City	0.9%	4.0%	3.9%	3.5%	3.3%	2.9%	2.6%
Winslow City	10.5%	9.5%	9.7%	9.2%	8.8%	7.2%	6.1%
Coconino County	8.5%	9.9%	9.5%	8.6%	8.1%	7.1%	6.6%
ARIZONA	9.9%	10.4%	9.5%	8.3%	7.7%	6.8%	6.1%

Source: Arizona Department of Administration, Employment and Population Statistics (2016). Local area unemployment statistics (LAUS).

Note: Unemployment rates represent annual averages and are not seasonally adjusted

Figure 9 Annual Unemployment Rates for Cities and Towns, 2009 to 2015



Source: Arizona Department of Administration, Employment and Population Statistics (2016). Local area unemployment statistics (LAUS).

Note: Unemployment rates represent annual averages and are not seasonally adjusted

Table 22 Parents of Young Children (Ages 0 to 5) Who Are or Are Not in the Labor Force

	Estimated number of children (ages 0-5) living with one or two parents	Children (ages 0-5) living with two parents who are both in the labor force	Children (ages 0-5) living with two parents, one in the labor force, and one not	Children (ages 0-5) living with two parents, neither in the labor force	Children (ages 0-5) living with a single parent who is in the labor force	Children (ages 0-5) living with a single parent who is not in the labor force
Coconino Region	8,850	32%	22%	1%	34%	11%
Fredonia	133	27%	46%	0%	27%	0%
Grand Canyon Village-Tusayan-Valle	122	41%	12%	16%	27%	3%
Greater Flagstaff Area	5,838	40%	22%	0%	30%	8%
Havasupai Tribe	0	N/A	N/A	N/A	N/A	N/A
Hopi Tribe	826	10%	5%	0%	54%	31%
Kaibab Band of Paiute Indians	29	66%	10%	0%	17%	7%
Page	819	29%	23%	0%	30%	18%
Williams-Parks	369	2%	33%	17%	46%	1%
Winslow	748	7%	22%	0%	55%	16%
Coconino County	9,818	31%	19%	2%	34%	14%
ARIZONA	510,658	31%	29%	1%	29%	10%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B23008

Note: "In the labor force" includes persons who are employed and persons who are unemployed but looking for work. Persons who are "not in the labor force" include stay-at-home parents, students, retirees, and others who are not working or looking for work.

Food Insecurity

Feeding America's "Map the Meal Gap" project gathers information regarding food insecure households, types of households, unemployment rates, and other information to provide a picture of the nation's food insecurity.[52] Food insecurity is defined by the USDA as a "household-level economic and social condition of limited or uncertain access to adequate food."[53] In the Coconino County, 20 percent of the population is estimated to be food insecure, which is higher than across the state as a whole (17%). Thirty percent of Coconino County children (those under 18 years old) are food insecure, higher than the state's 27 percent. An estimated 73 percent of food insecure children in the county are likely to be income-eligible for federal nutrition assistance (Table 23).[54,55]

Families' ability to promote the health of their children is influenced by the built environment of their communities. In the Coconino County in 2012 (the most recent data available), there were 6 times as

many fast-food restaurants as there are grocery stores (Table 24).[xi] Availability of recreation and fitness facilities may influence the frequency of physical activity. Approximately one-quarter (24%) of adults over age 18 in Arizona reported getting no physical activity during their leisure time in the prior month.[56] In all of Coconino County, there were only 10 fitness and recreation facilities in 2012,[xii] meaning that many families cannot reasonably access one of these facilities.

Other programs, such as the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the National School Lunch Program are important for helping those at risk of hunger. While the number of young children participating in SNAP has declined since 2012, this program still supported nearly 5,000 children in the Coconino Region in 2015 (Table 25; Figure 10). The estimated percent of young children enrolled in SNAP varies widely between communities in the Coconino Region. Although about half (49%) of children ages 0-5 in the region received SNAP benefits in 2015, only about a third of young children in the Greater Flagstaff area and Williams-Parks communities received SNAP (36% and 33%, respectively) (Figure 10). The vast majority of children in the Page (80%), Hopi Tribe (93%), and Winslow (96%) communities received SNAP benefits in 2015. Figure 11 shows the percent of all households receiving SNAP in the region by census tract, according to the American Community Survey.

WIC enrollment has also declined slightly (Table 27) but still served a substantial portion of the population of women and children (38% in 2015). Like SNAP, enrollment in the WIC program varies by community, with an estimated 89 percent of children in the Havasupai Tribe community and only 22 percent of children in the Grand Canyon Village-Tusayan-Valle community (Table 27; Figure 12). Table 28 provides a single month snapshot of participation in the program in 2015; 78 percent of women, 82 percent of infants and 74 percent of children who were enrolled in WIC claimed their benefits in the month of January. Participation rates in January 2015 were particularly high in the Fredonia (90%), Winslow (88%), and Hopi Tribe (85%) communities, whereas rates were low in the Grand Canyon Village-Tusayan-Valle community (45%) (Table 28). One challenge to participating in SNAP or WIC may be the availability of retailers where WIC vouchers or SNAP EBT are accepted. In 2016, several communities in the region lacked accessible SNAP or WIC retailers. As of June 2016, there were no SNAP retailers in the Grand Canyon Village-Tusayan-Valle or Kaibab Band of Paiute Indians communities, and no WIC retailers in either of these communities nor in the Fredonia or Havasupai communities (Table 29). In order to redeem SNAP or WIC benefits, residents of these communities must travel to other cities to do their grocery shopping.

Schools are an important part of the nutrition assistance system, especially for children that may be food insecure. About half (48-54%) of students in the Coconino Region have been eligible for free or

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[xi] *Based on the USDA definitions, grocery stores are defined here as "establishments generally known as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Included in this industry are delicatessen-type establishments primarily engaged in retailing a general line of food. Convenience stores, with or without gasoline sales, are excluded. Large general merchandise stores that also retail food, such as supercenters and warehouse club stores, are excluded."*
https://www.ers.usda.gov/webdocs/DataFiles/Data_Access_and_Documentation_Downloads__18030/documentation.pdf?v=42226

[xii] *Based on the USDA definitions, these are "establishments primarily engaged in operating fitness and recreational sports facilities featuring exercise and other active physical fitness conditioning or recreational sports activities, such as swimming, skating, or racquet sports."*
https://www.ers.usda.gov/webdocs/DataFiles/Data_Access_and_Documentation_Downloads__18030/documentation.pdf?v=42226

reduced-price lunch since 2012 (Table 30; Figure 13). This is lower than the percent across the state, which has hovered at 57 percent. Over the last five years, the proportion of students receiving free or reduced-price lunch has declined in the region and county, as well as many of districts in the region. In 2016, Flagstaff Unified District (38%) had the lowest proportion of students eligible, while Coconino Region Charter Schools had the highest proportion (78%), followed by Grand Canyon Unified District (68%) (Table 30). When school is not in session, schools, community centers, churches, and other community institutions in areas with at least 50 percent of children or more who are eligible for free or reduced-price lunch can receive funding through the Summer Food Service Program (SFSP)[xiii] to provide summer meals to children of all ages.[57] Sixty-eight sites provided summer meals to children in Coconino County in 2015, and the number of meals served in the county nearly tripled between 2012 and 2015 (Table 31; Figure 14). This increase occurred predominantly between the summer of 2014 and 2015 when the number of participating sites nearly doubled from 35 to 68.[58]

In Coconino County in January 2015, there were 26 sites participating in the Child and Adult Care Food Program (CACFP), not counting adult care centers or emergency shelters. Most of these sites in the county were Head Start centers, in contrast to the state where most CACFP sites are child care centers and preschools (Table 33). The number of sites participating in CACFP as well as the number of meals served dramatically declined between 2014 and 2015 in Coconino County, whereas the number of meals and participating sites increased statewide (Table 34; Figure 15). Over half of all Head Start centers in Coconino County (17 out of 29) participate in CACFP, but there are many child care centers in the county who could participate in the program. One reason child care providers may not participate in the program is due to the administrative duties involved. Participating providers must keep daily records of menu, enrollment, attendance, and meals served, which may lead some providers to not participate due to the time involved in compiling and maintaining these records.[59] Further support for providers through training and technical support might further encourage participation in CACFP. Family and home child care providers can also participate in CACFP; however no data for these providers was received for this report.

[xiii] *For more information on the Summer Food Service Program in Arizona, visit http://www.azsummerfood.gov/*

Table 23 Food Insecurity and Eligibility for Federal Nutrition Assistance, 2014

	Total population	Food insecurity rate (all ages)	Likely eligible for Federal Nutrition Assistance (all ages)	Population of children (ages 0-17)	Food insecurity rate (ages 0-17)	Likely eligible for Federal Nutrition Assistance (ages 0-17)
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Coconino County	135,817	20%	70%	30,669	30%	73%
ARIZONA	6,731,484	17%	67%	1,622,071	27%	68%

Source: Feeding America (2016). Hunger in America. Retrieved from map.feedingamerica.org/county/2014/overall

Table 24 Food Environment, 2014

	Grocery stores, 2012	Grocery stores per thousand residents, 2012	Fast-food restaurants, 2012	Fast-food restaurants per thousand residents, 2012	Recreation & fitness facilities, 2012	Recreation and fitness facilities per thousand residents, 2012
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Coconino County	20	0.15	121	0.89	10	0.07
ARIZONA	825	0.13	4,238	0.65	456	0.07

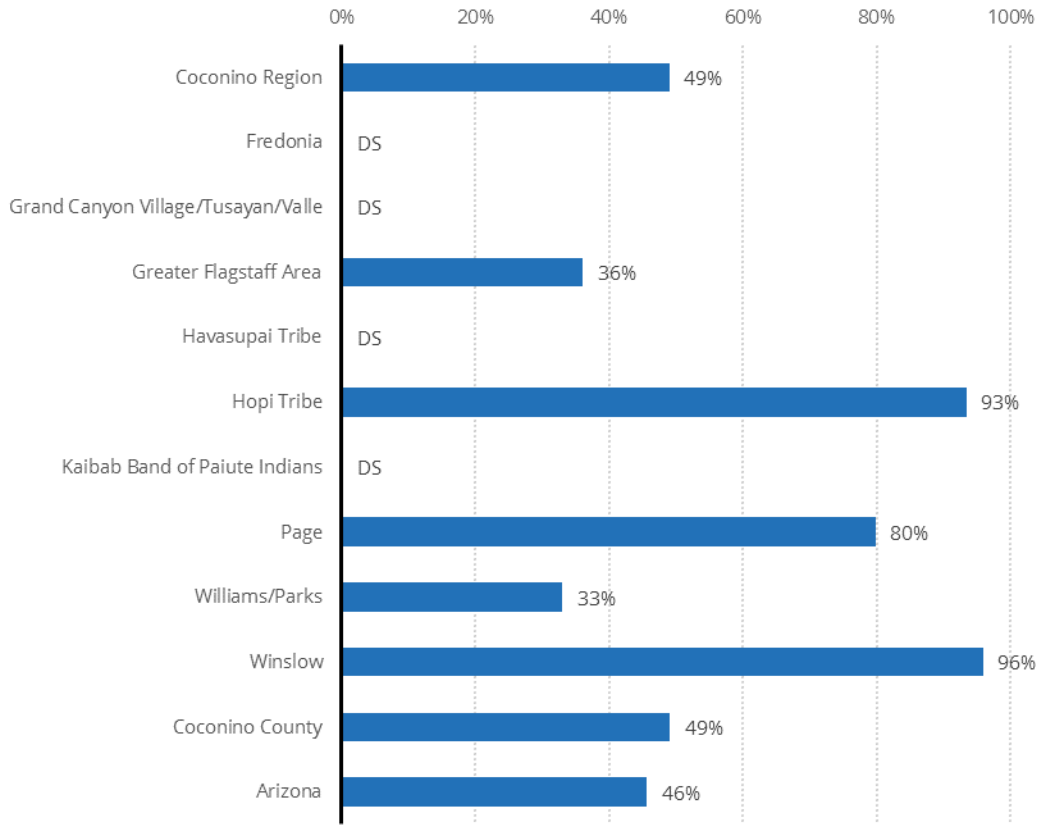
Source: USDA Economic Research Service (2014). Food Environment Atlas. Retrieved from www.ers.usda.gov/data-products/food-environment-atlas

Table 25 Numbers of Young Children (Ages 0 to 5) Receiving SNAP Benefits, 2012 to 2015

	CY 2012	CY 2013	CY 2014	CY 2015	Change from 2012 to 2015
Coconino Region	5,776	5,712	5,265	4,729	-18%
Coconino County	6,384	6,103	5,633	5,290	-17%
ARIZONA	296,686	290,513	277,345	249,712	-16%

Source: Arizona Department of Economic Security (2016). [Family Assistance Administration dataset]. Unpublished data.

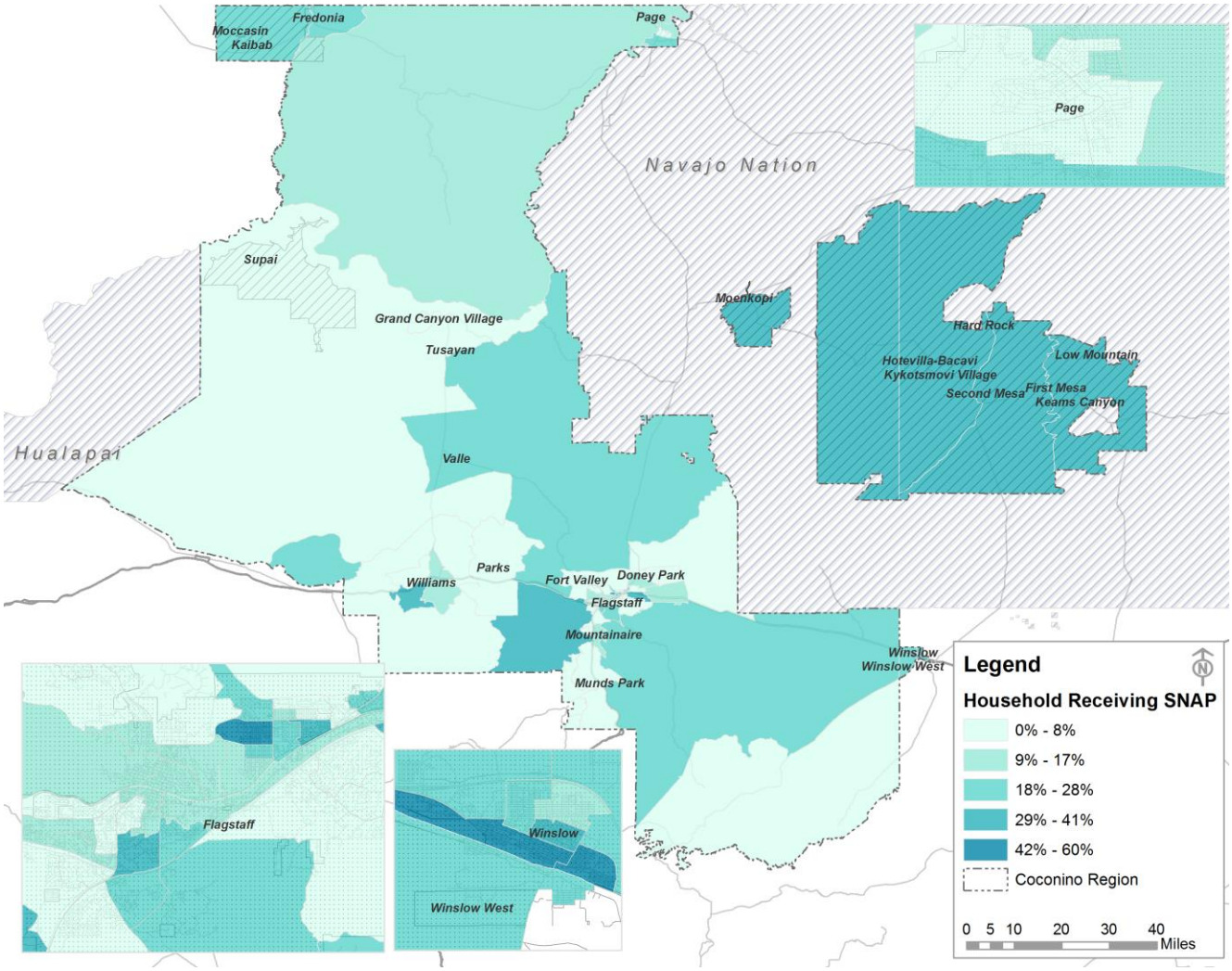
Figure 10 Estimated Percent of Children (ages 0-5) Receiving SNAP Benefits, 2015



Source: Arizona Department of Economic Security (2016). [Family Assistance Administration dataset]. Unpublished data.

Note: Estimated percent was calculated by dividing the number of children (ages 0-5) receiving SNAP in each community by the total number of children (ages 0-5) residing in the community according to the 2010 Census (see Table 1)

Figure 11 Map of Households receiving SNAP in the Coconino Region



Source: U.S Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B22002. Map produced by CRED.

Table 26 Number of Women, Infants, and Children Enrolled in the WIC Program During 2015

	Total	Women	Infants	Children
Coconino Region	**4,194**	**1,118**	**1,145**	**1,931**
Fredonia	46	<25	<25	25
Grand Canyon Village-Tusayan-Valle	54	<25	<25	27
Greater Flagstaff Area	2,990	805	814	1,371
Havasupai Tribe	69	<25	<25	31
Hopi Tribe	749	204	196	349
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A
Page	393	112	106	175
Williams-Parks	271	68	81	122
Winslow	381	95	100	186
Coconino County	4,310	1,157	1,178	1,975
ARIZONA	310,181	82,860	87,836	139,485

Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Inter-Tribal Council of Arizona (2016). [WIC datasets]. Unpublished data.

Noel: Data for the Hopi and Havasupai Tribes is from the Inter-Tribal Council of Arizona WIC program

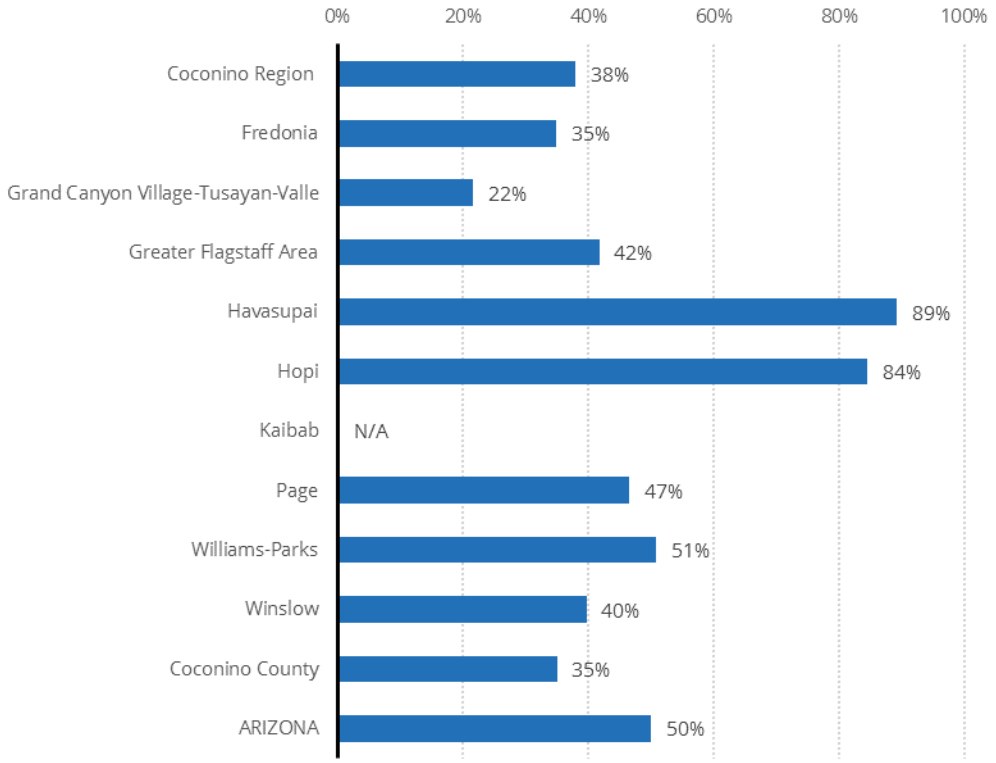
Table 27 Infants and Children (Ages 0 to 4) Enrolled in the WIC Program as a Percentage of the Population, 2012 to 2015

	Number of children (ages 0-4) in 2010 US Census	2012	2012	2013	2013	2014	2014	2015	2015	Change from 2012 to 2015
Coconino Region	**7,994**	**3,501**	**44%**	**3,224**	**40%**	**3,027**	**38%**	**3,076**	**38%**	**-12%**
Fredonia	106	56	53%	48	45%	38	36%	37	35%	-34%
Grand Canyon Village-Tusayan-Valle	199	37	19%	40	20%	40	20%	43	22%	+16%
Greater Flagstaff Area	5,235	2,508	48%	2,293	44%	2,132	41%	2,185	42%	-13%
Havasupai Tribe	56	N/A	N/A	53	95%	47	84%	50	89%	-6%
Hopi Tribe	645	N/A	N/A	607	94%	584	91%	545	84%	-10%
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Page	603	349	58%	308	51%	283	47%	281	47%	-19%
Williams-Parks	399	209	52%	188	47%	207	52%	203	51%	-3%
Winslow	721	302	42%	311	43%	297	41%	286	40%	-5%
Coconino County	8,945	3,608	40%	3,290	37%	3,105	35%	3,153	35%	-13%
ARIZONA	455,715	255,332	56%	243,050	53%	233,012	51%	227,321	50%	-11%

Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.; Inter-Tribal Council of Arizona (2016). [WIC datasets]. Unpublished data.

Note: WIC Enrollment in 2012 was not available from the Inter-Tribal Council of Arizona WIC program

Figure 12 Estimated Percent of Infants and Children (ages 0-4) Enrolled in the WIC Program, 2015



Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Inter-Tribal Council of Arizona (2016). [WIC datasets]. Unpublished data.

Note: Estimated percent was calculated by dividing the number of children (ages 0-5) receiving WIC in each community by the total number of children (ages 0-5) residing in the community according to the 2010 Census (see Table 1)

Table 28 WIC Participation Rates During January 2015

	Total	Women	Infants	Children
Coconino Region	**77%**	**78%**	**82%**	**74%**
Fredonia	90%	DS	100%	87%
Grand Canyon Village-Tusayan-Valle	45%	DS	DS	76%
Greater Flagstaff Area	75%	75%	80%	72%
Havasupai Tribe	70%	N/A	N/A	N/A
Hopi Tribe	85%	N/A	N/A	N/A
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A
Page	80%	93%	88%	69%
Williams-Parks	77%	77%	84%	72%
Winslow	88%	87%	87%	89%
Coconino County	76%	76%	81%	74%
ARIZONA	79%	78%	84%	77%

Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Inter-Tribal Council of Arizona (2016). [WIC datasets]. Unpublished data.

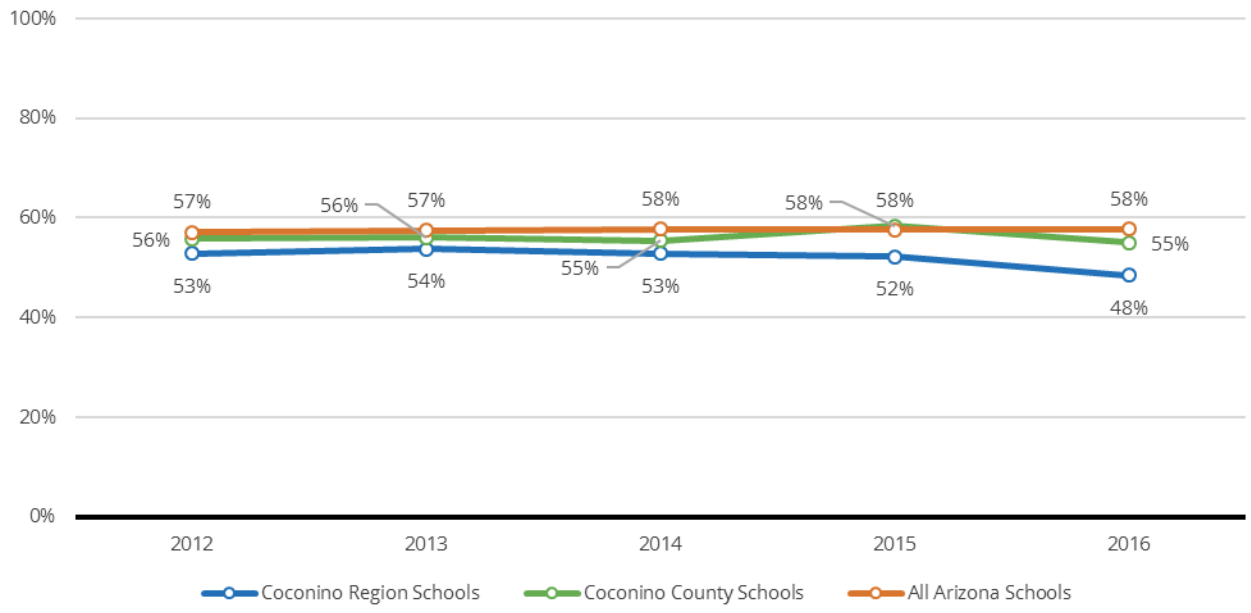
Table 29 Retailers Participating in the SNAP or WIC Programs, 2016

	Number of SNAP retailers	SNAP retailers per 100,000 residents	Number of WIC retailers	WIC retailers per 100,000 residents
Coconino Region	95	76.5	15	12.1
Fredonia	4	276.2	0	0.0
Grand Canyon Village-Tusayan-Valle	0	0.0	0	0.0
Greater Flagstaff Area	59	68.1	8	9.2
Havasupai Tribe	1	215.1	0	0.0
Hopi Tribe	7	97.4	3	41.8
Kaibab Band of Paiute Indians	0	0.0	0	0.0
Page	10	125.9	1	12.6
Williams-Parks	7	102.6	1	14.7
Winslow	7	70.8	2	20.2
Coconino County	101	75.1	12	8.9
ARIZONA	4,038	63.2	644	10.1

Source: United Arizona Department of Health Services (2016). Arizona WIC Vendor List. Retrieved from http://azdhs.gov/documents/prevention/azwic/az-wic-vendor-list.pdf; Inter-Tribal Council of Arizona (2016). Special Supplemental Nutrition Program for Women, Infants, and Children: Find a Store. Retrieved from http://itcaonline.com/?page_id=1064; United States Department of Agriculture (2016). SNAP Retailer Locator. Retrieved from https://www.fns.usda.gov/snap/retailerlocator.

Notes: Per capita figures were calculated using the 2010 Census total population for each geography. SNAP and WIC retailers by geography account for the retailers falling within the geographic boundaries of a given area. WIC retailers account for retailers authorized through both the Arizona Department of Health Services and the Inter-Tribal Council of Arizona WIC Programs.

Figure 13 Proportion of Students (Pre-kindergarten Through Twelfth Grade) Eligible for Free or Reduced-Price Lunch, 2012 to 2016



Source: Arizona Department of Education (2016). [Free and reduced lunch dataset]. Unpublished data.

Table 30 Proportion of Students (Pre-kindergarten Through Twelfth Grade) Eligible for Free or Reduced-Price Lunch, 2012 to 2016

	2012	2013	2014	2015	2016
Coconino Region Schools	**53%**	**54%**	**53%**	**52%**	**48%**
Arizona State Schools for the Deaf and Blind	N/A	N/A	N/A	N/A	N/A
Coconino County Accommodation School District	43%	84%	82%	59%	58%
Flagstaff Unified District	43%	45%	44%	44%	38%
Fredonia-Moccasin Unified District	80%	75%	69%	76%	57%
Grand Canyon Unified District	55%	55%	71%	63%	68%
Maine Consolidated School District	48%	49%	52%	49%	48%
Page Unified District	67%	65%	64%	63%	63%

Williams Unified District	65%	68%	66%	62%	62%
Winslow Unified District	64%	64%	64%	64%	64%
Coconino Region Charter Schools	77%	78%	81%	74%	78%
Coconino County Schools	56%	56%	55%	58%	55%
All Arizona Schools	57%	57%	58%	58%	58%

Source: Arizona Department of Education (2016). [Free and reduced lunch dataset]. Unpublished data.

Note: The data for the districts and schools above is only for the schools that fall within the regional boundaries and thus may differ from the data for the district as a whole.

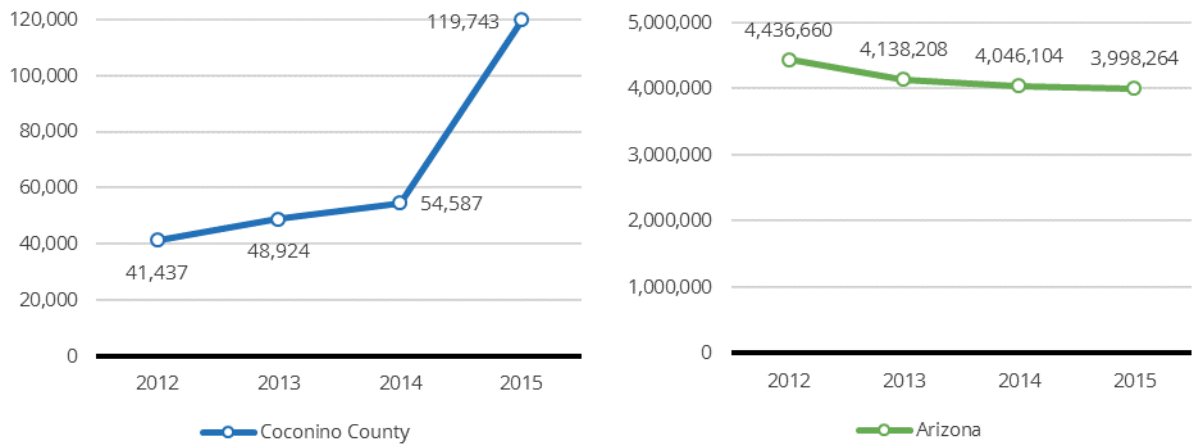
Table 31 Summer Food Service Program (SFSP) Sites and Meals Served

	Number of sites in Summer 2015	Number of free meals in Summer 2015	Change in the number of meals from 2012 to 2015
Coconino Region	N/A	N/A	N/A
Coconino County	68	119,743	+189%
Arizona	3,506	3,998,264	-10%

Source: Arizona Department of Education (2015). [Summer Food Service Program Dataset]. Unpublished data.

Note: The Summer Food Service Program serves children of all ages based on area eligibility. Sites must be located in the attendance area of a school or a census tract or block group where at least 50 percent of children are eligible for free or reduced price meals

Figure 14 Trends in Meals Served through the Summer Food Service Program (SFSP)



Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Inter-Tribal Council of Arizona (2016). [WIC datasets]. Unpublished data.

Note: The Summer Food Service Program serves children of all ages based on area eligibility. Sites must be located in the attendance area of a school or a census tract or block group where at least 50 percent of children are eligible for free or reduced price meals

Table 32 Number of Children Served by the Child and Adult Care Food Program (CACFP) in January 2015

	Breakfast	Morning snack	Lunch	Afternoon snack	Supper	Evening snack
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Coconino County	665	20	665	1,848	0	0
Arizona	50,252	16,809	54,098	56,849	27,906	2,375

Source: Arizona Department of Education (2015). [Child and Adult Food Care Program Dataset]. Unpublished data.

Note: Meals served at adult care centers and emergency shelters were excluded from this table

Table 33 Sites participating in CACFP by type, January 2015

	At-Risk Meal Service Center	Child Care Center or Preschool	Head Start Center	Outside School Hours Care Center
Coconino Region	N/A	N/A	N/A	N/A
Coconino County	6	1	17	2
Arizona	196	401	294	10

Source: Arizona Department of Education (2015). [Child and Adult Food Care Program Dataset]. Unpublished data.

Note: This does not include adult care centers or emergency shelters where meals were served.

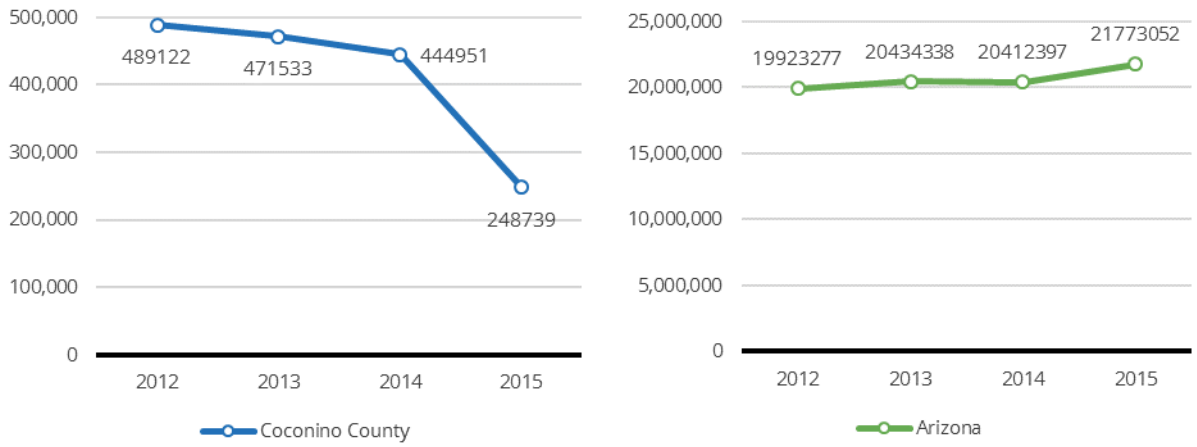
Table 34 Number of sites participating in CACFP, 2012-2016

	January 2012	January 2013	January 2014	January 2015	Change from 2012 to 2015
Coconino Region	N/A	N/A	N/A	N/A	N/A
Coconino County	35	35	37	26	-26%
Arizona	849	868	873	901	+6%

Source: Arizona Department of Education (2015). [Child and Adult Food Care Program Dataset]. Unpublished data.

Note: This does not include adult care centers or emergency shelters where meals were served.

Figure 15 Trends in Meals Served through the Child and Adult Care Food Program, 2012-2015



Source: Arizona Department of Education (2015). [Child and Adult Food Care Program Dataset]. Unpublished data

Note: This does not include adult care centers or emergency shelters where meals were served.

Housing and Homelessness

Of the 43,072 occupied housing units in the Coconino Region, 42 percent are occupied by renters and 58 percent are occupied by home-owners (Table 35). Lower homeownership rates are seen in the Greater Flagstaff (54%) and Winslow (59%) communities, while in the Grand Canyon Village-Tusayan-Valle, Page, and Williams-Parks communities home ownership rates are at or above 70 percent. Home-ownership across the region is lower than elsewhere in the state (63%). Residents of the Coconino Region have a higher housing cost burden than residents of the state as a whole: 38 percent of Coconino housing units require their residents to contribute more than 30 percent of their household income toward housing, compared to 34 percent statewide (Figure 16). Housing costs are particularly high in the Greater Flagstaff Area as 41 percent of housing units cost more than 30 percent of household income.

The Department of Housing and Urban Development (HUD) maintains the Comprehensive Housing Affordability Strategy (CHAS) database, which tracks the share of housing units with housing problems. HUD defines four key housing problems: a lack of complete kitchen facilities, a lack of complete plumbing facilities, overcrowding, and high cost-burden (see note on Table 36). A higher percentage of housing units in the Coconino Region (41%) have at least one of these problems compared to the state as a whole (37%). Within the region, the Page community (26%) has the lowest prevalence of housing problems, while the Hopi Tribe (48%) and the Greater Flagstaff Area (43%) communities have the highest prevalence. Housing problems may place extra burdens on low-income families, and with 12 percent of housing units having a housing problem and a low-income householder in the Coconino Region, this may be a greater problem in the region than in the state (8%). All of the communities in

the region, apart from the Grand Canyon Village-Tusayan-Valle and Havasupai Tribe communities, have a higher share of housing units with housing problems and low-income householders than in the state overall (Table 36). Foreclosure rates in the region as a whole (0.375 foreclosures per 1,000 housing units) and most communities in the region were much lower than that of the state (0.865), but the foreclosure rate in the Winslow community (0.982) was higher than the state rate (Table 37).

High housing costs and foreclosures can contribute to homelessness. According to the Homeless Management Information System (HMIS)[xiv], in Coconino County in 2015, 506 individuals were homeless, an increase of 23 percent from 2013, when 412 individuals were homeless. Despite an overall increase, the number of individuals in families who were homeless in Coconino County decreased by 42 percent from 116 in 2013 to 68 in 2015. In 2015, 13 percent of the homeless population receiving services were individuals in families. Of those individuals in families about half (51%) were in shelters and the other half (49%) in transitional housing. Families spent an average of 97 days in emergency shelters and 155 days in transitional housing in 2015.[60]

[xiv] *The Homeless Management Information System (HMIS) collects data from emergency shelters, transitional housing program, permanents supportive housing street outreach, homeless prevention and rapid rehousing, and service providers in all fifteen counties in Arizona. The homeless numbers provided through this system represent a point in time snapshot of homeless individuals who have encountered homeless service providers and may not represent all homeless individuals in the county.*

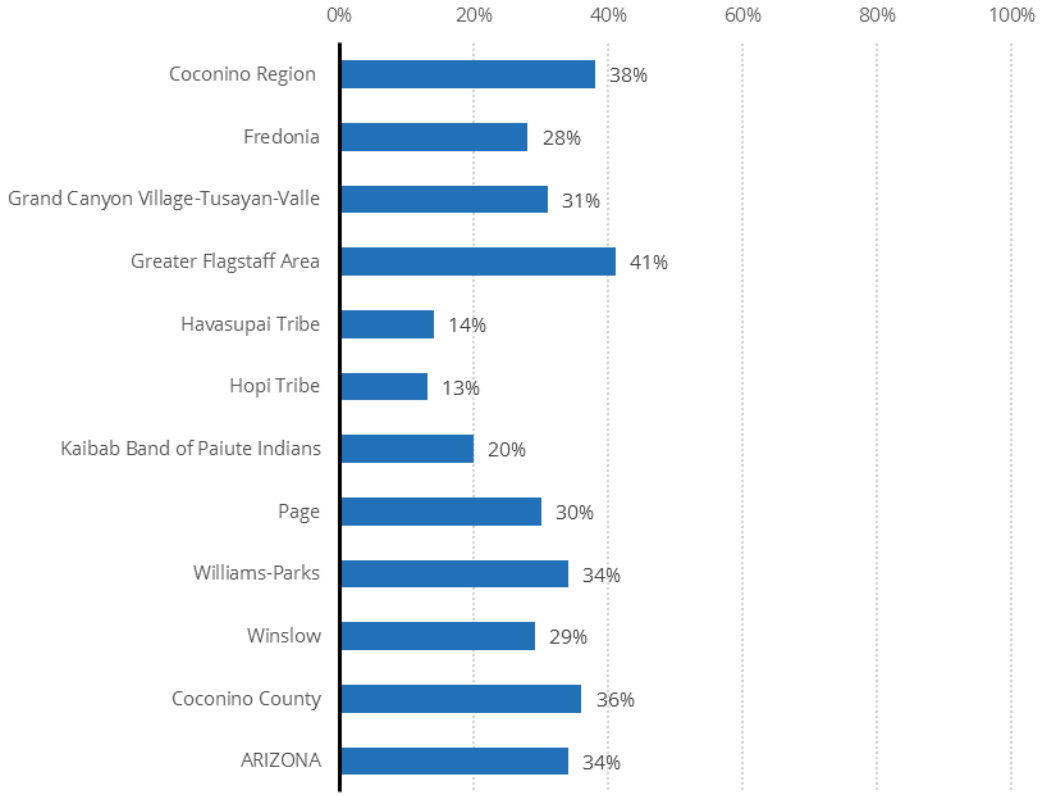
Table 35 Owner- and Renter-Occupied Housing Units

	Number of occupied housing units	Owner-occupied units	Renter-occupied units
Coconino Region	**43,072**	**58%**	**42%**
Fredonia	508	68%	32%
Grand Canyon Village-Tusayan-Valle	1,252	74%	26%
Greater Flagstaff Area	31,005	54%	46%
Havasupai Tribe	43	74%	26%
Hopi Tribe	2,047	75%	25%
Kaibab Band of Paiute Indians	96	29%	71%
Page	2,609	71%	29%
Williams-Parks	2,768	70%	30%
Winslow	2,764	59%	41%
Coconino County	46,391	60%	40%
ARIZONA	2,387,246	63%	37%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B25106

Note: Homeownership in tribal communities varies depending on tribal housing and land policies

Figure 16 Percent of Housing Units that Cost 30% of Household Income or More



Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B25106

Table 36 Housing Units with Housing Problems

	Housing Units	With housing problems	With housing problems and low-income householder
Coconino Region	**43,135**	**41%**	**12%**
Fredonia	453	34%	13%
Grand Canyon Village-Tusayan-Valle	1,201	33%	6%
Greater Flagstaff Area	31,172	43%	12%
Havasupai Tribe	79	32%	7%
Hopi Tribe	1,960	48%	15%
Kaibab Band of Paiute Indians	61	40%	12%
Page	2,840	26%	9%

Williams-Parks	2,614	36%	12%
Winslow	2,757	35%	10%
Coconino County	46,200	42%	13%
Arizona	2,369,550	37%	8%

Source: U.S. Department of Housing and Urban Development (2016). 2009-2013 Comprehensive Housing Affordability Strategy (CHAS) Data. Retrieved from https://www.huduser.gov/portal/datasets/cp/CHAS/bg_chas.html

Notes: Households with housing problems are defined as housing units with one or more of four HUD-defined housing problems: (1) unit lacks complete kitchen facilities; (2) unit lacks complete plumbing facilities; (3) household is overcrowded (more than one person per room); (4) household is cost-burdened (monthly housing costs exceeding 30% of monthly income). Low income households are those where household income is less than or equal to 30% of the HUD Area Median Family Income (HAMFI).

Table 37 Foreclosure Rates, May 2016

	Number of housing units	Number of foreclosures	Foreclosure rate per thousand homes
Coconino Region	58,601	226	0.375
Fredonia	734	7	N/A
Grand Canyon Village-Tusayan-Valle	1,466	6	0.205
Greater Flagstaff Area	42,141	132	0.376
Havasupai Tribe	70	N/A	N/A
Hopi Tribe	2,848	N/A	N/A
Kaibab Band of Paiute Indians	112	N/A	N/A
Page	3,317	23	0.231
Williams-Parks	4,503	39	0.379
Winslow	3,419	18	0.982
Coconino County	63,890	N/A	0.314
ARIZONA	2,874,548	N/A	0.865

Source: REALTYTRAC (May 2016). Foreclosure Rate. Retrieved from realtytrac.com

Note: The number of foreclosures and foreclosure rate were pulled by zip code from REALTYTRAC. The number of foreclosures was apportioned according to the proportion of households in each zip code belonging to a given region or subregion (according to the 2010 Census). The foreclosure rate was apportioned by multiplying the rate by the housing units in the zip code, apportioning using the proportion of households, and dividing that final number by the housing units in each fractional zip code to result in a foreclosure rate adjusted by the proportion of households belonging to each region/subregion. The foreclosure rate for some sub-regions could not be calculated due to a lack of data for sparsely populated areas.

EDUCATIONAL INDICATORS

Why Educational Indicators Matter

The degree to which people in a community are engaged and succeeding in educational settings can have profound impacts on the developmental and economic resources available to children and families in that region. Indicators such as school enrollment and attendance, achievement on standardized testing, graduation and dropout rates, and the overall level of education in the adult population can all paint a picture of a region's educational engagement and success.

The importance of education begins early in life. Preschool participation has been shown to better prepare young children for kindergarten by supporting good school attendance practices and honing socio-emotional, cognitive, and physical skills.[61,62,63,64] Starting in kindergarten, poor school attendance can cause children to fall behind, leading to lowered proficiency in reading and math, and increased grade-retention.[65]

Early education is laying an important foundation for the future. Students who are at or above grade level reading in third grade are more likely to graduate high school and attend college.[66] A family's economic circumstances can multiply this effect: more than one-fourth (26%) of children who were both not reading proficiently in third grade and living in poverty for at least a year do not finish high school – that is more than six times the drop-out rate for proficient readers.[67]

In 2010, the Arizona legislature, recognizing the importance of early reading proficiency, enacted *Move on When Reading Legislation* to support building literacy skills in the early grades. Part of the legislation is Arizona Revised Statute §15-701, which states that, as of school year 2013-14, a student shall not be promoted from the third grade if the student obtains a reading score that falls far below the third-grade level as established by the State Board of Education.[xv] Exceptions exist for students identified with or being evaluated for learning disabilities, English language learners, and those with reading impairments.

From 2000-2014, the primary in-school performance measure of students in public elementary schools in the state was the Arizona's Instrument to Measure Standards (AIMS).[xvi] In 2014, the statewide assessment tool for English language arts (ELA) (including reading and writing) and mathematics changed from AIMS to AzMERIT (Arizona's Measurement of Educational Readiness to Inform Teaching), and the first AzMERIT testing began in the 2015 school year.[68] AzMERIT scores are now used to determine promotion from the third grade in accordance with the *Move on When Reading* law. New proficiency cut points were determined by grade level,[69] and earning a score of "proficient" or "highly proficient" indicates that a student is prepared for the next grade without requiring additional support.[70] Students who score as either "minimally" or "partially proficient" are likely to need support to be ready to move on to the next grade.[71] In order for children to be prepared to succeed on tests such as AzMERIT, research shows that early reading experiences, opportunities to build vocabularies, and literacy-rich environments are the most effective ways to support the literacy development of young children.[72]

[xv] *For more information on Move on When Reading, visit http://www.azed.gov/mowr/*

[xvi] *For more information on the AIMS test, visit http://arizonaindicators.org/education/aims*

Beyond the direct connections between caregivers' education and their own literacy, the ability to read to, share with, and teach young children in the home is influenced by parental and familial stress levels, income levels, and educational levels. Families in poverty are often grappling with issues of day-to-day survival which may limit time spent in developmentally enriching activities. Parents with higher educational attainment may be less vulnerable to these issues and are more likely to have children with positive outcomes related to school readiness and educational achievement, as well improved health, social and economic outcomes.[73] Higher levels of parental education are also associated with better housing, more secure neighborhoods, and stable working conditions, all of which are important for the health and well-being of children.[74,75]

What the Data Tell Us

Standardized Test Scores

The AzMERIT, which replaced AIMS in the 2014-2015 school year, is designed to assess students' critical thinking skills and their mastery of the Arizona College and Career Ready Standards established in 2010 (now revised to be the Arizona English Language Arts and Math Standards). Students who receive a proficient or highly proficient score are considered adequately prepared for success in the next grade. In the 2014-2015 school year, only 37 percent of Coconino Region students attained these scores on the third grade math assessment, which was a lower passing rate than across Arizona as a whole (41%) (Figure 18; Table 38). Performance on the English Language Arts (ELA) test was similar, with 34 percent of Coconino Region students demonstrating proficiency, compared to 40 percent across the state (Figure 19). A portion of the 50 percent of Coconino Region third graders who scored minimally proficient are at risk for retention in third grade, based on the Arizona's *Move on When Reading* law, which requires retention of those whose reading falls far below the third grade level.[xvii]

The highest achieving districts in the region in math were the Flagstaff Unified District (41% passing math) and the Winslow Unified District (40% passing math), while Coconino Region Charter Schools (55% passing ELA), Maine Consolidated School District (40% passing ELA), and Flagstaff Unified District (39% passing ELA) performed better than the region or county on the English Language Arts test (Table 38, Table 39). The districts with the lowest proficiency rates were Fredonia-Moccasin Unified School District (26% passing math, 5% passing ELA) and Grand Canyon Unified District (5% passing math, 24% passing ELA) (Table 38, Table 39). District boundaries are shown in Figure 17.[xviii]

A sample of students in Arizona grades 4, 8 and 12 also take the National Assessment of Educational Progress (NAEP), a nationally-administered achievement test that allows for comparisons between states. Thirty percent of Arizona fourth graders scored at the proficient or advanced level in reading in 2015, compared with 35 percent of fourth graders nationally. Scores have been improving steadily, both in the state and nationally, since testing began in 1998.[76]

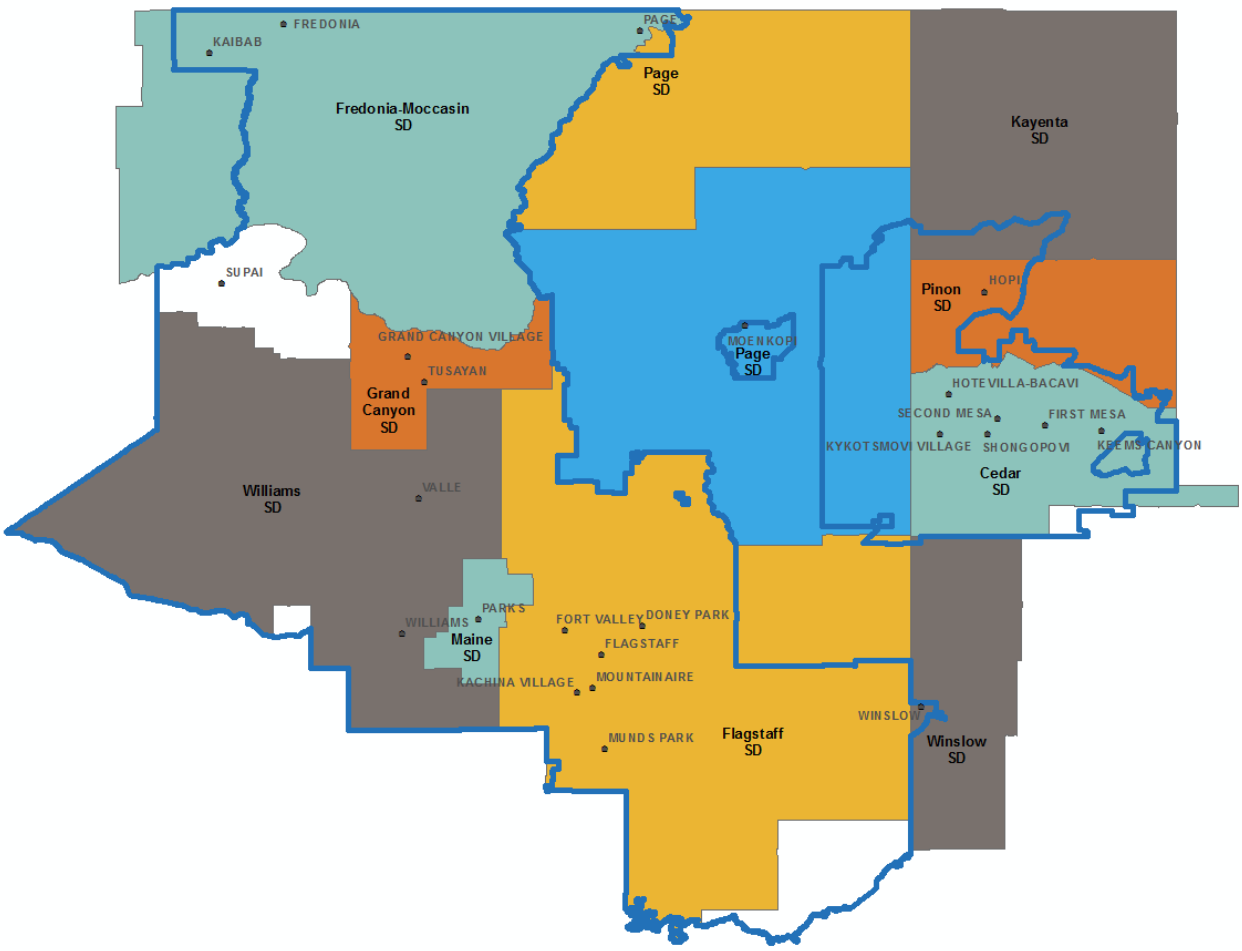
[xvii] *Note that in the data provided the scores reported are a combined ELA score of reading and writing. Students may have a minimally proficient ELA score and still meet the Move On When Reading requirement.*

[xviii] *Information on individual schools is available through the Arizona Department of Education's website: http://www.azed.gov/research-evaluation/aims-assessment-results/.*

Strong disparities exist in the state NAEP scores based on race, ethnicity and income. Forty-four percent of Arizona fourth grade white students score at the proficient reading level or above, compared with 27 percent of black students, 18 percent of Hispanic students, and 11 percent of American Indian students. Fifty-two percent of fourth graders who were *not* eligible for free or reduced-price school lunch scored at or above the proficient reading level, but only 17 percent of children who were eligible for the program scored that highly. In the Coconino Region, we see that some of the districts with the highest proportions of children eligible for free or reduced-price lunch, such as Grand Canyon Unified School District (68% eligible), Winslow Unified School District (64% eligible), and Page Unified District (63% eligible) (see Table 30), also have some of the highest proportions of students not passing the AzMERIT assessments in third grade (Table 38, Table 39).

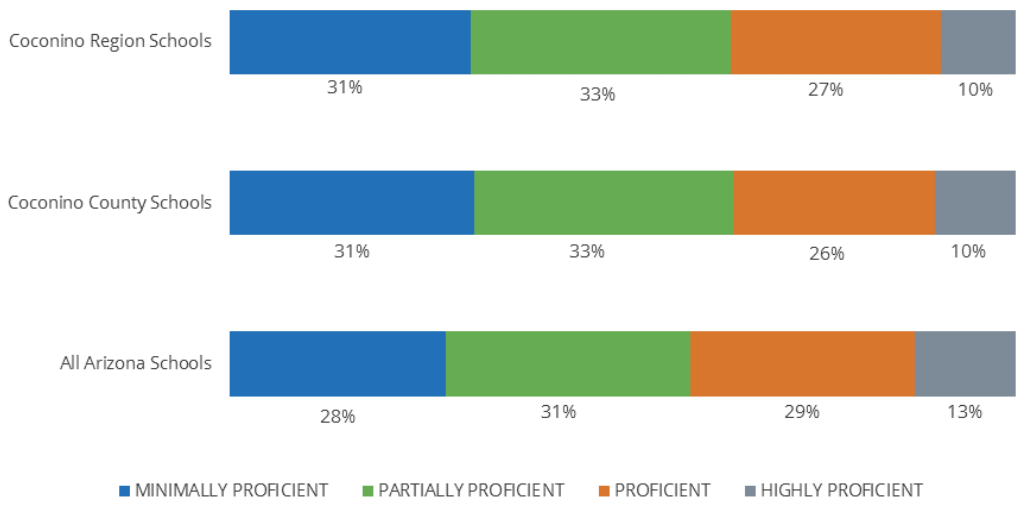
Student performance in the Coconino Region, and statewide, suggests that there is a need to support early literacy and to strengthen scholastic achievement, particularly among young children of color and children in poverty.

Figure 17 Map of School Districts in the Coconino Region



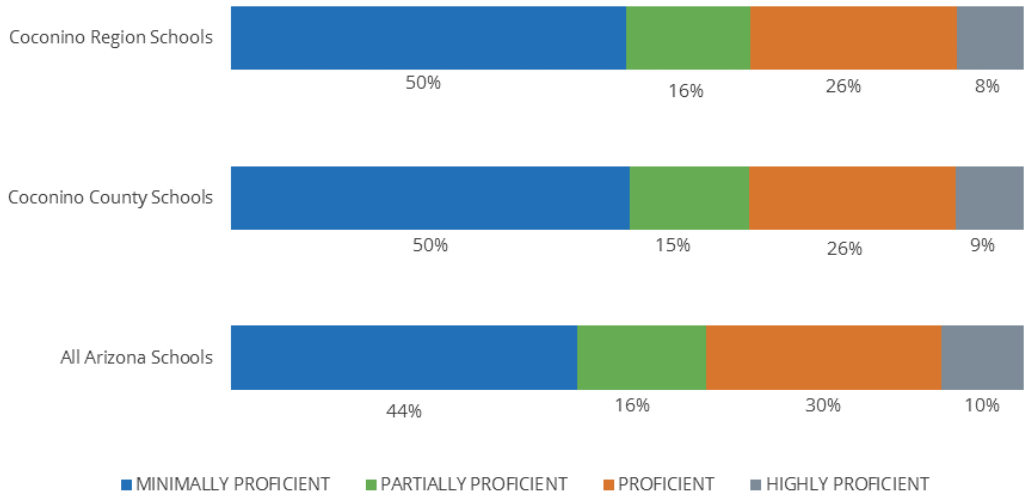
Source: First Things First (2016). Map produced by First Things First.

Figure 18 AzMERIT Math Test Results for Third-Graders in 2014-2015



Source Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Figure 19 AzMERIT Reading Test Results for Third-Graders in 2014-2015



Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Table 38 AzMERIT Math Test Results for Third-Graders in 2014-2015, by School District

	Minimally proficient in Math	Partially proficient in Math	Proficient in Math	Highly proficient in Math	Passing Math (proficient or highly proficient)
Coconino Region Schools	**31%**	**33%**	**27%**	**10%**	**36%**
Flagstaff Unified District	28%	31%	29%	13%	41%
Fredonia-Moccasin Unified District	32%	42%	21%	5%	26%
Grand Canyon Unified District	67%	29%	5%	0%	5%
Maine Consolidated School District	27%	55%	9%	9%	18%
Page Unified District	43%	32%	18%	7%	25%
Williams Unified District	37%	39%	24%	0%	24%
Winslow Unified District	24%	36%	35%	5%	40%
Coconino Region Charter Schools	28%	38%	26%	7%	34%
Coconino County Schools	31%	33%	26%	10%	36%
All Arizona Schools	28%	31%	29%	13%	41%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Table 39 AzMERIT English Language Arts Test Results for Third-Graders in 2014-2015, by School District

	Minimally proficient in English Language Arts	Partially proficient in English Language Arts	Proficient in English Language Arts	Highly proficient in English Language Arts	Passing English Language Arts (proficient or highly proficient)
Coconino Region Schools	**50%**	**16%**	**26%**	**8%**	**34%**
Flagstaff Unified District	45%	16%	30%	9%	39%
Fredonia-Moccasin Unified District	74%	21%	5%	0%	5%
Grand Canyon Unified District	57%	19%	24%	0%	24%

Maine Consolidated School District	40%	20%	30%	10%	40%
Page Unified District	72%	13%	14%	1%	15%
Williams Unified District	59%	28%	9%	4%	13%
Winslow Unified District	56%	20%	20%	4%	25%
Coconino Region Charter Schools	34%	11%	37%	18%	55%
Coconino County Schools	50%	15%	26%	9%	35%
All Arizona Schools	44%	16%	30%	10%	40%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Educational Attainment

The Arizona Department of Education tracks the percent of students who are chronically absent, meaning they have missed more than 10 days of school in a school year. Table 40 shows these percentages for elementary school districts in the region. Rates of chronic absences in the Coconino Region have been consistently higher in 2014 (41%) and 2015 (45%) than in the state as a whole (34% and 36%, respectively). In 2015, rates of chronic absences were particularly high in Page Unified District (52%), while rates were lowest in Williams Unified District (36%). Identifying and addressing the reasons behind chronic absenteeism is important to ameliorate later effects on educational achievement and graduation rates.[77]

The Coconino Region contains 18 high schools and alternative schools. The high school drop-out rate in Coconino Region fell slightly to 3 percent in 2015, after remaining at 4 percent in the three years prior. The rate in Coconino has consistently been about the same as the state rate of 3 to 4 percent (Table 41). Coconino County Accommodation District (11%) and Page Unified School District (5%) both had 2015 drop-out rates that were higher than that of the region or state overall. Four-year graduation rates in the Coconino Region (e.g., 2014: 78%) from 2011 to 2014 are similar to rates in Arizona (e.g., 2014: 76%). However, a number of districts outperformed both the state and county in four-year graduation rates in 2014, including Winslow Unified District (92%), Grand Canyon Unified District (90%), and Fredonia-Moccasin Unified District (88%) (Table 41). Page Unified District, which had one of the highest rates of chronic absences, had one of the lower graduation rates (73%) in the region.

Adults who are 25 and older in the Coconino Region are more likely to have a bachelor's or higher degree (34%) than adults across Arizona (27%) (Table 42). The percent of adults with less than a high school education in the region (11%) is also lower than the state (14%). The Havasupai Tribe (36%), Kaibab Band of Paiute Indians (21%) and Winslow (18%) communities have the highest shares of adults who did not complete high school. Adults in the Greater Flagstaff Area have the highest educational attainment in the sub-regions, with high rates of at least some post-secondary education (32%) as well as bachelor's and advanced degrees (41%).

Table 40 Chronic Absences for Students in Grades 1 to 3, 2014 and 2015

	Number of schools	Number of students in 2014	Students with chronic (more than 10) absences in 2014	Percent of students with chronic absences in 2014	Number of students in 2015	Students with chronic (more than 10) absences in 2015	Percent of students with chronic absences in 2015
Coconino Region Schools	**27**	**4,785**	**1,965**	**41%**	**4,881**	**2,209**	**45%**
Flagstaff Unified District	10	2,720	1,132	42%	2,730	1,195	44%
Fredonia-Moccasin Unified District	1	63	19	30%	68	32	47%
Grand Canyon Unified District	1	79	23	29%	87	35	40%
Maine Consolidated School District	1	40	14	35%	41	20	49%
Page Unified District	2	701	324	46%	696	362	52%
Williams Unified District	1	133	37	28%	148	54	36%
Winslow Unified District	3	494	202	41%	572	265	46%
Coconino Region Charter Schools	8	555	214	39%	539	246	46%
Coconino County Schools	25	4,604	1,895	41%	4,636	2,116	46%
All Arizona Schools	1,185	278,142	93,719	34%	283,147	103,078	36%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Table 41 High School Drop-Out and Graduation Rates, 2012 to 2015

	Total number of high schools and alternative schools	Drop-out rate, 2012	Drop-out rate, 2013	Drop-out rate, 2014	Drop-out rate, 2015	Four-year graduation rate, 2011	Four-year graduation rate, 2012	Four-year graduation rate, 2013	Four-year graduation rate, 2014
Coconino Region Schools	**18**	**4%**	**4%**	**4%**	**3%**	**77%**	**76%**	**77%**	**78%**
Coconino County Accommodation School District	4	14%	14%	15%	11%	38%	50%	45%	42%
Flagstaff Unified District	4	5%	4%	3%	3%	83%	77%	80%	81%
Fredonia-Moccasin Unified District	1	DS	DS	DS	DS	95%	95%	74%	88%
Grand Canyon Unified District	1	DS	DS	DS	DS	88%	67%	82%	90%
Maine Consolidated School District	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Page Unified District	1	2%	2%	4%	5%	74%	78%	73%	73%
Williams Unified District	1	DS	DS	DS	DS	83%	86%	75%	76%
Winslow Unified District	2	3%	5%	5%	3%	77%	81%	85%	92%
Coconino Region Charter Schools	4	3%	2%	2%	3%	81%	83%	81%	84%
Coconino County Schools	31	4%	4%	4%	3%	76%	74%	75%	76%
All Arizona Schools	836	4%	3%	3%	4%	78%	77%	76%	76%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Table 42 Level of Education for the Adult Population (Ages 25 and Older)

	Estimated population (ages 25 and older)	Less than high school	High school or GED	Some college or professional education	Bachelor's degree or more
Coconino Region	**73,302**	**11%**	**21%**	**35%**	**34%**
Fredonia	975	11%	23%	47%	18%
Grand Canyon Village-Tusayan-Valle	2,398	9%	24%	40%	27%

Greater Flagstaff Area	49,671	9%	17%	32%	41%
Havasupai Tribe	95	36%	37%	18%	9%
Hopi Tribe	4,642	15%	38%	37%	10%
Kaibab Band of Paiute Indians	159	21%	17%	62%	0%
Page	4,695	16%	23%	40%	21%
Williams-Parks	4,646	9%	30%	39%	22%
Winslow	5,970	18%	24%	45%	13%
Coconino County	79,300	12%	22%	33%	33%
ARIZONA	4,284,776	14%	25%	34%	27%

Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B15002

EARLY LEARNING

Why Early Learning Matters

Young children spend their time observing the world and learning at a rapid pace. From fine and gross motor skill development, to language and numeracy skills, to social skills, the early years of a child's life are filled with opportunities for learning. The skills that young children are building are critical for healthy brain development as well as later achievement and success. Just as rich, stimulating environments can promote development, early negative experiences can also carry lasting effects.[78] Gaps in language development between children from disadvantaged backgrounds and their more advantaged peers are already evident by 18 months of age;[79] those disparities that persist until kindergarten are predictive of later academic problems.[80]

Families play a tremendous role in fostering development. Research shows that children's health, socio-emotional, and cognitive development also benefit greatly from high quality early learning.[81,82] This is particularly true for children from disadvantaged backgrounds.[83] Children whose education begins in high quality preschool programs repeat grades less frequently, obtain higher scores on standardized tests, experience fewer behavior problems, and are more likely to graduate high school.[84]

Investment in children during the crucial first five years not only provides the necessary foundation for later achievement, but also produces a positive return on investment to society through increased educational achievement and employment, reduction in crime, and better overall health of those children as they mature into adults.[85,86,87] Experts estimate that investments in quality early learning initiatives can offer returns as high as $16 per dollar spent.[88,89] In other words, the costs of these programs are ultimately repaid several times over and the investment in early childhood is potentially one of the most lucrative ones that a community can make.

The ability of families to access quality, affordable early care and education opportunities, however, can be limited. Nearly one-third (32%) of parents of young children responding to a national survey regarding child care reported it was very or somewhat difficult to find care for their child, with cost being the most often cited challenge. More than two-thirds (69%) of parents surveyed reported having to pay in order to secure child care, and almost a third (31%) of those parents reported that that cost has caused a financial problem for the household. [90] According to the U.S. Department of Education, only 19 percent of four-year-olds in Arizona are enrolled in publically funded preschool or Head Start programs, compared to 41 percent nationally.[91] If not enrolled in publically-funded programs, which are often free or reduced cost, the annual cost of full-time center-based care for a young child in Arizona is nearly equal to the cost of a year at a public college ($9,166).[92]

Child care subsidies can be a support for families who have financial barriers to accessing early learning services.[93] The number of subsidies to families in Arizona through the Child Care and Development Fund (CCDF) has increased recently. In 2015, 38,855 children aged birth to 5 (about 7% of Arizona's children in this age range) received CCDF vouchers, up from 26,685 (5% of children aged 0-5) in 2014. With half of young children in Arizona living below the federal poverty level, the number in need of these subsidies is likely much higher than those receiving them.

In addition to prohibitive costs, the availability of suitable child care cannot be taken for granted. An inadequate child care supply, known as a "child care desert," has been defined as a zip code with at

least 30 children under five years of age and either no or very limited center-based early care and education programs (i.e., there are more than three times as many children under age five as there are spaces in the child care settings.)[94] Living in a child care desert disproportionately affects rural populations, and given the many rural counties in Arizona, this is likely a common phenomenon in many regions.

Beyond basic issues of access and affordability, quality is of paramount concern to parents. A recent national survey of parents who use child care for their young child(ren) found that most parents (59%) rated the quality of their child care as "excellent;" however, this runs contrary to research which suggests most child care across the country is not high quality.[95] How parents perceive and understand quality may differ; this points to the importance of quality ratings systems to help guide parent choices. Quality First is Arizona's Quality Improvement and Rating System (QIRS) for early child care and preschool providers. Quality First employs a five-point rating scale to indicate quality levels. A one-star rating indicates that the provider is committed to examining practices and improving the quality of care beyond basic health and safety requirements. Providers can to a quality rating (3-5 star) by implementing lower teacher-to-child ratios, supporting higher staff qualifications, instituting a curriculum that aligns with state standards and child assessment, and providing a nurturing relationships between adults and children that promote emotional, social, and academic development. The number of providers across the state that meet quality standards (three-star rating or higher) has increased in recent years with 25 percent of the 857 participating providers in 2013, and 65 percent of 918 participating providers in 2016 meeting or exceeding quality standards.[96]

Arizona was one of five states to receive a federal Preschool Development Block Grant (PDG) in 2015, with funding totaling $80 million over fiscal years 2017-2020. A main goal of this funding is to expand the number of quality preschools enrolled in Quality First in underserved areas through a partnership between First Things First and the Arizona Department of Education. The grant will also support early childhood infrastructure development, early-learning provider partnerships, and coordination of early childhood funding.[97]

The presence of qualified, well-trained, caring professionals is essential to providing quality child care and early education experiences for children. In Arizona, the number of early childhood professionals receiving a credential or degree has increased from 2007 (21%) to 2012 (29%). However, one incentive for attaining these credentials – increased wages – shows an opposite pattern. Wages for assistant teachers, teachers, and administrative directors working across all types of licensed child care and education settings in Arizona decreased between 2007 and 2012, after adjusting for inflation. In addition, average annual wages for early education professionals in Arizona are about half that of kindergarten and elementary teachers, which may affect retention of those in early education settings, particularly after degree attainment.[98]

In addition to formal education, there are additional professional development opportunities available for early childhood professionals in Arizona. The Arizona Early Childhood Career and Professional Development Network, supported by First Things First, hosts a professional development website, AZEarlyChildhood.org, that provides early childhood professionals with resources and information on professional development opportunities, career and job advancement, and networking in the early childhood field.[99,100]

The availability of early learning opportunities and services for young children with special needs is an ongoing concern across the state, particularly in the more geographically remote communities. Children with special health care needs (CSHCN) are defined as "those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."[101] According to the National Survey of Children's Health, children with special health care needs are more likely to experience more adverse childhood experiences than typically developing children,[102] and are at an increased risk for maltreatment and neglect.[103, 104] Almost half (46%) of families with a child with special needs in Arizona have incomes below 200 percent of the federal poverty level.[105]

Ensuring all families have access to timely and appropriate screenings for children who may benefit from early identification of special needs is paramount to improving outcomes for these children and their families. Timely intervention can help young children with, or at risk for, developmental delays improve language, cognitive, and socio-emotional development. It also reduces educational costs by decreasing the need for special education.[106,107,108] In Arizona, the services available to families with children with special needs include early intervention screening and intervention services provided through the Arizona Department of Education AZ FIND (Child Find),[xix] the Arizona Early Intervention Program (AzEIP),[xx] and the Division of Developmental Disabilities (DDD).[xxi]

What the Data Tell Us

Child Care and Preschool

According to data from the American Community Survey, 50 percent of children in the Coconino Region aged 3 and 4 were enrolled in nursery school, preschool, or kindergarten, meaning that relatively more children participate compared to children statewide (36%) (Figure 20). The highest rates of participation occur in the Page (87%), Williams-Parks (63%), Grand Canyon Village-Tusayan-Valle (52%), and Hopi Tribe (52%) communities, which surpass the regional rate of participation. The lowest rates of participation are in the Fredonia (36%) and Winslow (44%) communities.

Enrollment in early care and education is influenced by the availability of child care in the region. According to the most recent data available in 2015 and 2016, there were 77 registered child care and early education providers in the Coconino Region, approved to serve up to 3,533 children (Table 43). Figure 21 shows a map of known early care and education providers in the region. The Arizona Department of Economic Security's 2014 Market Rate Survey[109], which surveyed a total of 3,717 child care providers (1,765 licensed centers, 1,552 approved family homes, 280 certified group homes, and 129 unregulated homes listed with CCR&R), found that providers typically provided care to about 58 percent of their approved capacity. Providers may operate below their licensed capacity for a number of reasons, such as to provide higher quality care or because of staffing shortages. This suggests that

[xix] *For more information on AZ FIND, visit http://www.azed.gov/special-education/az-find/*

[xx] *For more information on AzEIP, visit https://www.azdes.gov/azeip/*

[xxi] *For more information on DDD, visit https://www.azdes.gov/developmental_disabilities/*

the true availability of child care slots in the region may be closer to 2,000. With a population of 9,652 young children in the region (see Table 1), there are likely to be 3 or 4 young children for each available child care slot in the region.[xxii] Using the Census estimate of children ages 0-5 as a baseline for child care demand, the ratio of demand to capacity varies widely across the region. Based on the definition described above (three times as many children as child care slots), the Fredonia, Williams-Parks, and Hopi Tribe communities could be potential child care deserts (Figure 22).

The number of children with all parents in the labor force provides another estimate of how many children may currently need child care. Parents in the labor force are those who are currently working or looking for work. In the Coconino Region, there are 5,823 children with all parents in the labor force but only 3,533 child care and early education slots (Figure 23). Within the community, the capacity of early care and education centers to meet this estimate of child care demand varies. In the Grand Canyon Village-Tusayan-Valle, Havasupai Tribe, and Kaibab Band of Paiute Indians communities, capacity exceeds estimated demand. In all other communities, there is not sufficient capacity to meet estimated demand. Increasing the number of registered or licensed child care providers could bring significant benefit to communities in the area with a current capacity shortage. Beyond the number of slots available, it is important to note that not all child care providers may offer full day care. Families may need to arrange more than one form of child care to find the care they need.

Of the 77 known child care providers, about 30 percent (n=23) are participating in the Quality First program. Most of these programs (15, 65%) have a 2-star or 3-star rating, which are also the most common ratings among sites statewide (Table 44). The 2-star rating is described as a "progressing star" by First Things First, and means that the program is "approaching quality standards," and the 3-star rating is described as a "quality" program that "meets quality standards."[110] There are 2 programs in Coconino that have achieved the 4-star rating, indicating they are exceeding quality standards. There are no 5-star sites in the Coconino Region. Currently in the region there is a wait list to enroll, which means that not all interested child care providers can enroll in Quality First. Key informants in the region note that some providers have reported constraints that prevent them from enrolling in Quality First and that they still may be providing quality care. Most Quality First programs in the region are child care centers (Table 45).

There are 11 schools in the Coconino Region that provide preschool classes, and over half of these are in the Flagstaff Unified District, where 124 children are enrolled in preschool (Table 46). Seventy-six preschoolers are enrolled in the Page Unified District at Desert View Elementary, 26 preschoolers are enrolled in the Winslow Unified District at Bonnie Brennan School, and 14 preschoolers are enrolled in Maine Consolidated School. About half of students enrolled in Flagstaff Unified District and Page Unified District preschools have special needs, and the preschools in Williams Unified District and Fredonia-Moccasin Unified District only serve children with special needs.

In the Coconino Region, there are 25 registered child care providers, excluding Head Start centers and providers enrolled in Quality First (Table 47). Most of these providers are child care centers, though

[xxii] *Note that this is a rough estimate. Not all slots are for children birth to five. For instance, some providers serve children up to 12 in after-school programs, and not all providers accept infants.*

there are a handful of family child care homes in the Greater Flagstaff Area and one home in the Winslow community. Key informants in the region reported that there used to be a number of home-based child care providers in the Williams-Parks community, but all of those providers have closed. The Hopi Tribe community also formerly had home-based providers, but these providers were unable to meet program requirements and are no longer operating. According to key informants in the community, the Department of Education is trying to train more individuals to become home child care providers because of a high need for child care in the community. In the past, there was a FACE program in Kykotsmovi Village that provided child care for infants. The tribe is continuing to work to build additional facilities for tribally-operated child care centers. Currently in the community, the tribal child care, a Quality First Center, can serve 25 children, and some young children (aged birth to three) can be enrolled in a private child care program in Second Mesa. Key informants noted that with many parents working for local schools and health care facilities, the need for child care during working hours remains high.

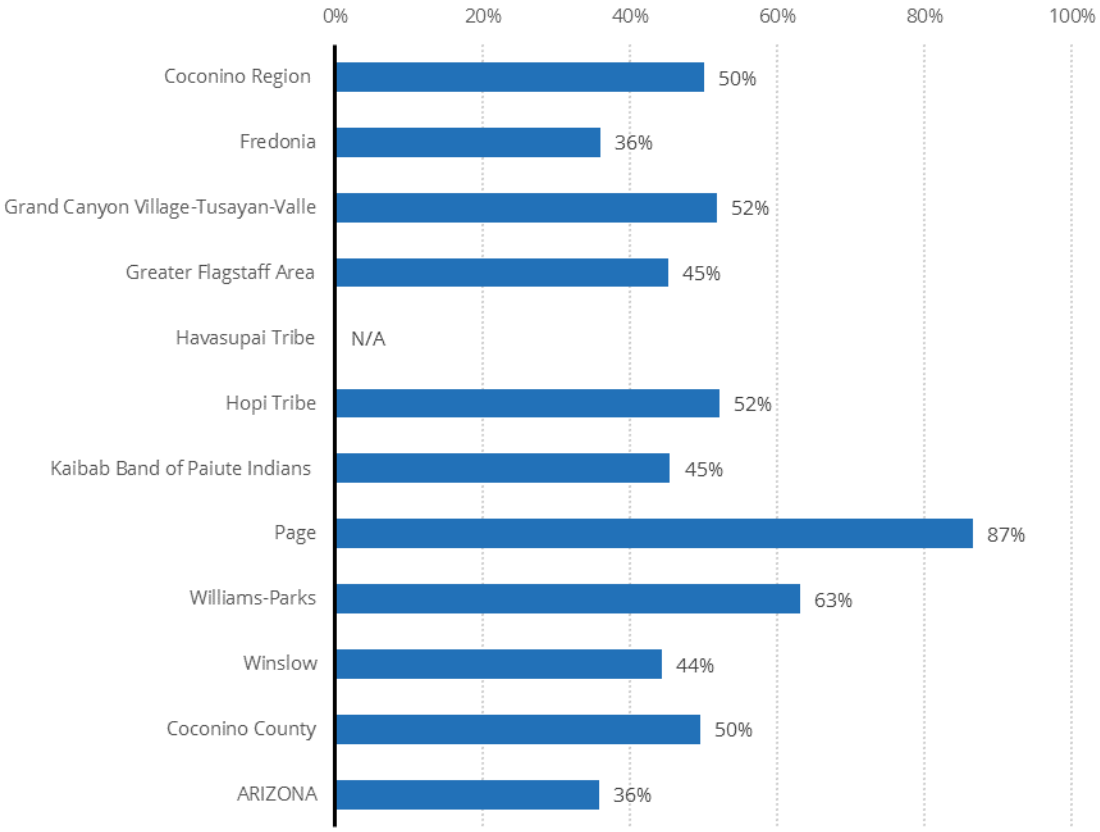
Over 200 children in the Hopi Tribe community are enrolled in the Hopi Tribe Head Start program, a tribal Head Start program (Table 48). The program has five centers in the community: Hotevilla-Bacavi, Kykotsmovi, Moencopi, Second Mesa, and Polacca Centers. According to key informants in the community, all centers are operating at full capacity, but there are no children currently on the waiting list for any of the centers. The Second Mesa and Kykotsmovi centers are currently sharing a building until funding is available to build a new facility for the Second Mesa center. The Havasupai tribe also operates a tribal Head Start Program that enrolled 20 children in the 2014-2015 academic year. Eighteen children were enrolled as of October 2016, and there were no children on the waitlist this year. Key informants in both the Hopi Tribe and Havasupai Tribe communities expressed concern over the lack of children on the waitlist, as Head Start centers must maintain their funded enrollment to keep funding stable. The Kaibab Band of Paiute Indians does not operate a tribal Head Start Program, but the tribal early learning center, a Quality First Program, has the capacity to serve all young children living in the community.

Northern Arizona Council of Governments (N.A.C.O.G.) operates 13 Head Start sites in the Coconino Region with 124 children enrolled in Early Head Start and 551 children enrolled in Head Start programs (Table 48). Most children attend center-based programs, but some children attend home-based programs, particularly children in Early Head Start. Many of the children enrolled in Coconino Head Start programs operated by N.A.C.O.G. are Hispanic or Latino (27%) and/or American Indian (40%) (see Figure 24 and Table 49).[xxiii] In a number of local Head Start programs, more than half of children enrolled are American Indian. Overall, these Head Start programs have about twice the share of American Indian children and half the share of Hispanic or Latino children than Head Start programs across the state, in which 60 percent of children are Hispanic or Latino and 20 percent of children are American Indian. Across the Coconino Region, most children enrolled in N.A.C.O.G. Head Start programs live with families that speak English primarily at home (Figure 25). However, there are a few programs in the Williams-Parks (Williams Head Start) and Greater Flagstaff Area (Federated Head

[xxiii] *Following the format for federal Head Start reporting, ethnicity (Hispanic/Latino or not Hispanic/Latino) is asked in a separate question from race. Due to this format, all children who are reported as Hispanic/Latino ethnicity must also select a race, which means that these two questions are non-exclusive and all children reporting Hispanic/Latino also appear in the race table.*

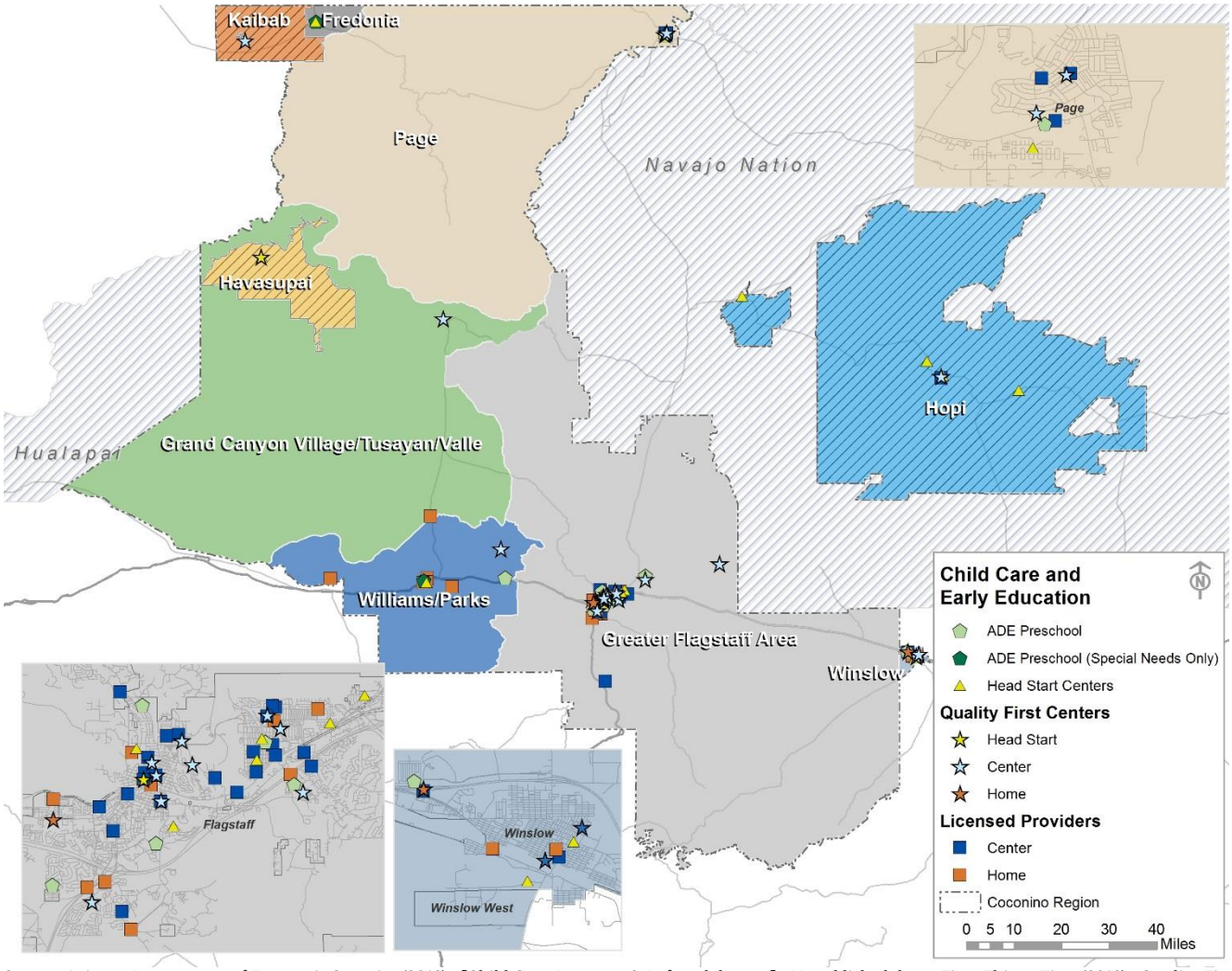
Start) where more than one in four children speaks primarily Spanish at home. Across Head Start programs statewide, 59 percent of children speak primarily English at home with their families and 40 percent speak Spanish at home.[111]

Figure 20 Estimated Percent of Children (Ages 3 and 4) Enrolled in School



Source: U.S. *Census Bureau* (2016). *American Community Survey*, 5-*year estimates* (2010-2014), *Table* B14003.

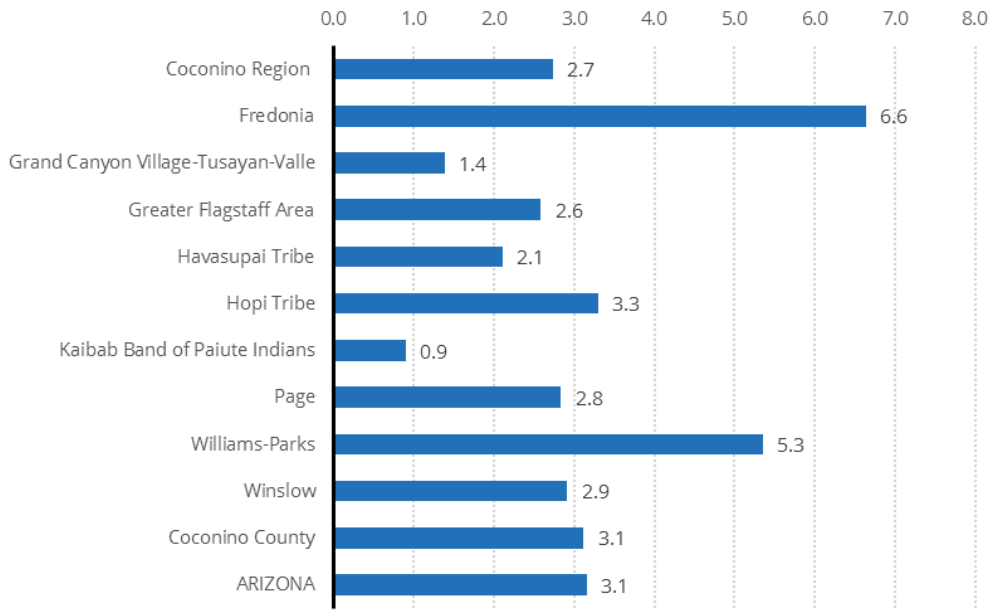
Figure 21 Map of Child Care and Early Education Providers in the Coconino Region



Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data.; First Things First (2016). Quality First, a Signature Program of First Things First. Retrieved from www.qualityfirstaz.com; Office of Head Start (2016). Head Start Locator. Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/HeadStartOffices; Arizona Department of Education. [School Enrollment]. Unpublished data.

Note: Key informants in the region have indicated that all home providers in the Williams/Parks community have closed since the last publication of the Child Care Resource and Referral Guide and the publication of this report.

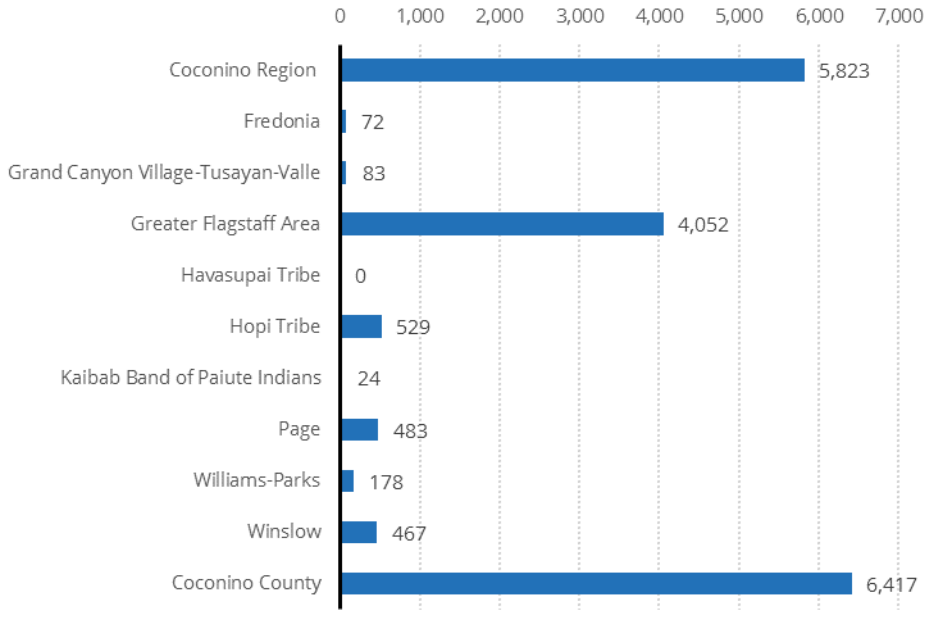
Figure 22 Ratio of Children (ages 0-5) to Estimated Child Care Capacity



Source: See Table 1, Table 44

Note: Children with all parents in the labor force refers to the sum of children living with two parents with both parents in the labor force and children living with a single parent with one parent in the labor force.

Figure 23 Children (Ages 0-5) with All Parents in the Labor Force



Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B23008

Note: Children with all parents in the labor force refers to the sum of children living with two parents with both parents in the labor force and children living with a single parent with one parent in the labor force.

Table 43 Early Care and Education Providers and Capacity, by Type, 2015 and 2016

	Total number and total capacity of all early care and education providers		Number and capacity of Quality First sites		Number and capacity of Head Start sites (excluding any QF sites)		Number and capacity of public-school-based sites (excluding any QF or HS sites)		Number and capacity of other childcare providers	
	#	Capacity	#	Capacity	#	Capacity	#	Capacity	#	Capacity
Coconino Region	77	3,533	23	1,201	19	818	10	171	25	1,343
Fredonia	2	19	0	0	1	18	1	<10	0	0
Grand Canyon Village-Tusayan-Valle	1	172	1	159	1	13	0	0	0	0
Greater Flagstaff Area	47	2,459	13	673	7	425	6	124	21	1,237
Havasupai Tribe	1	30	1	30	0	0	0	0	0	0
Hopi Tribe	6	235	1	25	5	210	0	0	0	0
Kaibab Band of Paiute Indians	1	39	1	39	0	0	0	0	0	0
Page	4	260	2	170	1	51	0	0	1	39
Williams-Parks	5	86	1	21	1	41	2	20	1	<10
Winslow	8	302	3	84	2	129	1	26	2	63
Coconino County	83	3,461	19	1,098	29	818	10	186	25	1,359
ARIZONA	3,053	173,566	916	75,173	201	14,665	313	10,280	1,623	73,448

Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data. First Things First (2016). Quality First, a Signature Program of First Things First. Retrieved from www.qualityfirstaz.com; Northern Arizona Council of Governments (2016). [Head Start Enrollment]. Unpublished data; Arizona Department of Education. [School Enrollment]. Unpublished data.
Note: Head Start enrollment numbers for Coconino County do not include enrollment data for tribal head start programs. The Child Care Resource & Referral guide is a database of child care providers serving children in Arizona that is maintained through a partnership between the Arizona Department of Economic Security (DES) and Child & Family Resources, Inc. Providers listed in this database are licensed, certified, regulated, or registered through the Arizona Department of Economic Security (DES), Arizona Department of Health Services (ADHS), Arizona Department of Education (ADE), Child Care Resource & Referral (CCR&R), or a Military or Tribal Authority. All child care facilities in the database must be licensed through DES or ADHS or regulated by a Military or Tribal Authority. Family Child Care Homes may be certified by DES, regulated by ADE as part of the Child and Adult Care Food Program, or registered with CCR&R through an application process. All individual providers listed are certified by DES. All providers and facilities listed in the database have met the basic requirements of passing a DCS background check, completing and infant/toddler CPR and First Aid certification, and maintaining an Arizona Level I Fingerprint Clearance Card.

Table 44 Quality First Sites and Capacity by Star Rating, June 2016

	1 Star		2 Star		3 Star		4 Star		5 Star		Not Publicly Rated		Total	
Coconino Region	0	0	7	539	8	409	2	64	0	0	6	189	23	1,201
Fredonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Canyon Village-Tusayan-Valle	0	0	1	159	0	0	0	0	0	0	0	0	1	159
Greater Flagstaff Area	0	0	2	175	5	296	1	43	0	0	5	159	13	673
Havasupai Tribe	0	0	0	0	0	0	0	0	0	0	1	30	1	30
Hopi Tribe	0	0	1	25	0	0	0	0	0	0	0	0	1	25
Kaibab Band of Paiute Indians	0	0	0	0	1	39	0	0	0	0	0	0	1	39
Page	0	0	2	170	0	0	0	0	0	0	0	0	2	170
Williams-Parks	0	0	0	0	0	0	1	21	0	0	0	0	1	21
Winslow	0	0	1	10	2	74	0	0	0	0	0	0	3	84
Coconino County	0	0	5	504	6	341	2	64	0	0	6	189	19	1,098
ARIZONA	2	96	288	27,350	262	20,978	143	10,106	36	2,350	180	13,880	911	74,760

Source: Quality First, a Signature Program of First Things First. Retrieved from www.qualityfirstaz.com;

Table 45 Quality First Providers by Type of Provider, June 2016

	Center		Head Start		Home		Total	
Coconino Region	19	1,096	2	89	1	<10	23	1,201
Fredonia	0	0	0	0	0	0	0	0
Grand Canyon Village-Tusayan-Valle	1	159	0	0	0	0	1	159
Greater Flagstaff Area	11	608	1	59	1	<10	13	673
Havasupai Tribe	0	0	1	30	0	0	1	30
Hopi Tribe	1	25	0	0	0	0	1	25

Kaibab Band of Paiute Indians	1	39	0	0	0	0	1	39
Page	2	170	0	0	0	0	2	170
Williams-Parks	1	21	0	0	0	0	1	21
Winslow	2	74	0	0	1	10	3	84
Coconino County	16	1,003	2	89	1	<10	19	1,098
ARIZONA	706	70,412	50	3,134	155	1,214	911	74,760

Source: Quality First, a Signature Program of First Things First (June 2016). Retrieved from www.qualityfirstaz.com;

Table 46 Preschool Enrollment in Public Schools, October 2015

	Number of schools with preschool classes	Number of students enrolled	Number of students in special education	Percent of students in special education
Coconino Region Schools	**11**	**247**	**121**	**49%**
Arizona State Schools for the Deaf and Blind	0	N/A	N/A	N/A
Coconino County Accommodation School District	0	N/A	N/A	N/A
Flagstaff Unified District	6	124	66	53%
Fredonia-Moccasin Unified District	1	<10	<25	DS
Grand Canyon Unified District	0	N/A	N/A	N/A
Maine Consolidated School District	1	14	<25	7%
Page Unified District	1	76	32	42%
Williams Unified District	1	<10	<25	DS
Winslow Unified District	1	26	<25	DS
Coconino Region Charter Schools	0	N/A	N/A	N/A
Coconino County Schools	11	262	130	50%
All Arizona Schools	490	19,123	8,773	46%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Table 47 Other Registered Child Care Providers by Type, 2015

	Nanny / Individual		Family Child Care		Child Care Center		Total	
Coconino Region	1	4	6	30	18	1,309	25	1,343
Fredonia	0	0	0	0	0	0	0	0
Grand Canyon Village-Tusayan-Valle	0	0	0	0	0	0	0	0
Greater Flagstaff Area	0	0	5	26	16	1,211	21	1,237
Havasupai Tribe	0	0	0	0	0	0	0	0
Hopi Tribe	0	0	0	0	0	0	0	0
Kaibab Band of Paiute Indians	0	0	0	0	0	0	0	0
Page	0	0	0	0	1	39	1	39
Williams-Parks	1	4	0	0	0	0	0	0
Winslow	0	0	1	4	1	59	1	59
Coconino County	2	8	5	26	18	1,325	25	1,359
ARIZONA	50	191	903	4279	670	68,528	1623	73,448

Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data.

Note: This table does not include any providers that are Quality First Providers, Head Start program, or public school preschools. For those providers, please see earlier tables.

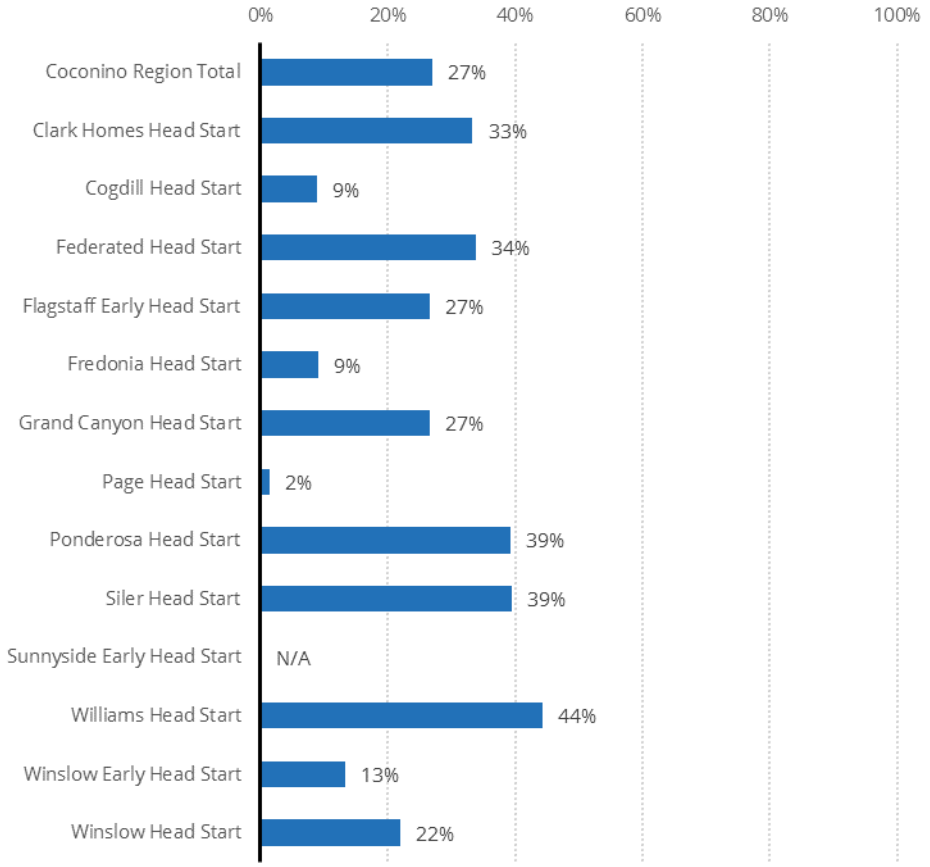
Table 48 Head Start Enrollment by Center, 2015-2016

	Early Head Start (ages 1-3)	Head Start (ages 3-5)	Total	Center-based	Home-based	Total
Coconino Region Total	124	781	905	835	70	905
Clark Homes Head Start	0	51	51	51	0	51
Cogdill Head Start	0	45	45	45	0	45
Federated Head Start	0	48	48	37	11	48
Flagstaff Early Head Start	53	0	53	42	11	53
Fredonia Head Start	0	18	18	18	0	18
Grand Canyon Head Start	0	13	13	13	0	13
Page Head Start	0	51	51	51	0	51
Ponderosa Head Start	0	118	118	118	0	118
Siler Head Start	0	57	57	57	0	57
Sunnyside Early Head Start	53	0	53	33	20	53
Williams Head Start	0	41	41	32	<10	41
Winslow Early Head Start	18	0	18	10	<10	18
Winslow Head Start	0	109	109	98	11	109
Havasupai Tribe Head Start	0	20	20	20	0	20
Hopi Tribe Head Start Centers	0	210	210	210	0	210

Source: Northern Arizona Council of Governments (2016). [Head Start Dataset 2015-2016]. Unpublished Data. Office of Head Start (2016). 2014-2015 Program Information Report. Retrieved from https://hses.ohs.acf.hhs.gov/pir/

Note: The Havasupai Tribe and Hopi Tribe operate their own tribal head start programs. The Hopi Tribe Head Start program has 5 Head Start Centers. All other programs are operated by the Northern Arizona Council of Governments.

Figure 24 Percent of Children Enrolled in N.A.C.O.G. Head Start Programs that are Hispanic or Latino, 2015-2016



Source: Northern Arizona Council of Governments (2016). [Head Start Dataset]. Unpublished Data.

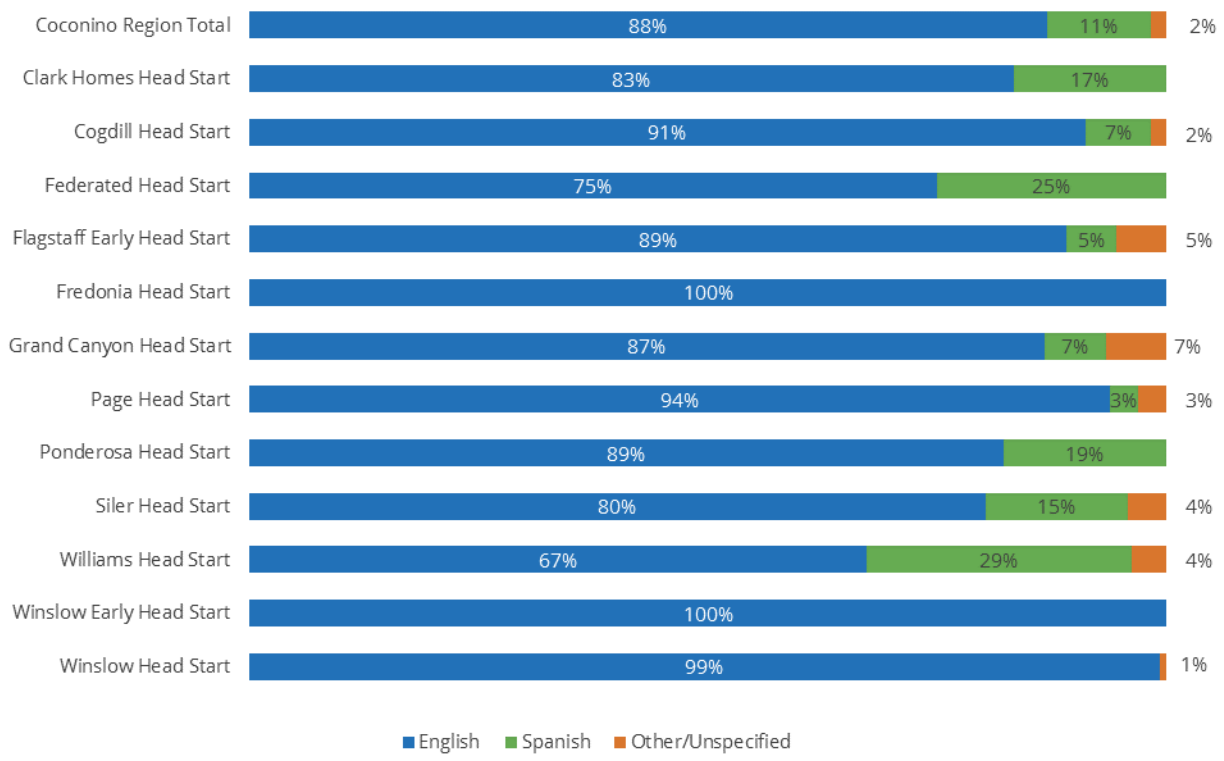
Table 49 Enrollment in N.A.C.O.G. Head Start Programs by Race, 2015-2016

Center	Total	White	American Indian / Alaska Native	Asian / Pacific Islander	Black	Multi -/ Bi-Racial	Other / Unspecified
Coconino Region Total	**771**	**35%**	**40%**	**1%**	**2%**	**15%**	**1%**
Clark Homes Head Start	54	44%	39%	0%	0%	17%	0%
Cogdill Head Start	56	16%	57%	0%	9%	14%	4%
Federated Head Start	56	50%	30%	0%	2%	11%	7%
Flagstaff Early Head Start	79	48%	28%	3%	1%	20%	0%
Fredonia Head Start	22	95%	0%	0%	0%	5%	0%
Grand Canyon Head Start	15	47%	27%	0%	0%	27%	0%

Page Head Start	64	16%	72%	0%	0%	13%	0%
Ponderosa Head Start	135	12%	42%	1%	0%	11%	0%
Siler Head Start	71	46%	41%	1%	0%	11%	0%
Sunnyside Early Head Start	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williams Head Start	52	77%	4%	2%	0%	15%	2%
Winslow Early Head Start	30	23%	53%	0%	0%	23%	0%
Winslow Head Start	137	28%	46%	0%	5%	20%	0%

Source: Northern Arizona Council of Governments (2016). [Head Start Dataset]. Unpublished Data.

Figure 25. Primary Language Spoken by Children Enrolled in N.A.C.O.G. Head Start, 2015-2016



Source: Northern Arizona Council of Governments (2016). [Head Start Dataset]. Unpublished Data.

Cost of Care

The cost of care in Coconino County varies by the type of care and the age of the child receiving care; the median cost in the county relative to the cost of like care across the state differs depending on the

situation. For example, residents in Coconino County tend to pay lower prices for child care centers (e.g., $32 per day for infant care vs. $42, Table 50) but slightly higher prices for approved family and certified group homes (e.g., $24 per day for infant care vs. $22 in family homes, $28 vs. $27 in group home than parents statewide (Table 51, Table 52). Across all kinds of care, parents can expect to pay more for infant care, which is typical. The lower teacher-to-child ratio needed for infant care necessitates a higher cost of care.

Families in Coconino County are paying a lower proportion (10-13%, depending on the child's age) of their overall income for a child care slot as other families statewide (Table 53). However, to avoid being overburdened, the Department of Health and Human Services recommends that parents spend no more than 10 percent of their family income on child care. Families in the Coconino are paying more than that for infant and toddler care, and these percentages reflect the burden for families with only one young child in need of full-time care. Families with more children would spend a greater proportion of their income on child care. Beyond this, these proportions were calculated based on the median income for all families. Single parent homes, particularly those with a single female householder, have a lower median income (see Table 16), resulting in a higher proportion of their income being spent on child care. Child care costs may be a particularly high burden in the city of Winslow, where child care costs as a share of income are four to five percentage points higher than in the county.

Subsidies from the Department of Economic Security (DES) can help families shoulder the cost burden of child care. DES prioritizes assistance to families who receive Cash Assistance (TANF), those who are transitioning off Cash Assistance to employment, and families involved with the Department of Child Safety (DCS) for subsidies. As of 2009, other families seeking DES subsidy support are placed on a waiting list. Statewide, 7,194 children were wait-listed as of January 6, 2017. The number of children on the waitlist in the Coconino Region has fallen each year since 2013; the most recent data from 2015 showed 75 children whose families were hoping to receive support (Table 54). At the same time, the number of children receiving a subsidy nearly doubled from 199 in 2014 to 358 in 2015. The majority of children eligible for and receiving subsidies live in the Greater Flagstaff area, though there are a number of children in the Winslow community that are eligible for and receiving subsidies (Table 55). Around 90 percent of children eligible for subsidies in the Greater Flagstaff Area and Winslow communities received subsidies in 2015. Nearly one-third of those who received subsidies in 2015 were involved with DCS; 84 percent of DCS-involved children received a subsidy, suggesting that this is an important support for children in the child welfare system (Table 56).

Table 50 Median Daily Charge for Full-Time Child Care in Licensed Child Care Centers, 2014

	For one infant	For one child, 1 or 2 years old	For one child, 3 to 5 years old
Coconino Region	N/A	N/A	N/A
Coconino County	$32.00	$27.60	$25.25

ARIZONA	$42.00	$38.00	$33.00

Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data.

Table 51 Median Daily Charge for Full-Time Child Care in Approved Family Homes, 2014

	For one infant	For one child, 1 or 2 years old	For one child, 3 to 5 years old
Coconino Region	N/A	N/A	N/A
Coconino County	$24.00	$22.00	$21.00
ARIZONA	$22.00	$20.00	$20.00

Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data.

Table 52 Median Daily Charge for Full-Time Child Care in Certified Group Homes, 2014

	For one infant	For one child, 1 or 2 years old	For one child, 3 to 5 years old
Coconino Region	N/A	N/A	N/A
Coconino County	$28.00	$25.00	$25.50
ARIZONA	$27.00	$25.00	$25.00

Source: Arizona Department of Economic Security (2016). [Child Care Resource & Referral dataset]. Unpublished data.

Table 53 Charge for Full-Time Child Care in Licensed Child Care Centers, as a Percentage of Median Annual Income

	For one infant	For one child, 1 or 2 years old	For one child, 3 to 5 years old
Coconino Region	N/A	N/A	N/A
Fredonia town	13%	11%	10%
Grand Canyon Village-Tusayan-Valle	N/A	N/A	N/A
Flagstaff city	12%	10%	9%
Page city	14%	12%	11%

Williams city	14%	12%	11%
Winslow city	18%	15%	14%
Coconino County	13%	11%	10%
ARIZONA	17%	15%	13%

Sources: Arizona DES (2016). [Child Care Resource & Referral dataset]. Unpublished data; and U.S. Census Bureau (2016). ACS, 5-year estimates (2010-2014), Table B19126

Note: Median family income is for cities and towns, and geography differs slightly than the community definitions for other tables. Cost for full-time care is estimated by multiplying the daily cost of care by 240 to estimate the cost for five days of care for 48 weeks. Cost is not estimated for the Havasupai Tribe, Hopi Tribe, or Kaibab Band of Paiute Indians because there are no private providers operating in those communities.

Table 54 Department of Economic Security (DES) Child Care Subsidies for Children (Ages 0 to 5), 2013 to 2015

	Children eligible for subsidy during 2013	Children eligible for subsidy during 2014	Children eligible for subsidy during 2015	Children receiving subsidy during 2013	Children receiving subsidy during 2014	Children receiving subsidy during 2015	Children on waiting list during 2013	Children on waiting list during 2014	Children on waiting list during 2015
Coconino Region	261	219	406	204	199	358	105	79	75
Coconino County	196	153	298	138	142	265	89	60	64
ARIZONA	28,429	29180	43,860	27,041	26,685	38,855	5,094	5,195	5,140

Source: Arizona Department of Economic Security (2016). [Child Care Administration dataset]. Unpublished data.

Table 55 DES Child Care Subsidies for Children (Ages 0 to 5) by Community, 2015

	Children eligible for subsidy	Children receiving subsidy	Children on waiting list	Percent of eligible children receiving subsidy
Coconino Region	406	358	75	88%
Fredonia	0	0	0	N/A
Grand Canyon Village-Tusayan-Valle	<25	<25	0	DS
Greater Flagstaff Area	265	240	54	91%
Havasupai Tribe	0	0	0	N/A
Hopi Tribe	34	26	<25	76%
Kaibab Band of Paiute Indians	0	0	0	N/A
Page	<25	<25	0	0%
Williams-Parks	<25	<25	<25	DS

Winslow	90	79	17	88%
Coconino County	298	265	64	89%
ARIZONA	43,860	38,855	5,140	89%

Source: Arizona Department of Economic Security (2016). [Child Care Administration dataset]. Unpublished data.

Table 56 DES Child Care Subsidies for Children Involved in the Department of Child Safety (DCS), 2015

	Number of DCS-involved children eligible for subsidy	Number of DCS-involved children receiving subsidy	Percent of DCS-involved children receiving subsidy
Coconino Region	117	98	84%
Coconino County	89	77	87%
ARIZONA	18,417	15,785	86%

Source: Arizona Department of Economic Security (2016). [Child Care Administration dataset]. Unpublished data.

Child Care Professionals

Formal education of Early Childhood Education (ECE) professionals is important for quality care and early learning. According to the 2012 Early Care and Education Workforce Survey, 50 percent of ECE teachers surveyed statewide had obtained an associate's, bachelor's or master's degree. Twenty-nine percent of assistant teachers had a Child Development Associate (CDA) credential, an associate's degree or higher, and 73 percent of administrative directors had an associate's degree or higher.

Three colleges and universities offer in-person degree or certification programs for early learning and child care professionals in the Coconino Region. Campuses and degrees/certification offered can be found in Table 57. Certifications and degree programs are also available online through community colleges and public universities such as Rio Salado College and Arizona State University.[112] Other early childhood education professional development opportunities are available in the region. The Professional REWARD$ program is a statewide First Things First initiative offering financial incentive to child care professionals who work with children ages birth to five. Professionals meeting certain eligibility requirements may qualify for this program[xxiv] to receive a 'reward' based on their education. According to the Coconino Region's funding plan, 53 rewards were contracted as part of the Professional REWARD$ program in fiscal year 2015.[113] In the past, the Coconino Region has also supported First Things First Teacher Education and Compensation Helps (TEACH) scholarships to

[xxiv] *Eligibility requirements include: working in a regulated child care center or family care home, working 30 hours per week, providing care for children birth to five, having at least one year of continuous employment at current employer, having completed at least six credit hours of college coursework related to Early Childhood Education or Child Development, and earning less than $20 per hour.*

support child care providers in pursuit of a CDA credential or associate's degree, but this is no longer one of the region's funded strategies.[114]

Several statewide organizations and agencies provide professional development opportunities for child care professionals. The Arizona Early Childhood Workforce Registry is a resource to explore available professional development opportunities in the Coconino Region. Arizona Childcare Resource and Referral also publishes a quarterly newsletter on early childhood training opportunities, including those in Coconino County.[115] The most recent newsletter[116] listed over a dozen trainings in Coconino County. The Arizona Department of Education also offers professional development opportunities in early childhood education, often via webinars, on topics such as early learning standards and infant and toddler development.[117]

Teachers and assistant teachers in Head Start and Early Head Start programs have higher rates of educational attainment. Across all Arizona Head Start programs, 83 percent of teachers and assistant teachers had at least one early education credential or degree, and a similar 82 percent of Early Head Start teachers and assistant teachers had at least one credential or degree (Table 58). Over all Early Head Start programs operated by NACOG, all teachers had at least a CDA credential or a degree in early education, as did 76 percent of Head Start teachers and assistant teachers. In 2015, only 1 out of 3 Havasupai Head Start teachers and assistant teachers had a CDA credential, but as of 2016, all teachers and assistant teachers had completed a CDA credential. In the Hopi Tribe Head Start program, 79 percent of Head Start teachers and assistant teachers had a CDA credential or higher in 2015. Key informants in the Hopi Tribe community noted that staff in the Head Start program have been a great asset and that many of the staff with CDA credentials are now working toward a bachelor's degree through Northland Pioneer College. There is hope to start a program in the local high school to allow high school students to obtain a CDA credential.

One challenge mentioned by key informants was retention of Head Start staff, especially once they obtain a higher degree, because of pay rates that are not comparable to pay elsewhere. The issues of staff retention and wages face all early care and education providers. According to the 2012 *Early Care and Education Workforce Survey*, the teacher turnover rate of early care providers is the highest in the early care and education field, with an average 30 percent of staff leaving their jobs annually across the nation[118]. Early care and education teachers in Arizona earned about half of the annual earnings for kindergarten and elementary school teachers, similar to the hourly rate of the average high school graduate ($9.45).[119] Although teacher and assistant teacher wages have failed to keep up with inflation and the cost of living changes, the 2012 survey results showed that the number of teachers and assistant teachers obtaining a credential or college degree has increased slightly since the 2007 survey. In Arizona, Head Start centers were seen to have the highest retention rate with 71 percent of Head Start teachers being employed more than five years or more[120]. Additionally, Head Start teacher assistants were also seen to have high retention rates (86 percent) with most being employed for three years or more. The 2012 survey shows that Arizona continues to struggle with two areas of teacher retention: wages and benefits. Continuing to pursue strategies for teacher retention can help ensure the availability of consistent high quality care in the region.

Table 57 Availability of Local Certification, Credentials, or Degree Programs

	Locations	Degrees Offered
Northland Pioneer College	Winslow Campus, Hopi Center	Certificates: Early Childhood Management, Family Care, Infant/Toddler, Preschool, Special Needs Child Development Associate (CDA) AAS: Early Childhood Management, Family Care, Infant/Toddler, Preschool, Special Needs; AGS: Early Childhood Management, Early Childhood Infant/Toddler, Early Childhood Preschool, Special Needs Educational Assistant
Northern Arizona University	Flagstaff	Certificates: Early Childhood Education BAS: Early Childhood Education* BS: Early Childhood Education Masters of Ed: Early Childhood Education*, with Certification in Early Childhood Special Education

Source: Coconino Community College (2016). Education Department. Retrieved from https://www.coconino.edu/23-academics/471-education-department; Northland Pioneer College (2016). Early Childhood Studies. Retrieved from http://www.npc.edu/early-childhood-studies; Northern Arizona University (2016). Teaching and Learning Degrees and Programs. Retrieved from https://nau.edu/COE/Teaching-and-Learning/Degrees-Programs/
Note: Both Bachelor's programs and the Masters of Education program at NAU can now be completed online or in a blended online/in-person format. Coconino Community College offers CDA and ECE credentials for high school students in dual enrollment programs but no longer offers these credentials for students outside of dual enrollment programs. A number of Early Childhood certification, credentials, and degree programs are also available through online community college and university programs such as Rio Salado College, Central Arizona College, and Arizona State Univeristy Online.

Table 58 Credentials for Head Start and Early Head Start Teachers

	Teachers and Assistant Teachers	Child Development Associate (CDA) Credential	AA in Early Childhood Education or equivalent	BA in Early Childhood Education or equivalent	Advanced Degree in Early Childhood Education or equivalent
N.A.C.O.G. Head Start programs	156	43	41	27	7
N.A.C.O.G. Early Head Start programs	34	7	19	5	3
Havasupai Tribe Head Start program	3	1	0	0	0
Hopi Tribe Head Start program	19	11	2	1	1
Arizona Head Start program	1647	401	558	354	56
Arizona Early Head Start programs	302	56	93	89	11

Source: Office of Head Start (2016). 2014-2015 Program Information Report, Arizona, Northern Arizona Council of Governments, Havasupai Tribe, Hopi Tribe. Retrieved from https://hses.ohs.acf.hhs.gov/pir/

Developmental Screenings and Services for Children with Special Developmental and Health Needs

The Department of Economic Security Arizona Early Intervention Program (AzEIP) provides services to children from birth to 36 months of age who are developmentally delayed or at high risk of developmental delay.[121] In the Coconino Region and across Arizona, more children were referred to and served by AzEIP in 2015 than in either of the two years prior (Table 59). Most of the children referred (70%) lived in the Greater Flagstaff Area (Figure 26). In 2015, 179 children ages 0 to 2 were served through the AzEIP program. Based on the 2010 population estimates for children ages 0 to 2, this means that AzEIP services are used by approximately 4 percent of children in the region. Research suggests that about 13 percent of children ages 0 to 2 would typically qualify for early intervention services,[122] which may mean that more than 400 children ages 0 to 2 in the region who would benefit from services are not receiving them.

In the last four years, very few children (fewer than 25 in the 0-2 or 3-5 age groups) were referred to or evaluated by the Division of Developmental Disabilities (DDD) in the Coconino Region or Coconino County. To qualify for DDD services an individual must have a cognitive disability, cerebral palsy, autism, epilepsy or be at risk for a developmental disability. Children under the age of six are eligible if they show significant delays in one or more of these areas of development: physical, cognitive, communication, social emotional or self-help.[123]

The number of children (ages 0-2) evaluated by DDD statewide fell dramatically from 2012 to 2015, while the number of children (ages 3-5) increased in that same period (Table 61). The number of children ages 0 to 2 years in the region served by DDD has remained consistently close to 30 children (Table 62), and a similar trend of close to 30 children ages 3 to 5 years were served by DDD from 2012 to 2015. The number of DDD service visits was 1,717 in 2015 for children ages 0-2; with a reported 30 children served, this works out to about 57 visits per child. For children ages 3 to 5, there were 3,501 service visits, or about 130 per child (Table 63). Similar to AzEIP service and referral data, 70 percent of children (ages 0-5) referred to DDD and 81 percent of children (ages 0-5) served by DDD lived in the Greater Flagstaff Area.[124]

The Head Start, Early Head Start, and public preschool programs are also supporting children who have disabilities. The percent of children in NACOG Head Start Programs with an individualized education plan (IEP) was higher than that of statewide Head Start Programs as a whole (Table 64). Across the region, more than 70 children with special needs were served by Head Start and Early Head Start programs.

The number of preschoolers in special education in Coconino Regions schools has decreased slightly over the past four years (Table 65). Among these children, about equal proportions have a developmental disability (34%), severe delay (35%), or speech or language impairment (31%) as their primary need (Figure 27). There are no children in regional schools with hearing impairments or vision impairments listed as their primary need. This may be because hearing impairments are frequently diagnosed as speech or language impairments in the preschool age groups, or because many children with vision or hearing impairments may receive services through the Arizona State Schools for the Deaf and the Blind, which provides services to children in the region through the North Central Regions Cooperative.[125] Compared to the state, there is a smaller proportion of students with developmental disabilities and a larger proportion of students with unspecified disabilities (Table 66). These unspecified disabilities may be disabilities that do not easily fall into one category or that have not been fully diagnosed yet.

Several districts across the region have high concentrations of students with specific needs. In Williams Unified District, Fredonia-Moccasin Unified District, and Grand Canyon Unified District, most children with special needs have a need for services for a speech or language impairment, while in Maine Consolidated District and Winslow Unified District, more children need services for developmental delay (Table 66). Over 600 students in kindergarten through third grade are enrolled in special education in the region, representing about 10 percent of all students enrolled (Table 67).

In 2015, there were approximately 451 children ages birth to five receiving services for special needs[xxv] across AzEIP, DDD, Head Start, and public school districts in the Coconino Region. This represents 4.7 percent of all children ages birth to five in the region according to the 2010 Census (see Table 1). This percentage is very close to the statewide percentage of 4.8 percent, as approximately 25,985 children receive special needs services across these agencies in Arizona. The National Survey of Children with Special Health Care Needs estimated that 7.6 percent of children from birth to five (and about 17% of school-aged children) in Arizona have special health care needs.[xxvi,126] The survey also estimates that nearly one in three Arizona children with special health care needs have an unmet need for health care services (compared to about one in four nationally). In the Coconino Region, the 2.8 percentage point gap in estimated children with special needs and children receiving services for special needs represents over 700 young children who may need services but are not receiving them. This survey's estimate that 7.6 percent of children ages 0 to 5 in Arizona have special health care needs is based on parent self-reports of special needs among children already identified as having special needs. By contrast, the estimate mentioned above that 13 percent of children ages 0 to 2 may have developmental delays comes from a national cohort survey with direct assessment by trained professionals. The true rate of children with special needs in the Coconino region is likely somewhere between these estimates, still indicating that hundreds of children may still be in need of services. Further data on children with special health care needs in Arizona and Coconino County should be available soon with the publication of the results of the 2016 Arizona Children's Health Survey in early 2017.[xxvii]

Table 59 Arizona Early Intervention Program (AzEIP) Referrals and Services for Children (Ages 0 to 2), 2013 to 2015

	Children (ages 0-2) referred to AzEIP during FY 2013	Children (ages 0-2) referred to AzEIP during FY 2014	Children (ages 0-2) referred to AzEIP during FY 2015	Children (ages 0-2) served by AzEIP during FY 2013	Children (ages 0-2) served by AzEIP during FY 2014	Children (ages 0-2) served by AzEIP during FY 2015

[xxv] *It is important to note that this number is likely an overestimate of the children receiving special needs services due to double-counting. Children may receive services through multiple agencies (e.g., through both Head Start and a local school district) and thus this is not a count of unique children.*

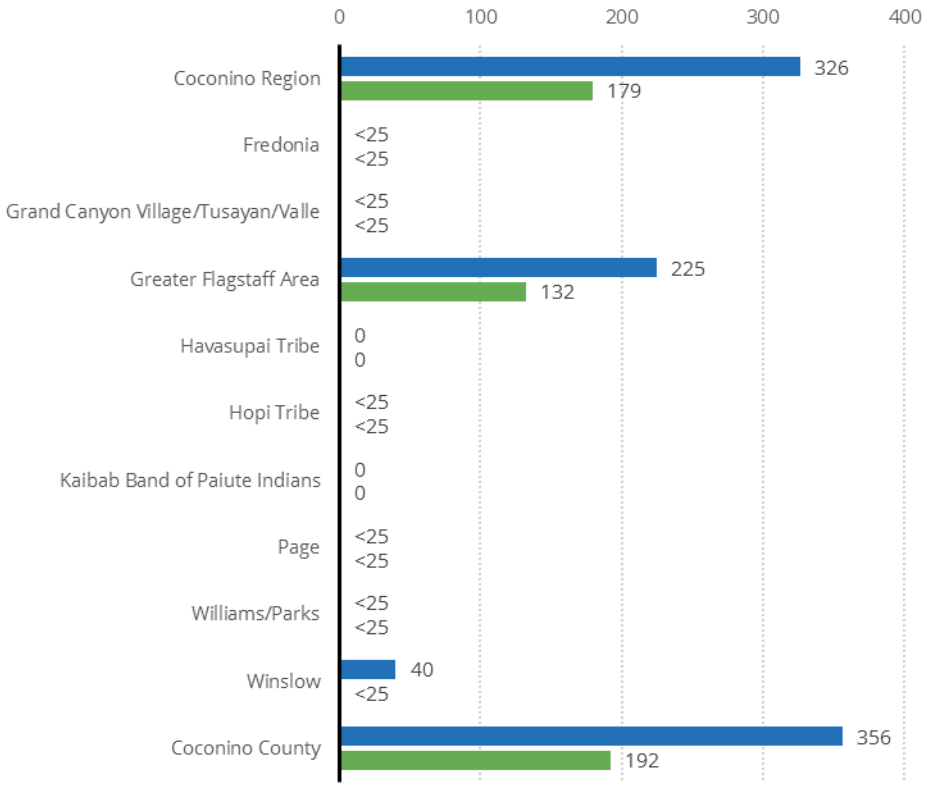
[xxvi] *The survey defines children with special health care needs broadly as "those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."*

[xxvii] *For more information on the Arizona Children's Health Survey, visit http://directorsblog.health.azdhs.gov/take-the-arizona-childrens-survey/*

Coconino Region	**252**	**248**	**326**	**97**	**80 to 88**	**179**
Coconino County	228	252	356	99	92	192
ARIZONA	10,715	11,741	14,450	4,799	5,248	10,039

Source: Arizona Department of Economic Security (2016). [Arizona Early Intervention Program dataset]. Unpublished data.

Figure 26 AzEIP Referrals and Services for Children (Ages 0-2) by Community, FY2015



Source: Arizona Department of Economic Security (2016). [Arizona Early Intervention Program dataset]. Unpublished data.

Table 60 Children (Ages 0 to 5) Referred to the Division of Developmental Disabilities (DDD), 2012 to 2015

	Number of children (ages 0-2) referred in FY2012	Number of children (ages 0-2) referred in FY2013	Number of children (ages 0-2) referred in FY2014	Number of children (ages 0-2) referred in FY2015	Number of children (ages 3-5) referred in FY2012	Number of children (ages 3-5) referred in FY2013	Number of children (ages 3-5) referred in FY2014	Number of children (ages 3-5) referred in FY2015
Coconino Region	<25	<25	31	33	<25	<25	<25	<25
Coconino County	<25	<25	30	39	<25	<25	<25	<25
ARIZONA	1,439	2,186	2,479	2,484	1,393	1,401	1,804	1,969

Source: Arizona Department of Economic Security (2016). [Division of Developmental Disabilities dataset]. Unpublished data.

Table 61 Children (Ages 0 to 5) Evaluated by the Division of Developmental Disabilities (DDD), 2012 to 2015

	Number of children (ages 0-2) screened in FY2012	Number of children (ages 0-2) screened in FY2013	Number of children (ages 0-2) screened in FY2014	Number of children (ages 0-2) screened in FY2015	Number of children (ages 3-5) screened in FY2012	Number of children (ages 3-5) screened in FY2013	Number of children (ages 3-5) screened in FY2014	Number of children (ages 3-5) screened in FY2015
Coconino Region	<25	<25	<25	<25	<25	<25	<25	<25
Coconino County	<25	<25	<25	<25	<25	<25	<25	<25
ARIZONA	732	314	216	238	669	731	727	958

Source: Arizona Department of Economic Security (2016). [Division of Developmental Disabilities dataset]. Unpublished data.

Note: Screening is defined by DES as including "children who DDD had paid for an evaluation, not including occupational therapy, physical therapy, or speech therapy, during the state fiscal year

Table 62 Children (Ages 0 to 5) Served by the Division of Developmental Disabilities (DDD), 2012 to 2015

	Number of children (ages 0-2) served in FY2012	Number of children (ages 0-2) served in FY2013	Number of children (ages 0-2) served in FY2014	Number of children (ages 0-2) served in FY2015	Number of children (ages 3-5) served in FY2012	Number of children (ages 3-5) served in FY2013	Number of children (ages 3-5) served in FY2014	Number of children (ages 3-5) served in FY2015
Coconino Region	32	31	26	30	29	<25	<25	27
Coconino County	29	29	25	32	<25	<25	<25	30
ARIZONA	2,646	2,693	2,341	2,336	2,563	2,600	2,533	2,540

Source: Arizona Department of Economic Security (2016). [Division of Developmental Disabilities dataset]. Unpublished data.

Table 63 Division of Developmental Disabilities (DDD) Service Visits for Children (Ages 0 to 5), 2012 to 2015

	Number of service visits (ages 0-2) in FY2012	Number of service visits (ages 0-2) in FY2013	Number of service visits (ages 0-2) in FY2014	Number of service visits (ages 0-2) in FY2015	Number of service visits (ages 3-5) in FY2012	Number of service visits (ages 3-5) in FY2013	Number of service visits (ages 3-5) in FY2014	Number of service visits (ages 3-5) in FY2015
Coconino Region	1,412	1,176	1,121	1,717	2,982	2,140	2,439	3,501
Coconino County	1,551	1,427	1,157	1,935	2,769	2,133	2,676	3,839
ARIZONA	168,992	158,496	130,486	120,519	363,468	374,440	367,590	358,322

Source: Arizona Department of Economic Security (2016). [Division of Developmental Disabilities dataset]. Unpublished data.

Table 64 Children Enrolled in Head Start or Early Head Start with an IEP or ISFP, 2015-2016

Center	Total Enrolled	Enrolled Children With IEP or ISFP	Percent of children with IEP or ISFP
N.A.C.O.G. Head Start Programs- Coconino County	442	64	14%
N.A.C.O.G. Early Head Start Programs- Coconino County	106	<25	DS
Havasupai Tribe Head Start	20	<25	DS
Hopi Tribe Head Start	210	<25	DS
Arizona Head Start Programs	18,313	1,930	11%
Arizona Early Head Start Programs	3,514	438	12%

Source: Northern Arizona Council of Governments (2016). [Head Start Dataset]. Unpublished Data. Office of Head Start (2016). 2015-2016 Program Information Report. Retrieved from https://hses.ohs.acf.hhs.gov/pir/

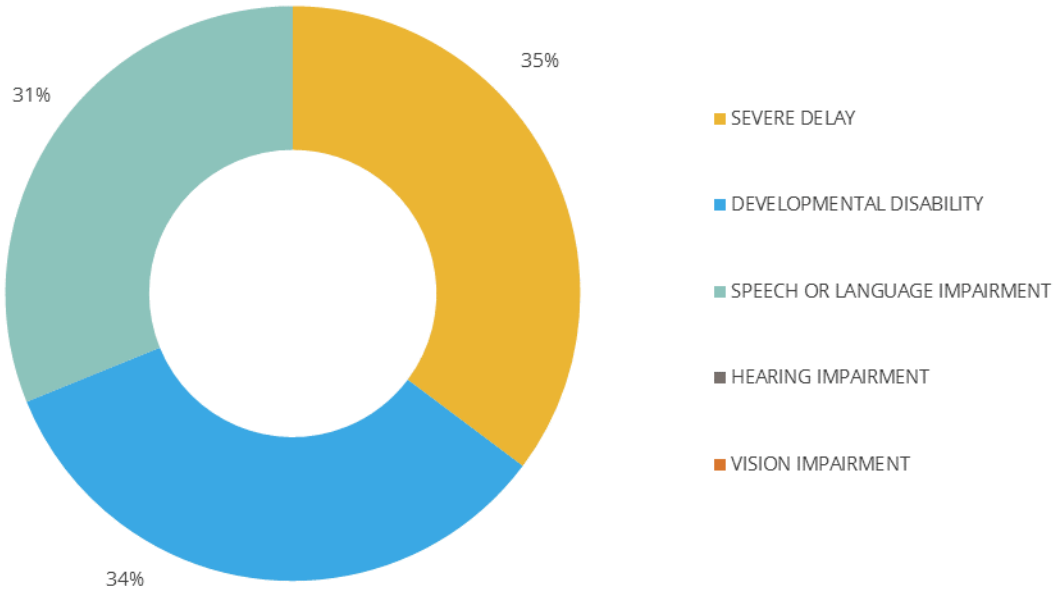
Table 65 Number of Preschoolers in Special Education, 2012 to 2015

	Total number of ADE preschools and elementary schools	Number of preschoolers in special education, 2012	Number of preschoolers in special education, 2013	Number of preschoolers in special education, 2014	Number of preschoolers in special education, 2015
Coconino Region Schools	14	144	151	133	122
Arizona State Schools for the Deaf and Blind	1	<25	<25	<25	0
Flagstaff Unified District	7	60	66	59	59
Fredonia-Moccasin Unified District	1	<25	<25	<25	<25
Grand Canyon Unified District	1	<25	<25	<25	<25
Maine Consolidated School District	1	<25	<25	<25	<25
Page Unified District	1	44	46	32	32
Williams Unified District	1	<25	<25	<25	<25
Winslow Unified District	1	<25	<25	<25	<25
Coconino Region Charter Schools	0	0	0	0	0
Coconino County Schools	13	139	199	174	127
All Arizona Schools	550	9,173	9,203	8,845	8,702

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here.

Figure 27 Types of Disabilities Among Preschoolers in Special Education in the Coconino Region, 2015



Source: Arizona Department of Economic Security (2016). [Arizona Early Intervention Program dataset]. Unpublished data.
Note: The data presented in this table are unduplicated (i.e., children diagnosed with multiple disabilities are counted only one time in the Federal Primary Need (FPN) category

Table 66 Types of Disabilities Among Preschoolers in Special Education, 2015

	Developmental Disability	Hearing Impairment	Severe Delay	Speech Or Language Impairment	Vision Impairment
Coconino Region Schools	34%	0%	35%	31%	0%
Flagstaff Unified District	22%	0%	66%	12%	0%
Fredonia-Moccasin Unified District	0%	0%	0%	100%	0%
Grand Canyon Unified District	25%	0%	0%	75%	0%
Maine Consolidated School District	100%	0%	0%	0%	0%
Page Unified District	47%	0%	9%	44%	0%
Williams Unified District	0%	0%	0%	100%	0%
Winslow Unified District	62%	0%	8%	31%	0%
Coconino County Schools	31%	0%	39%	30%	0%

All Arizona Schools	41%	1%	21%	36%	1%

Source: Arizona Department of Education (2016). [Education dataset]. Unpublished data.

Note: The school-district data in this table include only the schools that fall within the region's boundaries. For districts which are partially outside of the region, the data for the complete district is likely to vary from the percentages reported here. The data presented in this table are unduplicated (i.e., children diagnosed with multiple disabilities are counted only one time in the Federal Primary Need (FPN) category

Table 67 Kindergarten through Third-Grade Enrollment in Special Education, October 2015

	Number of students enrolled (K to 3)	Number of students in special education	Percent of students in special education
Coconino Region Schools	**5,889**	**607**	**10%**
Flagstaff Unified District	3,261	365	11%
Fredonia-Moccasin Unified District	76	<25	8%
Grand Canyon Unified District	96	<25	11%
Maine Consolidated School District	49	<25	12%
Page Unified District	794	75	9%
Williams Unified District	175	30	17%
Winslow Unified District	669	52	8%
Coconino Region Charter School	769	62	8%
Coconino County Schools	5,616	616	11%
All Arizona Schools	342,307	33,269	10%

Source: Arizona Department of Education (2016). [Enrollment dataset]. Unpublished data.

CHILD HEALTH

Why Child Health Matters

Health encompasses not only physical health, but also mental, intellectual, social and emotional well-being. Optimal development brings all of these facets together. A child's health begins with its mother's health before she becomes pregnant and is influenced by early prenatal care.[127] The exposures and experiences in utero, at birth, and in early life set the stage for health and well-being throughout a child's life.[128,129] Access to health care and health insurance, preventive care such as immunizations and oral health care all influence not only a child's current health, but long-term development and future health as well.[130,131,132]

One way to assess how well a region is faring is by comparing a set of indicators to known targets or standards. Healthy People is a federal initiative that provides 10-year national objectives for improving the health of Americans. Healthy People 2020 targets were developed with the use of current health data, baseline measures, and areas for specific improvement. Using the Healthy People 2020 standards as a tool for comparison can help regions understand where they fall relative to the nation as a whole, as well as identify particular areas of strength and places for improvement in relation to young children's health.

The ability to obtain health care is critical for supporting the health of young children. In the early years of a child's life, well-baby and well-child visits allow clinicians to offer developmentally appropriate information and guidance to parents and provide a chance for health professionals to assess the child's development and administer preventative care measures like vaccines and developmental screenings. [133] Families without health insurance are more likely to skip these visits, and so are less likely to receive preventive care for their children, or to receive care for health conditions and chronic diseases.[134,135] Children who lack health insurance are also more likely to be hospitalized and to miss school.[136]

Low income children in Arizona are covered by the Arizona Health Care Cost Containment System (AHCCCS), Arizona's Medicaid. AHCCCS coverage is available for children in families with income up to 147 percent of the Federal Poverty Level (FPL) for those under age 1, and up to 141 percent of FPL for those ages 1 to 5 (and 133% for those from 6-19 years). Across the nation, state-run Children's Health Insurance Programs (CHIP) have provided health insurance to children up to age 19 in families with incomes too high to qualify them for Medicaid (AHCCCS). Enrollment in the Arizona version of CHIP, KidsCare, was suspended as of January 1, 2010, a particularly vulnerable time for families, following on the heels of the Great Recession.[137] Arizona became the only state without an active CHIP program. However, in May 2016, the Arizona legislature voted to lift the freeze on KidsCare,[138] and in July 2016 applications began to be accepted for the first time in six years, with coverage beginning September 1, 2016.[139] Expanding health insurance availability for lower-income children can lead to health improvements, and to longer-term benefits such as increased high school and college graduation rates and higher lifetime earnings.[140]

Because a number of factors influence the health of a child before conception and in utero, the characteristics of women giving birth can have a substantial impact on the birth and developmental outcomes for their children. For instance, pregnancy during the teen years is associated with a number of health concerns for infants, including neonatal death, sudden infant death syndrome, and

child abuse and neglect.[141] Teenaged mothers (and fathers) themselves are less likely to complete high school or college, and more likely to require public assistance and to live in poverty than their peers who are not parents.[142,143,144]

A mothers' weight status can also influence her child's health. Women who are obese before they become pregnant have pregnancies with a higher risk of birth complications and neonatal and infant mortality.[145,146] Babies born to obese women are at risk for chronic conditions in later life such as diabetes and heart disease.[147] Maternal smoking is another factor that can greatly affect child outcomes. Babies born to mothers who smoke are more likely to be born early (pre-term), be low birth weight, die from sudden infant death syndrome (SIDS) and have weaker lungs than other babies.[148]

One potentially harmful birth outcome that can have long-lasting effects are preterm births – births before 37 weeks of gestation. Preterm birth, in addition to being associated with higher infant and child mortality, often results in longer hospitalization, increased health care costs, and longer-term impacts such as physical and developmental impairments. Babies born at a low-birth weight (less than 2,500 grams or 5 pounds, 8 ounces) are also at increased risk of infant mortality and longer-term health problems such as diabetes, hypertension and cardiac disease.[149]

Quality preconception counseling and early-onset prenatal care can help reduce some of these risks for poor birth outcomes by providing information and supporting an expectant mother's health and nutrition.

After birth, a number of factors have been associated with improved health outcomes for infants and young children. One factor is breastfeeding, which has been shown to reduce the risk of ear, respiratory and gastrointestinal infections, SIDS, overweight, and type 2 diabetes.[150] The American Academy of Pediatrics recommends exclusive breastfeeding for about 6 months, and continuing to breastfeed as new foods are introduced for 1 year or longer.[151] Healthy People 2020 aims to increase the proportion of infants who were ever breastfed to 81.9 percent.[152]

Children exposed to alcohol and drugs neonatally face behavioral and developmental health challenges. Opiate use during pregnancy, both illegal and prescribed use, has been associated with neonatal abstinence syndrome (NAS), where infants born exposed to these substances exhibit withdrawal creating longer hospital stays, increased health care costs and increased complications for infants born with NAS.[153] Infants exposed to cannabis (marijuana) in utero often have a decrease in birth weight, and are more likely to be placed in neonatal intensive care, compared to infants whose mothers had not used the drug during pregnancy.[154] Substance abuse treatment and supports for parents and families grappling with these issues can help to ameliorate these short and long-term impacts on young children.

Immunization against preventable diseases is protect children from illness and potentially death. In order to assure community immunity (also known as "herd immunity"), which helps to protect unvaccinated children and adults from contracting vaccine- preventable diseases, rates of vaccination in a community need to remain high.[155] Research shows that higher exemption rates from vaccines at the school-level have been associated with school-based outbreaks of preventable diseases such as measles and pertussis.[156]

Oral health and good oral hygiene practices are also very important to children's overall health. According to the National Survey of Children's Health, the percentage of children in Arizona with

excellent or very good oral health (65.7%) falls below the national level of 71.3 percent.[157] Tooth decay and early childhood caries can have short and long term consequences including pain, poor appetite, disturbed sleep, lost school days, and reduced ability to learn and concentrate.[158] More children in kindergarten in Arizona (52%) have tooth decay compared to children across the nation (36%). Within Arizona, American Indian (76%) and Hispanic children (56%) are more likely to experience tooth decay than white children (34%).[159]

In early childhood, illness and injury can cause not only trauma to a child but added stress for a family. Non-fatal unintentional injuries substantially impact the well-being of children,[160] and injuries are the leading cause of death in children in the United States.[161] Common causes of visits to the emergency department for children 0-5 in Arizona include falls (particularly from furniture), collisions with an object, and natural events like bites and stings. Common causes for hospitalization of young children in Arizona include falls, poisoning, and assault/abuse.[162] Many of these injuries are preventable, prompting the Centers for Disease Control and Prevention to produce a National Action Plan for Child Injury Prevention, which outlines evidence-based strategies for addressing the challenge of keeping children safe.[163] The Arizona Department of Health Services has recognized the need to focus on reducing childhood injuries in Arizona, and identified that as one of their priorities in the Bureau of Women's and Children's Health Strategic Plan[164], as well as included it as part of their Arizona Injury Prevention Plan.[165]

A child's weight status can have long-term impacts on health and well-being; in the United States, areas of concern tend to center around malnutrition and obesity, rather than undernutrition and underweight. Nationwide, it is estimated that about 3.8 percent of children ages 2-19 are underweight, 16.2 percent are overweight, and 17.2 percent are obese.[166,167] Obesity can have negative consequences on physical, social, and psychological well-being that begin in childhood and continue into and throughout adulthood.[168] The first two years of life are seen as critical to the development of childhood obesity and its resultant negative consequences. Higher birth weight and higher infancy weight, as well as lower-socioeconomic status and low-quality mother-child relationships have all been shown to be related to higher childhood weight.[169] One component of establishing a healthy weight – physical activity – also promotes improved visual-motor integration skills and object manipulation skills which in turn lead to improved executive function, social behaviors and ultimately school readiness for young children.[170]

What the Data Tell Us

Access to Care

The Arizona Department of Health Services designates Primary Care Areas (PCAs) as geographically based areas in which most residents seek primary medical care from the same place.[171] There are five primary care areas that coincide with the Coconino Region: Page, Grand Canyon Village, Flagstaff, Hopi Tribe, and Winslow.[xxviii] Each PCA receives a score based on 13 weighted items to provide a snapshot of

[xxviii] *The geography of Primary Care Areas differs from the definition of sub-regional communities in the Coconino Region. For a map of Arizona Primary Care Areas, visit http://azdhs.gov/documents/prevention/health-systems-development/data-reports-maps/maps/azpca.pdf*

the health of area residents.[xxix] In the Coconino Region, the Flagstaff PCA (24) and Grand Canyon Village (36) have the lowest (best) scores, while the scores of the Winslow (42), Page (44), and Hopi Tribe (58) PCAs are much higher, indicating more public health risk factors. Medically Underserved Areas (MUAs) are federally designated areas that have a need for medical services due to a shortage of primary care providers, while Medically Underserved Populations are specific groups of people living in an area with a provider shortage and barriers to health care.[xxx,172] Parts of the Page, Hopi Tribe, and Winslow PCAs are designated as medically underserved areas. Figure 28 shows the ratio of population to primary care providers by PCA as of July 2015. The Flagstaff PCA had the best population-provider ration, with 286 providers per person. Grand Canyon Village, Page, and the Hopi Tribe PCAs all had population-provider ratios greater than that seen statewide, indicating a potential need for more primary care providers.

Another key factor for access to health care is health insurance, and 12 percent of young children in the region were estimated to be uninsured, along with 19 percent of the total population in the Coconino Region (Table 68). This is higher than uninsured rates statewide for young children (10%) and all ages (16%). The proportion of health insurance varied by community. Only 5 percent of young children in the Winslow community and 8 percent of young children in the Page community lacked health insurance, compared to 19 percent in the Grand Canyon Village-Tusayan-Valle community and 37 percent in the Kaibab Band of Paiute Indians Community.

One way that children in Arizona have had access to health insurance is through the Affordable Care Act (ACA). As of February 2016, 46,700 children under 18 in Arizona were enrolled in federally facilitated marketplace plans through the ACA, representing 23 percent of those enrolled under ACA across the state. This is the highest proportion of young people enrolled in any state (tied with North Dakota and Utah); the national rate is nine percent.[173]

The smallest proportion of adults without health insurance were in the Page (17%), Winslow (19%), and Hopi Tribe (19%) communities, while the highest proportions were in the Havasupai community (72%). It is important to note for both children and adults living in tribal communities that the U. S. Census does not consider health care coverage through the Indian Health Service (IHS) to be health insurance.[174] Thus, while there may be high percentages of uninsured persons in tribal communities, this does not mean that these people do not have access to health care.

Health care services through the Indian Health Service (IHS) are available to residents of the Havasupai Tribe community at Supai Canyon Health Station, to residents of the Hopi Tribe community at the Hopi Health Care Center, and to residents of the Kaibab Band of Paiute Indians community at the Kaibab-Paiute Health Station. Residents of these communities may also travel to other facilities to receive care. Key informants from the Hopi Tribe community noted that community members travel to the Tuba City Regional Health Care Corporation, an independent health system with a hospital in

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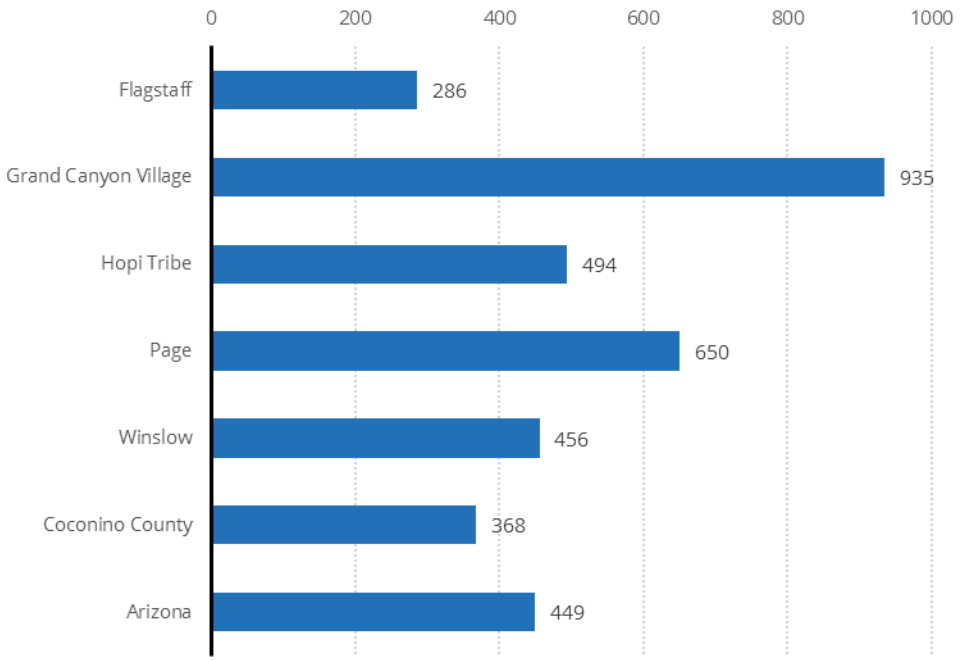
[xxix] *The 13 items (according to the Arizona Administrative Code R9-24-203) are population to provider ratio, travel distance to primary care provider, transportation score, percent of population under 200 percent of the federal poverty level (FPL), percent of population between 100 and 200 percent of the FPL, uninsured births, ambulatory-care admissions, low birthweight births, lack of prenatal care, percentage of deaths before life expectancy, infant mortality rate, percent of minorities, elderly, and unemployed population, and whether the area as one or fewer full-time providers.*

[xxx] *Medically Underserved Areas and Populations are defined using the Index of Medical Underservice, which is calculated on four criteria: population to provider ratio, poverty rate, share of population over age 65, and the infant mortality rate.*

Tuba City serving both the Navajo and Hopi communities, or to Winslow for care. Data provided by IHS indicate that between October of 2013 and September of 2015, 51 unique children (ages 0-5) from the Havasupai Tribe, 525 unique children (ages 0-5) from the Hopi Tribe, and fewer than 25 children (ages 0-5) from the Kaibab Band of Paiute Indians were served at IHS medical facilities (see Table 69).[xxxi] Figure 29 shows the number of well child visits by age for children from the Hopi Tribe and Havasupai Tribe during that same time period.

Figure 28 Ratio of Population to Primary Care Providers by Primary Care Area, July 2015

[xxxi] *Please note that the number of active users represents all members of the Havasupai Tribe (birth to 5, in this case) who received services at least once at facilities within the IHS Colorado River Service Unit, all members of the Hopi Tribe who received services at least once at facilities within the IHS Hopi Service Unit, and all members of the Kaibab Band of Paiute Indians who received services at least once at facilities within the IHS Hopi Service Unit during the stated time period, regardless of their place of residence. Facilities within the Colorado Service Unit include the Supai Canyon Health Station and the Parker Indian Health Center, and facilities within the Hopi Service Unit include the Hopi Health Care Center and the Kaibab Paiute Health Station. This is also the case with all other indicators included in this report where the Indian Health Service is the source. This means that some of the children and adults considered "active users" may not be living within the reservation boundaries but in the surrounding areas which include Kingman, Flagstaff, Page, and Winslow. Personal Communication, Indian Health Service – Phoenix Area, September 2016*



Source: Arizona Department of Health Services (2016). Primary Care Area Statistical Profiles. Retrieved from http://azdhs.gov/prevention/health-systems-development/data-reports-maps/index.php#statistical-profiles-pca.

Table 68 Estimated Proportion of Population Without Health Insurance

	Estimated population (ages 0-5)	Children (ages 0-5) without health insurance	Estimated population (all ages)	Persons (all ages) without health insurance
Coconino Region	9,233	12%	123,917	19%
Fredonia	176	11%	1,539	20%
Grand Canyon Village-Tusayan-Valle	128	19%	3,070	21%
Greater Flagstaff Area	6,040	14%	87,184	19%
Havasupai Tribe	N/A	N/A	126	72%
Hopi Tribe	916	11%	8,278	19%
Kaibab Band of Paiute Indians	35	37%	277	26%
Page	823	8%	8,006	17%
Williams-Parks	384	13%	6,486	22%
Winslow	770	5%	8,907	19%
Coconino County	10,330	14%	135,141	20%
ARIZONA	531,825	10%	6,453,706	16%

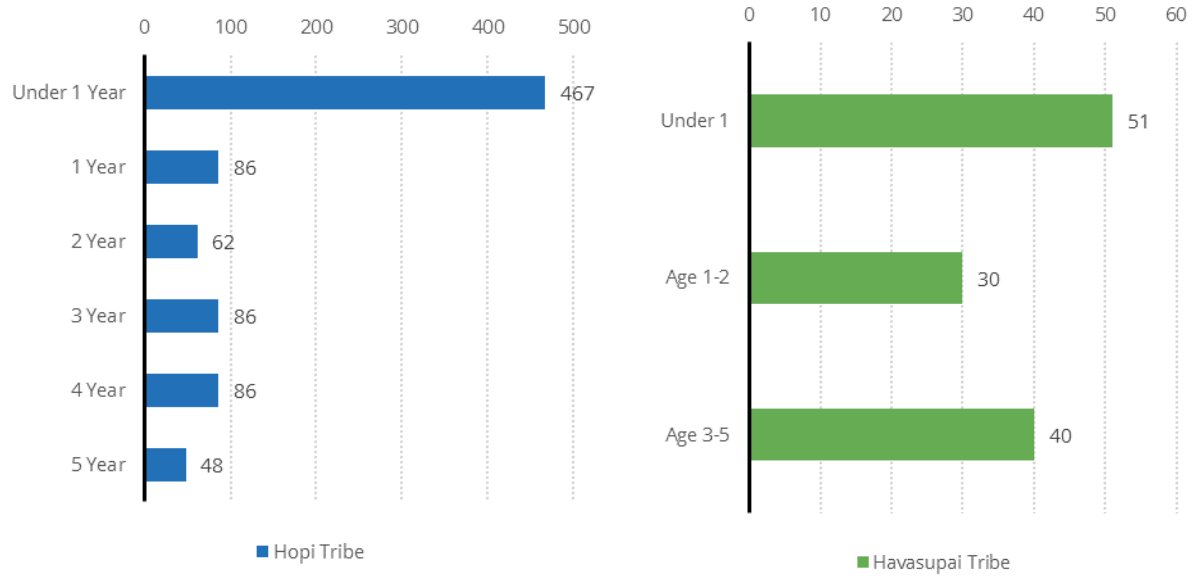
Source: U.S. Census Bureau (2016). American Community Survey, 5-year estimates (2010-2014), Table B27001

Table 69 Active Users of Indian Health Services, October 2013 to September 2015

	All Ages	Children (ages 0-5)	Children (ages 0-17)
Havasupai Tribe	598	51	162
Hopi Tribe	5,447	525	1,694
Kaibab Band of Paiute Indians	109	<25	28

Source: Indian Health Service, Phoenix Area (2016). [Maternal and Child Health dataset]. Unpublished data.

Figure 29 Number of Well Child Visits at IHS Facilities by Age, October 2013 to September 2015



Source: Indian Health Service, Phoenix Area (2016). [Maternal and Child Health dataset]. Unpublished data.
Note: Age groupings differ between the two figures due to the small number of young children in the Havasuapi Tribe community; age groups are combined for the Havasupai Tribe children to protect privacy.

Pregnancies and Birth

In 2014, 1,562 Coconino Region residents gave birth (Table 70). This represented 1.8 percent of the births statewide. More than two-thirds of these births were to mothers residing in the Greater Flagstaff Area (1,041). There were more than 100 births to mothers residing in the Hopi Tribe, Page, and Winslow communities. In keeping with the projected population growth in Coconino, the number of births in the county is expected to remain about the same through 2040 (Table 71).

Table 70 Live Births During Calendar Year 2014, by Mother's Place of Residence

	Total number of births to Arizona-resident mothers in 2014
Coconino Region	1,562
Fredonia	<25
Grand Canyon Village-Tusayan-Valle	<25
Greater Flagstaff Area	1,041
Havasupai Tribe	<25
Hopi Tribe	171
Kaibab Band of Paiute Indians	0
Page	120
Williams-Parks	62
Winslow	131
Coconino County	1,701
ARIZONA	86,648

Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Table 71 Projected Number of Births Per Year, 2015 to 2040

	2015	2020	2025	2030	2035	2040
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A
Coconino County	1,669	1,690	1,685	1,690	1,695	1,705
ARIZONA	86,475	94,177	102,207	108,600	112,982	116,633

Source: Arizona Department of Administration, Employment and Population Statistics (2015). State and county population projections (medium series).

Maternal Characteristics

Of the 1,562 mothers who gave birth in the Coconino Region in 2014, half (50%) were non-Hispanic white, one third (33%) were American Indian or Alaska Native, and 14 percent were Hispanic or Latina (Figure 30). Compared to the state as a whole, mothers in the Coconino Region were much more likely to be American Indian, and less likely to be Hispanic or Latina. New mothers in the Coconino Region had slightly higher educational attainment than mothers statewide; 41 percent had a high school education or less (45% statewide), and 26 percent had attained a bachelor's degree or more (23% statewide) (Table 72). Over two-thirds (68%) of mothers in the Greater Flagstaff Area has at least some college or professional education or a degree. The largest proportions of mothers giving birth in the Hopi Tribe and Winslow communities had a high school diploma or GED (45% and 40%, respectively).

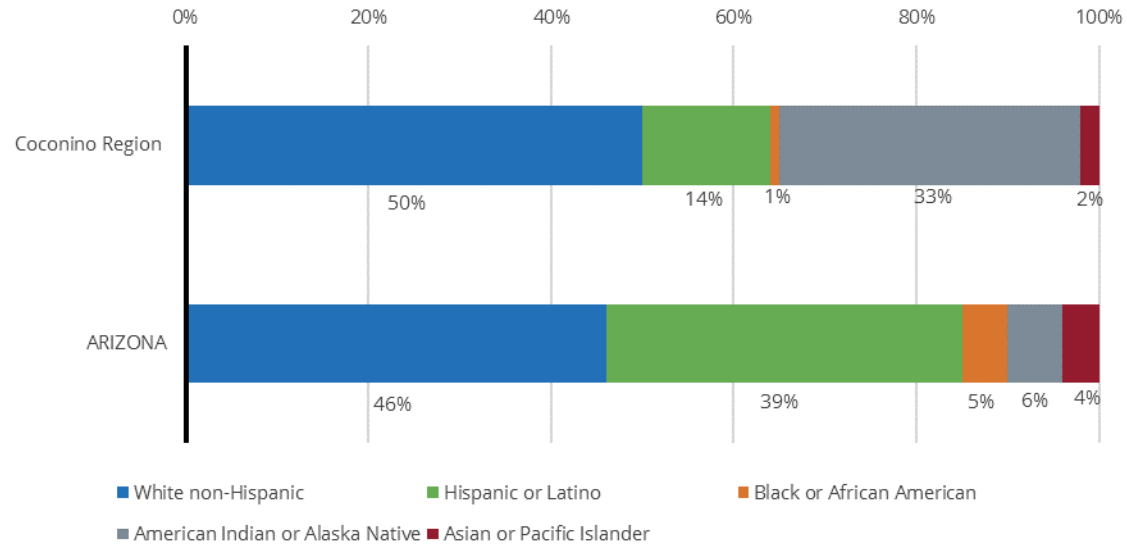
The population of new mothers in the Coconino Region was similar to those statewide on other attributes. Just under half (49%) of mothers were not married in the region (45% statewide) and 8 percent were in their teens (8% statewide) (Table 73). In Coconino, over half of births (57%) were to mothers relying on AHCCCS or Indian Health Service (IHS) coverage, which was slightly higher than the statewide proportion of 55 percent. However, maternal characteristics varied by community. The percent of mothers aged 19 and younger were higher than the region in the Williams-Parks (15%), Winslow (12%), and Hopi Tribe (12%) communities. As key informants from the Hopi Tribe community noted, young parents may need more support from other relatives, particularly grandparents, when raising their children. The number of teen mothers in the Havasupai Tribe community fell below the suppression threshold, but key informants in the community noted that there are not currently many teen parents in the community. Nearly all births in the Hopi Tribe community (90%) were covered by AHCCCS or IHS, compared to about half (49%) in the Greater Flagstaff Area.

A lower proportion of mothers in the Coconino Region reported smoking (3.5%) than across the state (4.6%), though both areas fall above the Healthy People 2020 goal of 1.4 percent (Table 73). In Arizona, the percent of expectant mothers who reported smoking during pregnancy has remained relatively stable from 2009 to 2013 at just over four percent. However, there is evidence of disparities. In Arizona in 2013, expectant mothers insured by AHCCCS were more likely to report smoking (6.4%) compared to those with private insurance (1.8%). Race/ethnicity also impacts reports of smoking during pregnancy with white, non-Hispanic (7%) and African-American (6.5%) expectant moms more likely to report smoking than expectant moms who were Alaska native (2.9%), Hispanic/Latina (1.8%), and Asian or Pacific Islander (1.1%).[175] By community, rates of tobacco use were extremely high in the Page community at 17.5 percent. Key informants in the Hopi Tribe region highlighted a tribal tobacco program that discourages use of commercial tobacco. In 2014, only 1.2 percent of Hopi Tribe mothers reported using tobacco during pregnancy, which is below the Health People 2020 goal of less than 1.4 percent. The number of children enrolled in the WIC program exposed to smoking in the household has fallen from 5 percent in 2011 to 0 percent in 2015.[176] Key informants suggested that these data could be evidence that the tobacco program is having a positive impact in the community.

Another aspect of maternal health that is linked to both birth outcomes and a child's subsequent health is maternal obesity. Among Arizonan women overall, about 51 percent were overweight or obese before pregnancy in 2014.[177] Among women who participate in WIC, this rate was higher – 58 percent, which is to be expected given that low-income women are more likely to be obese in the United States.[178] In the Coconino Region, this rate was slightly lower; 30 percent of women were overweight,

and 27 percent were obese, for a total of 57 percent who were overweight or obese before becoming pregnant (Figure 31). The rate of obesity in the region, county, and the state has increased slightly but steadily since 2012 (see Figure 32); this mirrors national trends as well.[179]

Figure 30 Race and Ethnicity of Mothers Giving Birth in 2014



Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Table 72 Live Births During Calendar Year 2014, by Mother's Educational Attainment

	Less than high school	High school or GED	Some college or professional education	Bachelor's degree or more
Coconino Region	**14%**	**27%**	**32%**	**26%**
Fredonia	DS	DS	DS	DS
Grand Canyon Village-Tusayan-Valle	DS	DS	DS	DS
Greater Flagstaff Area	11%	20%	34%	34%
Havasupai Tribe	DS	DS	DS	DS
Hopi Tribe	DS	45%	26%	DS
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A
Page	14%	36%	33%	18%
Williams-Parks	18% to 24%	40%	21% to 27%	11% to 18%
Winslow	19% to 22%	40%	33%	5% to 8%
Coconino County	15%	28%	32%	25%
ARIZONA	20%	25%	31%	23%

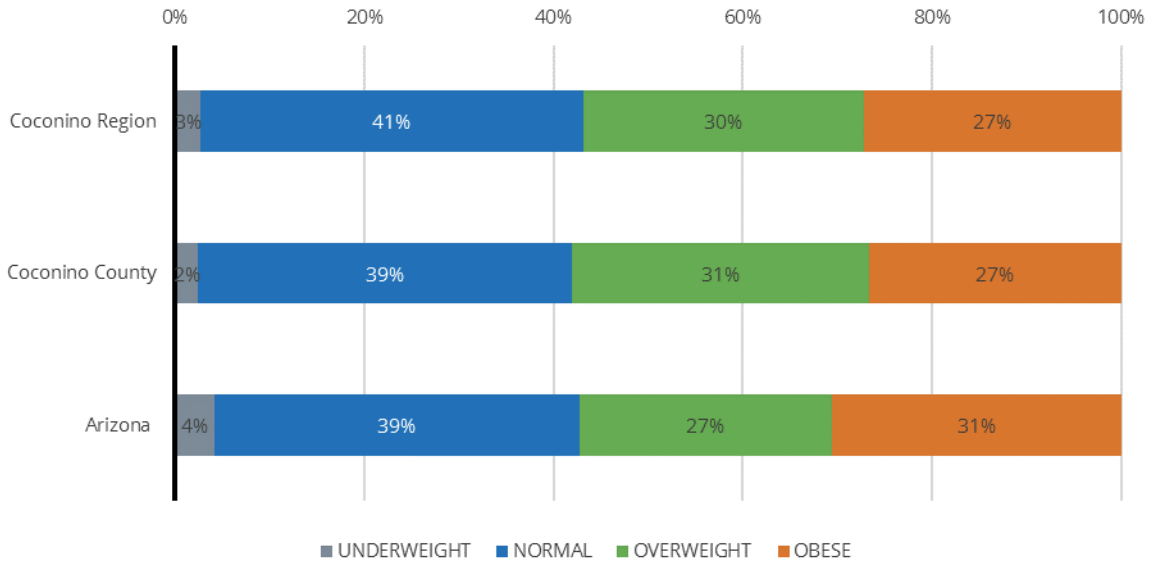
Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Table 73 Other Characteristics of Mothers Giving Birth in 2014

	Mother was not married	Mother was 19 or younger	Mother was 17 or younger	Birth was covered by AHCCCS or IHS	Tobacco use during pregnancy
Coconino Region	**49%**	**8%**	**2%**	**57%**	**3.5%**
Fredonia	DS	DS	DS	DS	DS
Grand Canyon Village-Tusayan-Valle	DS	DS	DS	DS	DS
Greater Flagstaff Area	42%	6%	DS	49%	1.7%
Havasupai Tribe	DS	DS	DS	DS	DS
Hopi Tribe	85%	12%	DS	90%	1.2%
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A	N/A
Page	50%	6%	DS	61%	17.5%
Williams-Parks	39%	15%	DS	66%	3.2%
Winslow	60%	12%	DS	73 to 76%	3.8%
Coconino County	52%	8% or 9%	2% or 3%	61%	3.2%
ARIZONA	45%	8%	2%	55%	4.6%

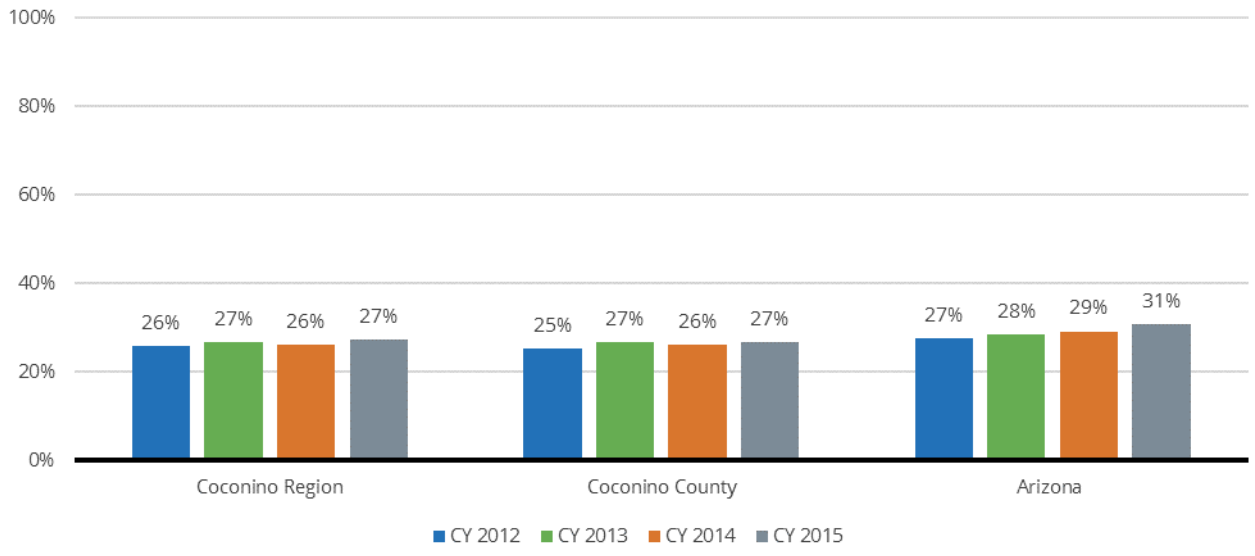
Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Figure 31 Pre-Pregnancy Weight Status for WIC Women, 2015



Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.

Figure 32 Pre-Pregnancy Obesity Rates for WIC Women, 2012 to 2015



Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.

Prenatal Care

The Healthy People 2020 goal is that at least 77.9 percent of pregnant women receive prenatal care that begins in the first trimester of pregnancy. Prior to 2014, the percent of women with early prenatal care was consistently near 85 percent, meeting the Healthy People 2020 goal. In 2014, the Arizona Department of Health Services introduced major changes in the way that prenatal care by trimester is assessed; these structural changes mean that rates from 2014 onward are not directly comparable to earlier rates. The new calculations have resulted in a higher number of birth certificates with "unknown" prenatal care status (3.4% in the Coconino Region). In 2014, 77.0 percent of pregnant women in the region obtained prenatal care during the first trimester, meaning that the Healthy People 2020 goal was not met (Table 74). Only the Greater Flagstaff Area community met the Healthy People 2020 goal with 80.4 percent of pregnant women beginning care in first trimester. Rates of care in the first trimester were particularly low in the Hopi Tribe community (59.5% to 60.2%). While the reason for the decline in timely prenatal care may be an artifact of the new reporting system, the data for 2014 indicate that not as many women as previously thought are obtaining prenatal care in the first trimester, which could have serious repercussions for child well-being. Particularly concerning is that there is a similar downward trend in the proportion of Arizona women of child-bearing age (18-45) who report that a doctor, nurse or other health care worker ever talked with them about ways to prepare for a healthy pregnancy and baby (that is, discussed preconception health). Statewide, this rate has fallen from 47 percent in 2011, to 35 percent in 2014; in Coconino County the rate in 2014 was 42 percent.[180]

On a more positive note, most mothers are receiving at least some form of prenatal care; only 5 percent of babies in the Coconino Region were born to mothers who had had fewer than five prenatal care visits (Table 74). The Coconino Region had a smaller proportion of mothers with few prenatal visits, compared to the state, where 6 percent of births were to mothers who had fewer than five prenatal care visits. However, several communities had higher shares of mothers with few prenatal visits. In the Hopi Tribe community, 8 percent of mothers had fewer than five prenatal care visits, and a similar 7 percent of mothers had few care visits in the Page community.

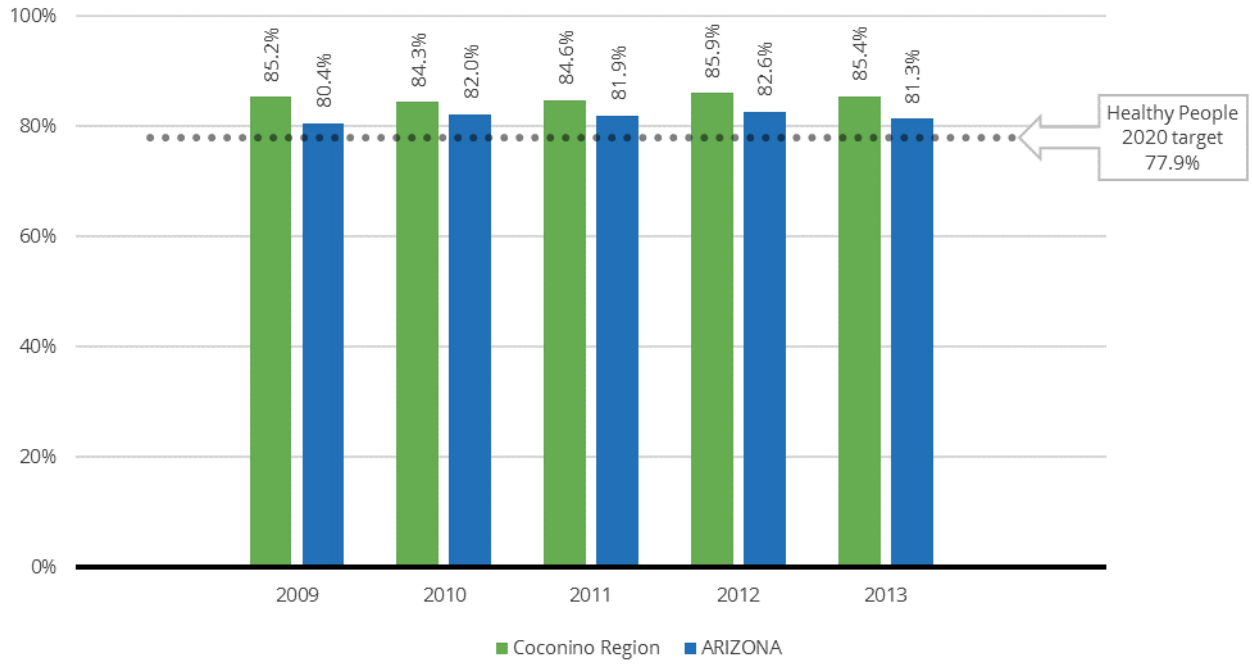
Table 74 Live Births During Calendar Year 2014, by Number and Timing of Prenatal Visits

	No visits	1 to 4 visits	5 to 8 visits	9 to 12 visits	13 or more visits	Percent of births with fewer than five prenatal care visits	Percent of births with prenatal care begun in first trimester
Coconino Region	**1%**	**4%**	**15%**	**51%**	**29%**	**5%**	**77%**
Fredonia	DS	DS	DS	DS	DS	DS	DS
Grand Canyon Village-Tusayan-Valle	DS	DS	DS	DS	DS	DS	DS
Greater Flagstaff Area	1%	4%	14%	53%	28%	5%	80%
Havasupai Tribe	DS	DS	DS	DS	DS	DS	DS
Hopi Tribe	2%	6%	21%	42%	29%	8%	59.5% to 60.2%
Kaibab Band of Paiute Indians	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Page	DS	7%	18%	47%	27%	7%	77%
Williams-Parks	0%	DS	DS	61%	31%	DS	77% to 83%
Winslow	0%	5%	16%	41%	37%	5%	76%
Coconino County	1%	5%	15%	50%	28%	6%	78%
ARIZONA	2%	4%	15%	47%	31%	6%	72%

Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Note: Due to small numbers, data for some communities are provided as ranges.

Figure 33 Percent of Births with Prenatal Care Begun in First Trimester, 2009 to 2014



Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Birth Outcomes

With regard to perinatal health, babies in the Coconino Region were doing slightly better than babies born statewide. In the region in 2014, 8.1 percent of babies were low birth weight, compared to seven percent across the state (Table 75). The highest percentages of low birthweight births were seen in the Williams-Parks (9.7%), Page (9.2%), and Hopi Tribe (8.8%) communities. These high rates of low birthweight births are likely at least partially due to the effects of high altitude on fetal development. A 1997 study in Colorado found that birthweight declined an average of 102 g per 1000 meters of elevation gain.[181] The percent of premature births was slightly lower in the region than in the state, with 8.3 percent in the region, and 9.0 percent across the state falling into this category (Table 75). The highest percentage of premature births occurred in the Page community (12.5%) and the lowest in the Greater Flagstaff Area (7.4%) Healthy People 2020 objectives include that fewer than 7.8 percent of babies are born at low birth weights and fewer than 11.4 percent are born preterm, meaning that the Coconino Region has achieved the Healthy People 2020 goal for preterm births, but not low birthweight births (Figure 34; Figure 35). The Greater Flagstaff Area and the Winslow communities met the Healthy People 2020 goal for low birthweight births, and all communities except the Page community met the goal for premature births. A much lower proportion (2.0%) of newborns in the region were admitted to a Neonatal Intensive Care Unit (NICU) than across the state (6.7%). However, again, the Page community saw nearly triple the percentage of newborns admitted to a NICU than the region as a whole.

Infants enrolled in WIC exceeded the Healthy People 2020 goal of 81.9 percent of babies ever being breastfed in the Coconino Region (2015: 85.8%), whereas breastfeeding in Arizona lagged behind that goal with only 71.2 percent of WIC-enrolled infants ever breastfed (Table 76). Data on the complete (i.e., including those not participating in WIC) Coconino Region infant population are unavailable. However, data from the National Immunization Survey on children born in 2013 estimated the Arizona statewide rate of infants ever-breastfed was 85.0 percent, suggesting that WIC participants are less likely to be breastfed than other infants.[xxxii] Thus, it is highly encouraging that in the region infants enrolled in WIC are already being breastfed at rates higher than the Health People 2020 goals. In 2015, breastfeeding rates were particularly high in the Greater Flagstaff Area (89.4%) and Page (89.1%). Breastfeeding rates decreased slightly between 2012 and 2015 in the Hopi Tribe community, but still remained above 85 percent. Key informants in the community note that an outreach campaign by the Indian Health Service to increase breastfeeding is likely having a positive effect on breastfeeding in the region. Tuba City Regional Health Care Corporation was designated a Baby Friendly Hospital in February 2016, meaning that the hospital offers an optimal level of care to promote breastfeeding and mother-baby bonding.[182] However, there are a few communities in which the Healthy People 2020 goal for breastfeeding is not being met. Only 47.6 percent of infants in the Havasupai Tribe community and 53.2 percent of infants in the Winslow community were ever breastfed in 2015. While the rate of breastfeeding in the Havasupai Tribe community has increased 10 percentage points from 2012 to 2015, the rates in the Winslow community decreased by 20 percentage points in the same period. The Winslow community saw the largest decrease in breastfeeding rates of any community in the region.

In 2015, about four out of 100 newborns (4.4%) did not pass an initial hearing screen. However, only 0.7 percent of those screened required a diagnostic evaluation and a very small proportion, 0.4 percent, were found to have confirmed hearing loss (Figure 36). The percentage of newborns with hearing loss in the region was double that in the state as a whole, indicating that there may be a greater need for hearing services in the region.

Newborns exposed to alcohol or other noxious substances in utero may have long-lasting health care needs. An analysis of rates of substance exposure across six years in Arizona found that relatively fewer newborns were diagnosed with neonatal abstinence syndrome (NAS)[xxxiii] or exposed to narcotics or cocaine in Coconino County than in the state as whole. However, rates of fetal alcohol syndrome (FAS) in Coconino County were triple that of the state as whole, with approximately one in 1,000 newborns being diagnosed with FAS (Figure 37). About one in 1,000 newborns in the county was diagnosed with neonatal abstinence syndrome, and nearly 3 in 1,000 were exposed to narcotics. In raw numbers, eight newborns were diagnosed with NAS, eight with FAS, and 25 with narcotic exposure between 2008 and 2013. Newborns exposed to alcohol or drugs in Arizona had higher incidences of low birthweight (23.2% compared to 7% for all births), higher incidences of respiratory symptoms, and higher incidences of feeding difficulties. Additionally, the median total charges related to care were double that of other hospital births.[183] Research suggests that alcohol and drug exposure may be linked

[xxxii] *This estimate is based on a sample of 291 births in Arizona in 2013. Rates of Any and Exclusive Breastfeeding by State among Children Born in 2013. Data available at: https://www.cdc.gov/breastfeeding/data/nis_data/rates-any-exclusive-bf-state-2013.htm*

[xxxiii] *Neonatal Abstinence Syndrome refers to withdrawal syndrome in newborns and is usually caused by opiate use by the mother during pregnancy.*

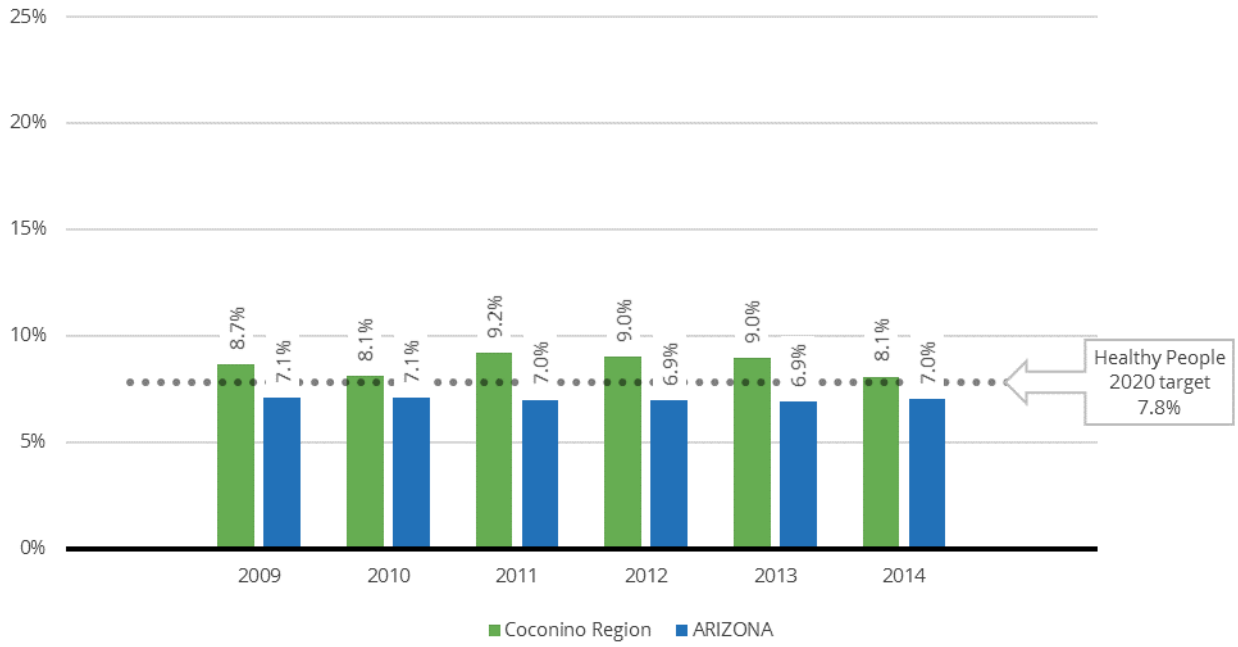
to behavioral issues and developmental delays as a child develops, creating a need for extra supports when a child enters school.[184]

Table 75 Other Characteristics of Babies Born in 2014

	Baby had low birthweight (5.5 lb. or less)	Healthy People 2020 target for low-birthweight babies	Percent of premature births (under 37 weeks)	Healthy People 2020 target for premature births	Newborns admitted to intensive care unit
Coconino Region	**8.1%**	**7.8%**	**8.3%**	**11.4%**	**2.0%**
Fredonia	DS	7.8%	DS	11.4%	DS
Grand Canyon Village-Tusayan-Valle	DS	7.8%	DS	11.4%	DS
Greater Flagstaff Area	7.5%	7.8%	7.4%	11.4%	1.7%
Havasupai Tribe	DS	7.8%	DS	11.4%	DS
Hopi Tribe	8.8%	7.8%	9.4%	11.4%	DS
Kaibab Band of Paiute Indians	N/A	7.8%	N/A	11.4%	N/A
Page	9.2%	7.8%	12.5%	11.4%	5.8%
Williams-Parks	9.7%	7.8%	DS	11.4%	0.0%
Winslow	6.9%	7.8%	9.9%	11.4%	DS
Coconino County	7.2%	7.8%	7.9%	11.4%	1.9%
ARIZONA	7.0%	7.8%	9.0%	11.4%	6.7%

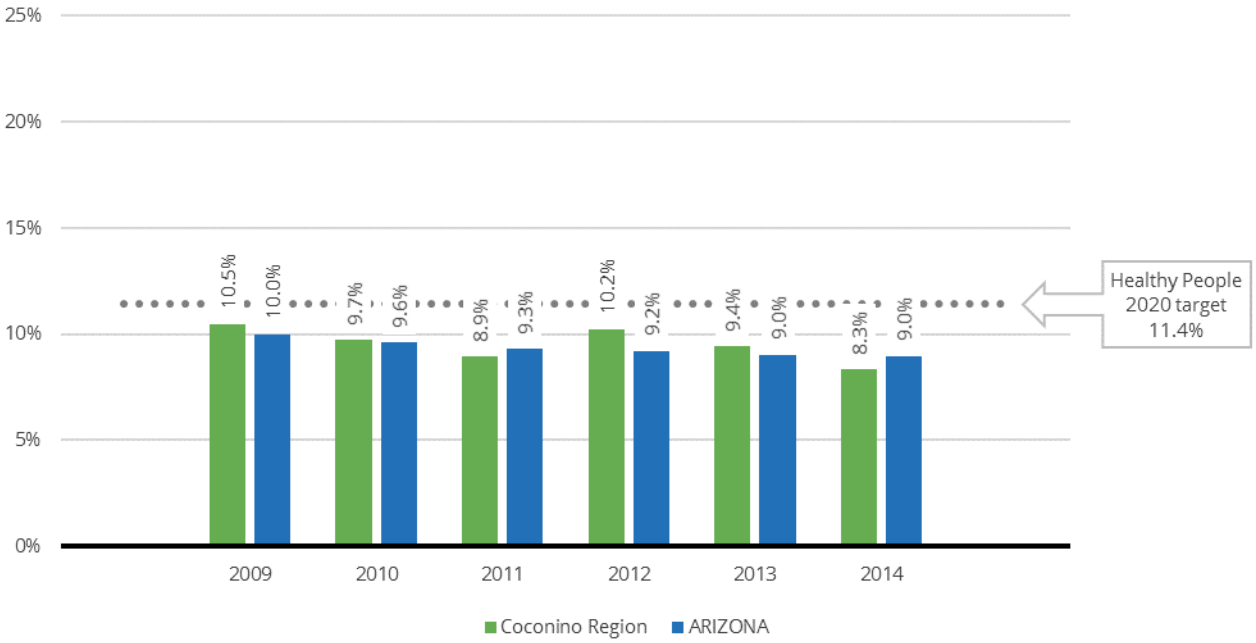
Source: Arizona Department of Health Services (2016). [Vital Statistics Births dataset]. Unpublished data.

Figure 34 Percent of Births with Low Birthweight (5.5 Pounds or Less), 2009 to 2014



Source: Arizona Department of Health Services (2016). [Hearing Screening Results dataset]. Unpublished data.

Figure 35 Percent of Births that Were Premature (37 Weeks or Less), 2009 to 2014



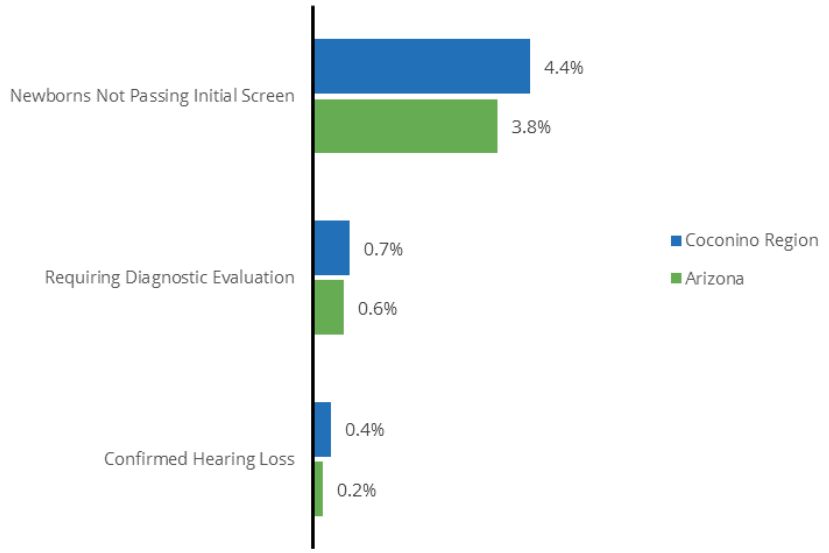
Source: Arizona Department of Health Services (2016). [Hearing Screening Results dataset]. Unpublished data.

Table 76 WIC Infants Who Were Ever Breastfed, 2012 to 2015

	Healthy People 2020 Target for Breastfeeding	CY 2012	CY 2013	CY 2014	CY 2015
Coconino Region	**81.9%**	**82.8%**	**83.7%**	**85.5%**	**85.8%**
Fredonia	81.9%	DS	DS	DS	DS
Grand Canyon Village-Tusayan-Valle	81.9%	92.3%	DS	N/A	81.8%
Greater Flagstaff Area	81.9%	83.4%	87.6%	88.9%	89.4%
Havasupai Tribe	81.9%	35.0%	18.8%	45.5%	47.6%
Hopi Tribe	81.9%	95.2%	91.4%	86.3%	86.6%
Kaibab Band of Paiute Indians	81.9%	DS	DS	DS	DS
Page	81.9%	87.0%	85.5%	86.4%	89.1%
Williams-Parks	81.9%	70.3%	69.2%	84.0%	84.4%
Winslow	81.9%	73.4%	63.4%	62.3%	53.2%
Coconino County	81.9%	84.1%	86.4%	88.1%	88.9%
ARIZONA	81.9%	63.1%	63.0%	65.5%	71.2%

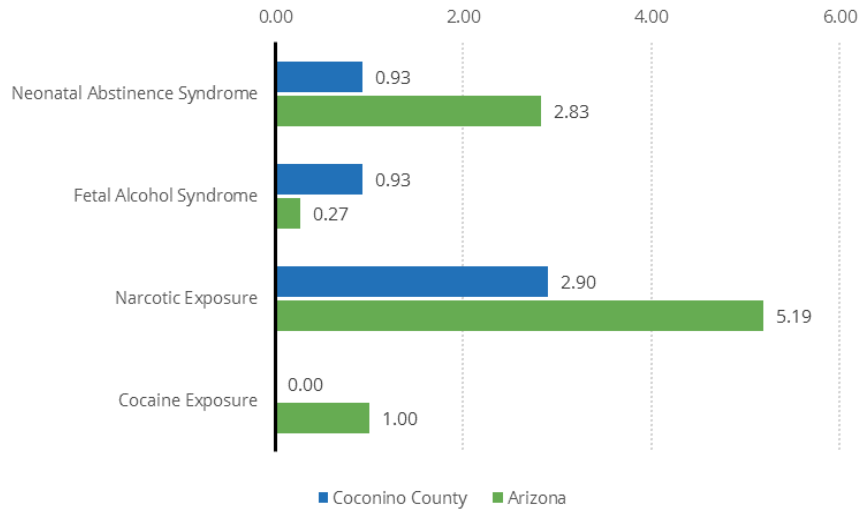
Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Intertribal Council of Arizona (2016). [WIC datasets]. Unpublished data

Figure 36 Newborn Hearing Screening Results, 2015



Source: Arizona Department of Health Services (2016). [Hearing Screening Results dataset]. Unpublished data.

Figure 37 Rate of Newborns With Issues Related To Drug Exposure per 1,000 births, 2008 To 2013



Source: Arizona Department of Health Services (2014). Neonatal Abstinence Syndrome: 2008-2013 Overview. Retrieved from http://www.azdhs.gov/documents/preparedness/public-health-statistics/publications/neonatal-abstinence-syndrom-research.pdf

Immunizations

While immunization rates vary by vaccine, over 94 percent of children in child care in the Coconino Region had completed each of the three major (DTAP, polio, and MMR) vaccine series; the regional rates were higher than those of the state (Table 77). The Healthy People 2020 target for vaccination coverage for children ages 19-35 months for these vaccines is 90 percent,[185] suggesting the region is meeting this goal. However, given that state regulations require children enrolled in child care to be up to date on immunizations, it is possible that the rates of immunization for children in child care are higher than immunization rates for children not in child care.[xxxiv] If that is the case, the rates for the entire population of children in these areas may be lower than the Healthy People 2020 goal. One exception to the extensive vaccine coverage is Hepatitis A; only 81 percent of children in child care had completed the recommended two immunizations. One possible explanation for this difference is that the Hepatitis A vaccine is not recommended until later in childhood, and the second dose may follow the first by as many as 18 months.[xxxv] For the Hopi Tribe and Havasupai Tribe communities, data on vaccination rates for children aged 19 to 35 months were received from the Indian Health Service. For children seen at IHS in this age group from the Havasupai Tribe, 81.3 percent had all recommended vaccines for their age group, while 76.2 percent of children from the Hopi Tribe in this age group had all recommended vaccines. These rates are below the Healthy People 2020 target for vaccination in this age group. However, all children enrolled in the Havasupai Tribe and Hopi Tribe Head Start programs are up to date on their vaccinations.[186]

Rates for the three major (DTAP, polio, and MMR) vaccine series for children in kindergarten were slightly below the rates for children in child care (Table 78). The Healthy People 2020 target for vaccination coverage of kindergarteners is 95 percent for the DTAP, MMR, polio, Hepatitis B, and Varicella vaccines.[187] The Coconino Region is only meeting this goal for the Varicella vaccine, whereas statewide kindergarteners are meeting this goal for all immunizations except the DTAP and MMR vaccines. Rates of personal exemptions for vaccinations among children in child care (4.1%) and kindergarten (6.8%) in the region were much higher than exemption rates at the state level (3.5% and 4.5% respectively) (Table 77, Table 78).

[xxxiv] *For example, the National Immunization Survey (NIS) monitors vaccination coverage among U.S. children aged 19–35 months, and estimates the Arizona statewide rate for DTAP (Diphtheria, Tetanus, Pertussis, 4 or more doses) to be about 81 percent and the statewide rate for MMR (Measles, Mumps and Rubella, 1 or more doses) to be about 84 percent. Source: Hill, H., Elam-Evans, L., Yankey, D., Singleton, J., Kolasa, M. (2015). National, state, and selected local area vaccination coverage among children aged 19–35 months—United States. Morbidity and Mortality Weekly Report, 2014, 64(33), 889-896. Retrieved from: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6433a1.htm*

[xxxv] *The CDC immunization schedule recommends initiating the Hepatitis A vaccine at 12 through 23 months, with the second dose administered 6 to 18 months later. For more information see: https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html*

Table 77 Vaccination Rates and Exemption Rates for Children in Child Care

	Students enrolled	Four or more DTAP	Three or more Polio	Two or more MMR	Three or more HIB	Two Hep A	Three or more Hep B	One or more Varicella	Religious exemption	Medical exemption
Coconino Region	1,773	94%	95%	95%	93%	81%	95%	97%	4.1%	0.7%
Coconino County	1,680	95%	96%	96%	94%	79%	95%	96%	4.6%	0.7%
ARIZONA	92,128	92%	93%	94%	92%	81%	92%	95%	3.5%	0.5%

Source: Arizona Department of Health Services (2016). [Immunization Data Reports dataset]. Unpublished data.

Table 78 Vaccination Rates and Exemption Rates for Kindergarten Children

	Students enrolled	Four or more DTAP	Three or more Polio	Two or more MMR	Three or more Hep B	One or more Varicella	Personal exemption	Medical exemption
Coconino Region	1,508	93%	93%	93%	94%	95%	6.8%	0.4%
Coconino County	1,303	92%	93%	92%	94%	95%	7.1%	0.3%
ARIZONA	83,088	94%	95%	94%	96%	97%	4.5%	0.3%

Source: Arizona Department of Health Services (2016). [Immunization Data Reports dataset]. Unpublished data.

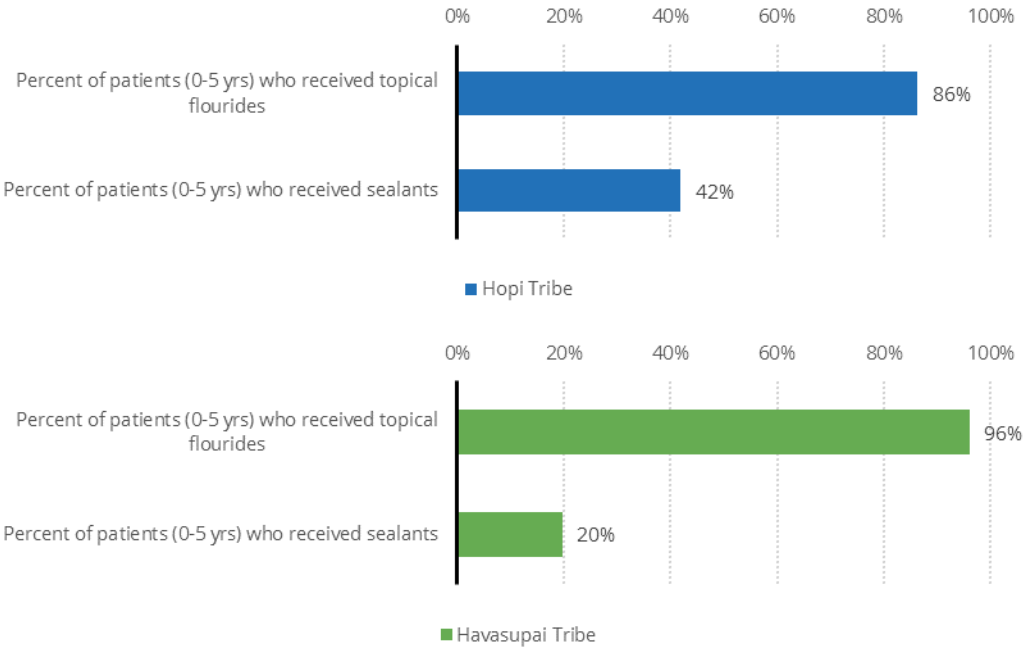
Oral Health

To identify the trends in oral health of the state's children, Arizona Department of Health Services, in partnership with First things First, administered the Healthy Smiles Healthy Bodies survey to 3,630 kindergarten children during the 2014-2015 school year.[188] The survey was designed to gather information from Arizona's kindergarten children regarding prevalence and severity of tooth decay, and included dental screening and parent/caregiver component. In the Coconino Region, 204 children were screened and 152 parents or caregivers answered at least one question on the optional screening questionnaire given with their child's screening. Untreated decay experience and need for dental care was reported for 30 percent of kindergarteners in the region, which is slightly higher than the state (27%). In overall decay experience, 63 percent of kindergarteners evidenced decay experience compared to Arizona's 52 percent. While the state has met its own 2020 benchmark (no more than 32% of children with untreated tooth decay) and is on track towards the Healthy People's 2020 target (26%), there remains a need for focused oral health efforts on primary prevention across the state.

Children in tribal communities may receive oral health services through the Indian Health Service. Between October 2013 and September 2015, 86 percent of children ages 0-5 from the Hopi Tribe and

96 percent of children ages 0-5 from the Havasupai Tribe received topical applications of fluoride, which can help prevent tooth decay (see Figure 38). Additionally, 42 percent of young children from the Hopi Tribe and 20 percent of young children from the Havasupai tribe received sealants, which also protect against tooth decay.

Figure 38 Children (ages 0-5) Receiving Oral Health Services through IHS, October 2013 to September 2015



Source: Indian Health Service, Phoenix Area (2016). [Maternal and Child Health dataset]. Unpublished data.

Childhood Injury, Illness and Mortality

The Arizona Child Fatality Review (CFR) Program produces an annual report in order to identify ways to decrease or eliminate identified preventable deaths amongst children across the state. In the 2015 annual report, 768 deaths were reported in children under 18 years old in Arizona, a decrease from 834 the year prior. Seventy four percent (n=566) of deaths were young children from birth to age five. More than one-third of these deaths (38%) occurred in the neonatal period (birth-27 days) and were due to natural causes (prematurity, neurological disorders, and other medical conditions). The infancy age group (28-365 days) saw 23 percent of these deaths, which were largely due to suffocation. About 13 percent of these deaths were amongst children one to four years old, an age group with high rates of fatalities due to drowning, motor vehicle accidents, and blunt force trauma. In 2015, 10 percent of perinatal deaths, 48 percent of infant deaths, and 57 percent of young child deaths in Arizona were deemed preventable.

Additionally, local CFR Teams determine which deaths can be classified as maltreatment based on the actions or failures to take appropriate preventative action by a parent, guardian, or caretaker. In the 2015 review, 11 percent of all child fatalities were due to maltreatment and all of these deaths were determined to have been preventable. These maltreatment deaths are classified in one of three categories: homicide (e.g. abusive force trauma), natural (e.g. failure to obtain medical care or prenatal substance use that caused premature death), or accidental (e.g. the unintentional injuries caused by negligence or impaired driving.[189]

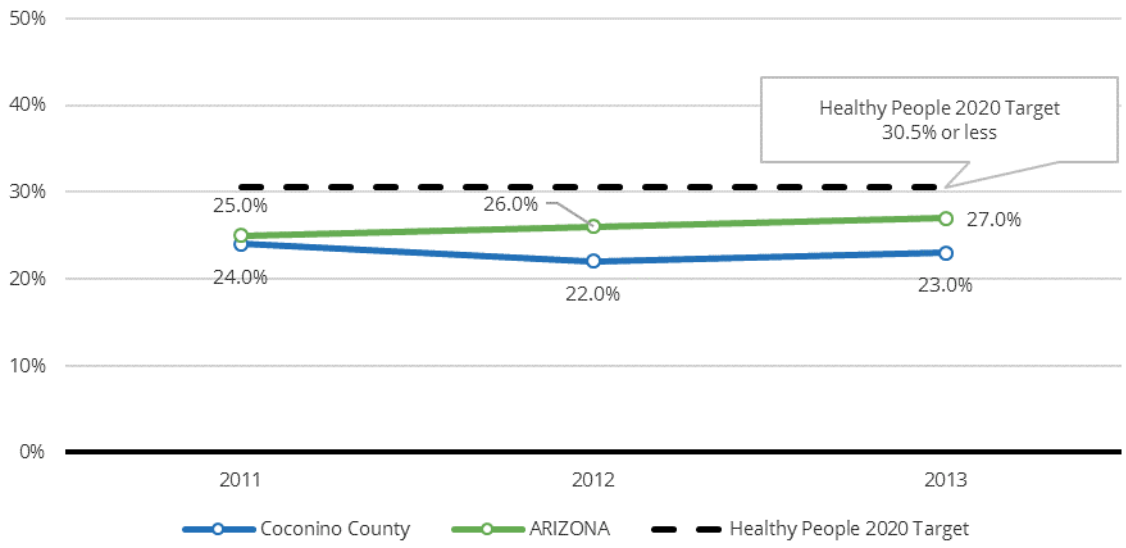
Weight Status

Based on data from the Centers for Disease Control and Prevention (CDC), adult obesity has decreased slightly overall in Coconino County between 2011 and 2013 (from 24.0% to 23.0%) (Figure 39). Across all three years, Coconino County met the Healthy People 2020 goal of having no more than 30.5 percent of the population have obesity.[xxxvi] In contrast, state rates have been increasing, from 25 to 27 percent over the same period.

Compared to adults, children are less likely to be obese. Healthy People 2020 has set a goal of no more than 9.4 percent of children having obesity. Among children participating in WIC in the Coconino Region in 2015, 9 percent had obesity and an additional 11 percent have overweight (Figure 40). The highest percentages of children that were overweight or obese were seen in the Havasupai Tribe and Page communities (Table 79). The proportion of children with obesity decreased between 2012 and 2015, dropping from 12.1 percent in 2012 to 8.7 percent in 2015 (Figure 41). This pattern mirrors national patterns, where 2014 saw a decrease from 2010 among WIC participants ages 2 to 4.[190] Based on these data, the Coconino Region is meeting the Healthy People 2020 target, although it is important to note that these data only reflect one segment of the population of the region, and low-income populations, i.e., those receiving WIC benefits, are at an elevated risk for obesity. Across the region, child obesity rates for children ages 2 to 4 enrolled in WIC decreased in every community besides the Havasupai Tribe community. However, only the Greater Flagstaff Area met the Healthy People 2020 goal in 2015 (Table 80). For children seen at IHS between October 2013 and September 2015, 16.7 percent of children ages 2 to 5 from the Hopi Tribe and 22.7 percent of children ages 2 to 5 from the Havasupai Tribe had obesity. The lower obesity rate for children 2 to 5 from the Havasupai Tribe suggests that the overall rate of obesity for young children may be lower than that for children enrolled in WIC, though the rate remains above the Healthy PeoplKTe 2020 target.

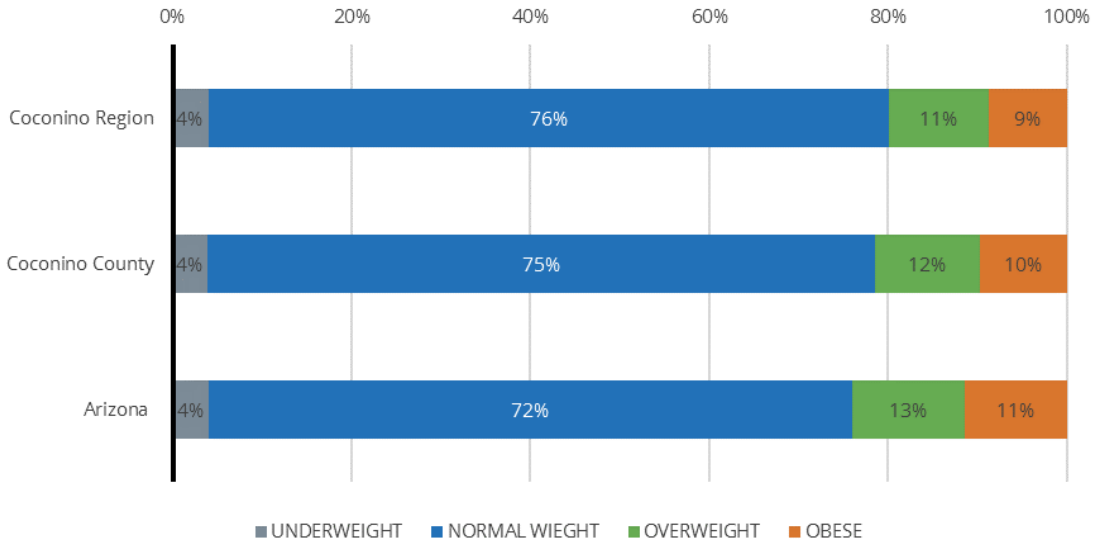
[xxxvi] *Note that the Centers for Disease Control now use language consistent with the perspective that obesity is a disease state. We have adopted that language. See https://www.cdc.gov/obesity/data/adult.html.*

Figure 39 Adult Obesity Rate, 2011 to 2013



Source: Center for Disease Control and Prevention (2016). Diabetes Data and Statistics. Retrieved from www.cdc.gov/diabetes/atlas/countydata/atlas.html

Figure 40 WIC Children's Weight Status, 2015



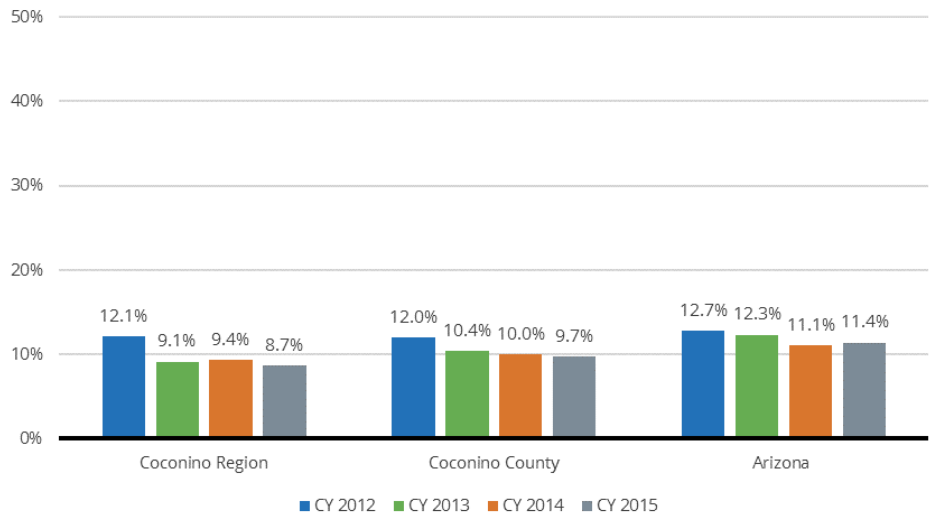
Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.

Table 79 WIC Children's Weight Status, 2015

	Underweight	Normal	Overweight	Obese
Coconino Region	**4%**	**76%**	**11%**	**9%**
Fredonia	DS	DS	DS	DS
Grand Canyon Village-Tusayan-Valle	DS	DS	DS	DS
Greater Flagstaff Area	4%	77%	11%	8%
Havasupai Tribe	DS	DS	DS	DS
Hopi Tribe	1%	61%	22%	16%
Kaibab Band of Paiute Indians	DS	DS	DS	DS
Page	7%	68%	13%	12%
Williams-Parks	DS	DS	DS	DS
Winslow	0%	78%	8%	11%
Coconino County	4%	75%	12%	10%
ARIZONA	4%	72%	13%	11%

Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data. Intertribal Council of Arizona (2016). [WIC datasets]. Unpublished data

Figure 41 WIC Children's Obesity Rates, 2012 to 2015



Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.

Table 80 WIC Children's Obesity Rates, 2012 to 2015

	Childhood obesity rate, 2012	Childhood obesity rate, 2013	Childhood obesity rate, 2014	Childhood obesity rate, 2015	Healthy People 2020 Target for Childhood Obesity
Coconino Region	**12.1%**	**9.1%**	**9.4%**	**8.7%**	**9.4%**
Fredonia	DS	DS	DS	DS	9.4%
Grand Canyon Village-Tusayan-Valle	DS	DS	DS	DS	9.4%
Greater Flagstaff Area	10.7%	8.7%	8.9%	7.9%	9.4%
Havasupai Tribe	40.0%	30.0%	42.9%	50.0%	9.4%
Hopi Tribe	19.0%	18.0%	20.3%	15.9%	9.4%
Kaibab Band of Paiute Indians	DS	DS	DS	DS	9.4%
Page	16.0%	14.7%	16.5%	11.9%	9.4%
Williams-Parks	7.2%	0.0%	0.0%	DS	9.4%
Winslow	18.6%	8.0%	8.9%	10.8%	9.4%
Coconino County	12.0%	10.4%	10.0%	9.7%	9.4%
ARIZONA	12.7%	12.3%	11.1%	11.4%	9.4%

Source: Arizona Department of Health Services (2016). [WIC datasets]. Unpublished data.

FAMILY SUPPORT AND LITERACY

Why Family Support and Literacy Matter

Parents, caregivers and families who provide positive and responsive relationships support optimal brain development during a child's first years[191,192] and promote better social, physical, academic and economic outcomes later in that child's life.[193,194] Parental and family involvement is positively linked to academic skills and literacy in preschool, kindergarten and elementary school.[195] Literacy promotion is so central to a child's development that the American Academy of Pediatrics has identified it as a key issue in primary pediatric care, aiming to make parents more aware of their important role in literacy.[196] Reading aloud, singings songs, practicing nursery rhymes, and engaging in conversation primes children to reach their full potential. To assess the degree to which these activities are happening across the state, the First Things First Family and Community Survey, a phone-based survey, was designed to measure many critical areas of parents' knowledge, skills, and behaviors related to their young children. Among other topics, the 2012 survey collected data about parent and caregiver knowledge of children's early development and their involvement in a variety of behaviors known to contribute positively to healthy development. Data on the amount and quality of the interaction parents and caregivers typically have with their children can be useful to inform programs and policies to encourage positive engagement. Examples of these community-level resources in Arizona include Read On Arizona, a partnership of agencies, philanthropic organizations, and community stakeholders committed to creating a continuum of services to improve language and literacy outcomes[xxxvii]; and the national "Reach Out & Read" program, in which close to 200 clinics and pediatric practices across the state seeing children for a well-child visit provide them with a book to take home.[197]

Not all children are able to begin their lives in the most positive, stable environments. Adverse Childhood Experiences (ACEs)[198] have been linked to risky health behaviors (such as smoking, drug use and alcoholism), chronic health conditions (such as diabetes, depression, obesity), poorer life outcomes (such as lower educational achievement and increased lost work time), and early death.[199] Children in Arizona are more likely to have experienced two or more ACEs (31.1%) than children across the country (21.1%).[200] Reports of child maltreatment grew by 44 percent in Arizona between 2010 and 2014, fueled in part by an increasing number of children, in particular poor children, living in the state; cut backs in child care subsidies during the same period; and a decrease in the size of the state child welfare workforce. During the same period, the percentage of reports being substantiated, i.e., verified, also increased. Arizona places more children with a substantiated case of maltreatment in foster care than many other states across the country, and with an increase in the number of substantiated reports, there is an increasing demand on the foster care system. [201] Children involved in the foster care system often have physical and behavioral health issues, in addition to the social needs brought on by being removed from a parent's care. Nationally and in Arizona, very young children are at most risk for child abuse, neglect and fatalities from abuse and neglect; in 2013 children five and under made up more than half (53.3%) of cases of child maltreatment and of children waiting for adoption (52.1%) in Arizona.[202]

[xxxvii] *For more information on Read On Arizona, visit http://readonarizona.org/*

Children subject to maltreatment and neglect often suffer physical, psychological and behavioral consequences, and in fact are much more likely to have interactions with the criminal justice system in later life.[203] Referrals are the most common method of entry into the juvenile justice system and can be made by police, school officials and parents, among others. In Arizona, between 2010 and 2014, the number of juveniles referred to juvenile court decreased from 24,074 in 2010 to 15,193 in 2014. [204] Like many other states in the nation, Arizona has moved from sentencing juveniles to prison or corrections settings, to applying probation or community-service sentences.[205]

Children who are exposed to domestic violence, either as direct victims or witnesses, are subject to short and long term negative consequences including physical health problems, behavioral issues, and emotional impacts such as depression, anxiety and post-traumatic stress.[206] Fortunately, the effects of observing domestic violence can be mitigated to some extent through strong relationships and attachments to supportive adults and timely intervention and support.[207] The need for increased focus on the issue of domestic violence in Arizona is evidenced by results from a statewide needs assessment, in which domestic violence was the second most often cited top health priority, after access to health services, by Arizonans surveyed.[208]

Behavioral health supports are often needed to address issues of domestic violence, maltreatment, abuse and neglect that children may face. Infant and toddler mental health is the young child's developing capacity to "experience, regulate and express emotions; form close interpersonal relationships; and explore the environment and learn."[209] When young children experience stress and trauma they have limited responses available to react to those experiences.

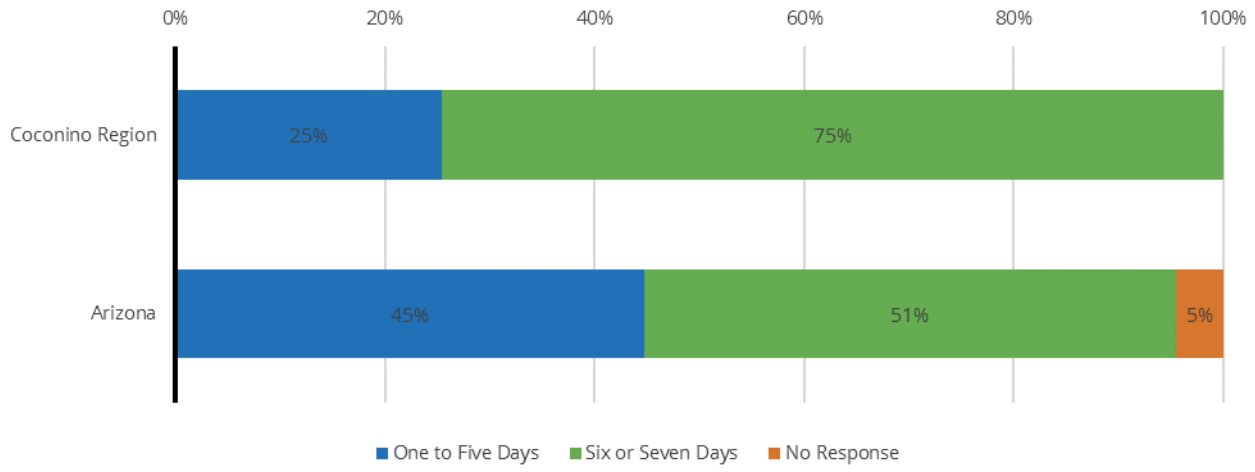
What the Data Tell Us

Family Involvement

The skills that children develop between birth and five years of age can have profound effects on early and later literacy. The six most important of these skills are alphabet knowledge, phonological awareness, rapid automatic naming of letters or digits and objects or colors, writing and phonological memory.[210] Interventions known to have a positive impact on these skills include shared-reading interventions, parent and home programs, and preschool and kindergarten programs.[211]

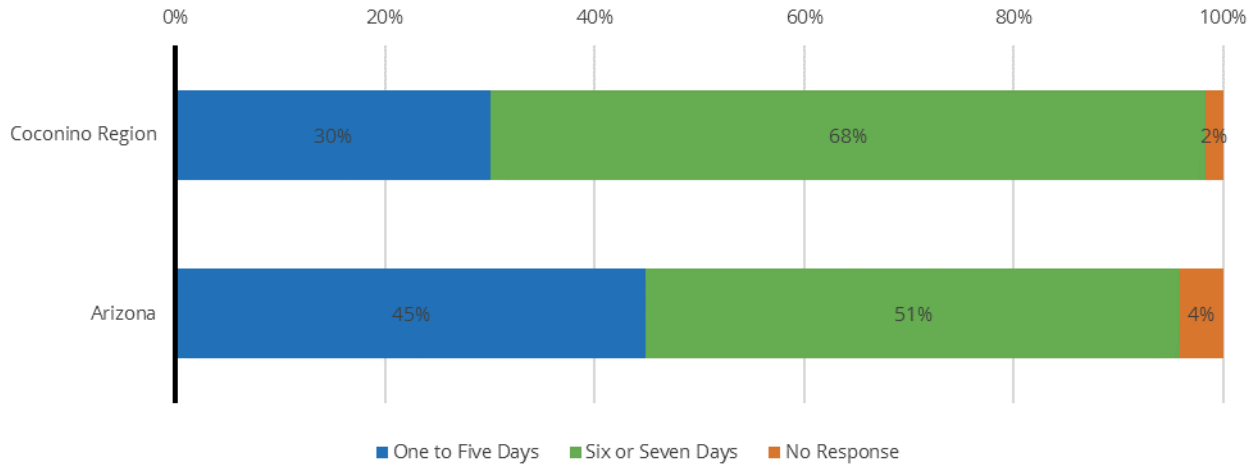
In the Coconino Region, 147 people responded to the 2012 First Things First Family and Community Survey. Among other topics, the survey collected data about parent and caregiver knowledge of children's early development and their involvement in a variety of behaviors known to contribute positively to healthy development. Parents in the Coconino Region were much more likely to report reading to their children (75%), telling stories to their children (68%) and drawing with their child (49%) six or seven days a week compared to parents across the state (51%, 51% and 47% respectively) (see Figure 42, Figure 43, Figure 44). Parents in the Coconino Region also showed a better understanding that brain development can be impacted prenatally or right from birth (87%) than did respondents across the state as a whole (80%) (see Figure 45).

Figure 42 Responses to "During the past week, how many days did you or other family members read stories to your child?"



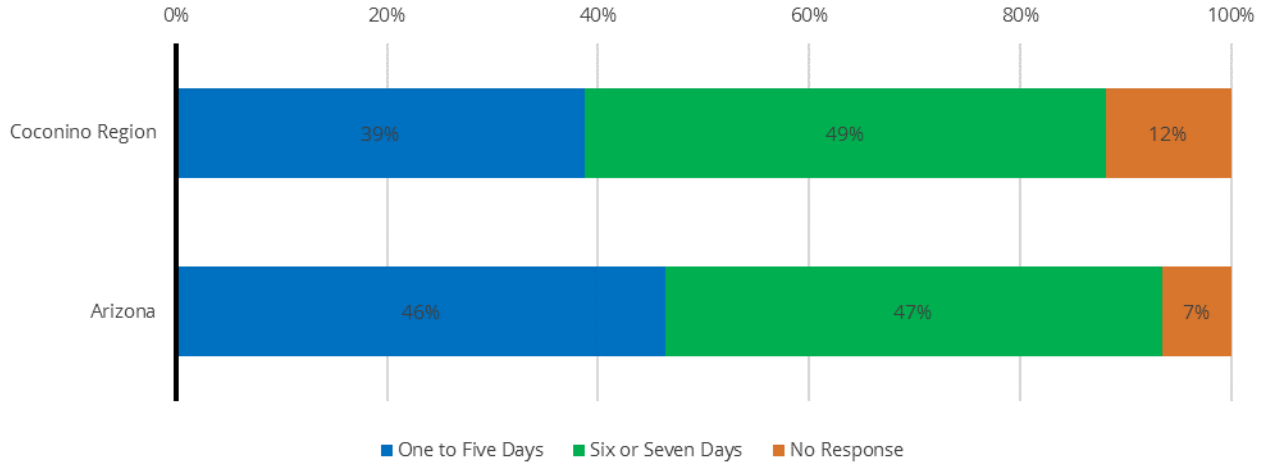
Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data.

Figure 43 Responses to "During the past week, how many days did you or other family members tell stories or sing songs to your child?"



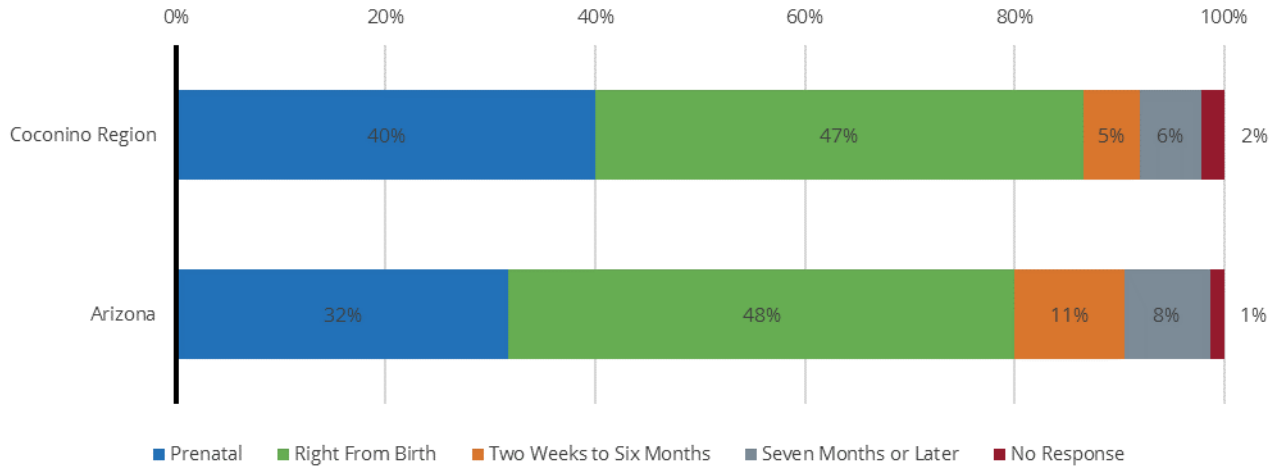
Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data.

Figure 44 Responses to "During the past week, how many days did your child scribble, pretend draw, or draw with you or another family member?"



Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data.

Figure 45 Responses to "When do you think a parent can begin to significantly impact a child's brain development?"



Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data.

Child Welfare

The Arizona Department of Child Safety produces a semi-annual report on child welfare services. Statewide, reports of child abuse and neglect had been increasing from 2013 through 2015 to a high of 26,455 reports during the April 1-September 30, 2015 reporting period. In the last two reporting periods available, reports were lower, with 24,787 reports in the last period available, April 1-September 30, 2016.[212] According to this latest report, of 423 reports of abuse and neglect received during that

period for Coconino County, 27 (7.7%) of those reports resulted in a removal from the home (Table 81); note this number reflects all children, not just those aged birth to 5. The proportion of reports resulting in removal were higher (12%) across the state as a whole. For reports of maltreatment that were substantiated in the county during that period, most (79%) were cases of neglect, followed by physical (18%) and sexual (3%) abuse (Table 82).

Statewide, the number of children entering out-of-home care has been decreasing since the April 1-September 30, 2015 reporting period; from 6,819 then to 5,669 during April 1-September 30, 2016. The total number of children entering out-of-home care in Coconino County for the April 1- September 30, 2016 reporting period (n=66) is higher than the number of removals resulting from substantiated reports of abuse (n=27) due to several things. One, a report focuses on the family unit, and thus could concern multiple children; two, these removals are also the result of reports prior to the current reporting period, and three, the children entering out-of-home care include children in voluntary foster care agreements (Table 83). Nearly one in five children entering out-of-home care had been removed at least once in the prior two years.

Table 81 Department of Child Safety Reports and Removals, April to September 2016

	Number of reports received, April to September 2016	Number of reports assigned, April to September 2016	Number of reports with removal, April to September 2016	Removal rate
Coconino Region	N/A	N/A	N/A	N/A
Coconino County	423	350	27	7.70%
ARIZONA	24,787	24,403	2,967	12.20%

Source: Department of Child Safety (2016). Child welfare reporting requirements semi-annual report for the period of April 1, 2016 through September 30, 2016. Tables 5, 15. Retrieved from https://dcs.az.gov/sites/default/files/DCS-Semi-Annual-Child-Welfare-Reporting-Requirments_Apr16_Sept16.pdf

Table 82 Department of Child Safety Substantiated Maltreatment Reports, April to September 2016

	Number of substantiated maltreatment reports	Neglect	Physical Abuse	Sexual Abuse	Emotional Abuse
Coconino Region	N/A	N/A	N/A	N/A	N/A
Coconino County	33	79%	18%	3%	0%
ARIZONA	2,823	87%	10%	2%	0%

Source: Department of Child Safety (2016). Child welfare reporting requirements semi-annual report for the period of April 1, 2016 through September 30, 2016. Tables 19. Retrieved from https://dcs.az.gov/sites/default/files/DCS-Semi-Annual-Child-Welfare-Reporting-Requirments_Apr16_Sept16.pdf

Table 83 Children Entering Out-of-Home Care, April to September 2016

	Number of children removed	Number of children with a prior removal within the previous 24 months	Percent of children with a prior removal within the previous 24 months
Coconino Region	N/A	N/A	N/A
Coconino County	66	12	18%
ARIZONA	5,669	715	13%

Source: Department of Child Safety (2016). Child welfare reporting requirements semi-annual report for the period of April 1, 2016 through September 30, 2016. Tables 31. Retrieved from https://dcs.az.gov/sites/default/files/DCS-Semi-Annual-Child-Welfare-Reporting-Requirments_Apr16_Sept16.pdf

Domestic Violence

The Arizona Department of Economic Security produces an annual report on domestic violence shelters including county-level data on the populations served and services provided. [213] In fiscal year 2015, three domestic violence shelter in Coconino County served 271 people, 132 (49%) of whom were children (Table 84). Northland Family Help Center, in Flagstaff, served the most people (158) and children (74), followed by Page Regional Domestic Violence Services (113 people, 58 children), and Alice's Place in Winslow (98 people, 48 children). The average length of stay for those served was about 38 days, close to the statewide average of 39 days. [214] Additionally, 988 calls were made to hotline and information and referral (I&R) numbers for the county, representing four percent of such calls statewide (Table 84). Hope Cottage and Sharon Manor also provide services to women and children affected by domestic violence.[215]

Table 84 Domestic Violence Shelters, State Fiscal Year 2015

	Total number served	Number of adults served	Number of children served	Number of bed-nights	Average length of stay	Number of hours of support services	Number of hotline and information-and-referral (I&R) calls
Coconino Region	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northland Family Help Center	158	84	74	7,201	46 days	2,133	419
Page Regional Domestic Violence Services	113	55	58	5,003	44 days	1,617	569
Alice's Place, Inc.	98	50	48	2,455	25 days	502	173
Coconino County	271	139	132	12,204	38.3 days	3,750	988
ARIZONA	7,567	3,862	3,705	293,970	39 days	144,025	25,185

Source: Arizona Department of Economic Security (2015). Domestic Violence Shelter Fund Report for SFY 2015. Retrieved from des.az.gov/digital-library/domestic-violence-shelter-fund-report-sfy-2015

Behavioral Health

In Arizona, the Arizona Health Care Cost Containment System (Arizona's Medicaid program) contracts with community-based organizations, known as Regional Behavioral Health Authorities (RBHAs) and Tribal Regional Behavioral Health Authorities (TRBHAs), to administer publically-funded behavioral health services. Arizona is divided into separate geographical service areas (GSAs) served by various RBHAs.[xxxviii] Coconino County is served by the North GSA, which is serviced by Health Choice Integrated Care (HCIC), a collaboration between Health Choice and the Northern Arizona Regional Behavioral Health Authority (NARBHA). Prior to October 2015, Coconino County was serviced by Northern Arizona Regional Behavioral Health Authority (NARBHA). The data received for this report is for the period before the change to HCIC.

In 2015, 448 pregnant or parenting women received publically-funded behavioral health services through NARBHA in the Coconino Region (Table 85). This represents a decrease of 12 percent from the 511 women who received services in 2012. Across the state a similar trend occurred, with 24 percent fewer women receiving these services in 2015 compared to 2012. The number of children ages birth to 5 receiving behavioral health services in the Coconino Region also decreased from 2012 (n=159) to 2015 (n=140), representing a 12 percent decrease (Table 86). This represents only 4.7 percent of young children in poverty in the Coconino Region (compared to about 9.5 percent of young children in poverty receiving services statewide). It is estimated that about 13 percent of low-income children aged 6 to 11 years old covered by Medicaid have mental health problems[216], suggesting that although there is improving coverage in the Coconino Region, there may be an unmet need for services for about 248 additional young children.[xxxix]

[xxxviii] *Arizona Regional Behavioral Health Areas. See https://www.azahcccs.gov/img/BehavioralHealth/ARBHAMap.jpg*

[xxxix] *Representing the difference between the 140 low-income children (4.7%) currently served, and the estimated 388 (13%) likely in need.*

According to a 2015 AHCCCS report, 67 percent of children in foster care in Arizona in FY2014 were enrolled in behavioral health services, compared to just one in 15 children (7%) enrolled in AHCCCS, not in the foster care system.[217] This suggests that there may be a higher proportion of children not in the child welfare system who would benefit from behavioral health services statewide, and likely in the Coconino Region, as well. Beginning in 2015, each Regional Behavioral Health Authority (RBHA) was contractually required to ensure that children in Department of Child Safety (DCS) custody and their families are referred for ongoing behavioral health services, suggesting that rates of both mothers and children being provided services are likely to increase going forward.

A continuum of services to address infant and toddler mental health promotion, prevention and intervention has been proposed by a number of national organizations. Recommendations to achieve a comprehensive system of infant and toddler mental health services include 1) the integration of infant and toddler mental health into all child-related services and systems, 2) ensuring earlier identification of and intervention for mental health disorders in infants, toddlers and their parents by providing child and family practitioners with screening and assessment tools, 3) enhancing system capacity through professional development and training for all types of providers, 4) providing comprehensive mental health services for infants and young children in foster care, and 5) engaging child care programs by providing access to mental health consultation and support.[218]

Table 85 Number of Pregnant or Parenting Women Receiving Behavioral Health Services, 2012 to 2015

	2012	2013	2014	2015	Change from 2012 to 2015
Coconino Region	511	568	494	448	-12%
Coconino County	504	561	503	482	-4%
ARIZONA	19,134	17,731	13,657	14,546	-24%

Source: Arizona Department of Health Services (2016). [Behavioral Health dataset]. Unpublished data.

Table 86 Number of Children (Ages 0 to 5) Receiving Behavioral Health Services, 2012 to 2015

	2012	2013	2014	2015	Change from 2012 to 2015
Coconino Region	159	158	128	140	-12%
Coconino County	147	154	120	137	-7%
ARIZONA	13,110	14,396	12,396	14,374	+10%

Source: Arizona Department of Health Services (2016). [Behavioral Health dataset]. Unpublished data.

COMMUNICATION, PUBLIC INFORMATION, AND AWARENESS[xl]

[xl] This section of the report was prepared by the First Things First Communications Division.

Why Communication, Public Information, and Awareness Matter

Public awareness of the importance of early childhood development and health is a crucial component of efforts to build a comprehensive, effective early childhood system in Arizona. Building public awareness and support for early childhood is a foundational step that can impact individual behavior as well as the broader objectives of system building. For the general public, information and awareness is the first step in taking positive action in support of children birth to 5, whether that is influencing others by sharing the information they have learned within their networks or taking some higher-level action such as elevating the public discourse on early childhood by encouraging increased support for programs and services that impact young children. For parents and other caregivers, awareness is the first step toward engaging in programs or behaviors that will better support their child's health and development.

Unlike marketing or advocacy campaigns which focus on getting a narrowly-defined audience to take short-term action, communications efforts to raise awareness of the importance of early childhood development and health focus on changing what *diverse* people across Arizona *value* and providing them multiple opportunities over an extended time to act on that commitment.

There is no one single communications strategy that will achieve the goal of making early childhood an issue that more Arizonans value and prioritize. Therefore, integrated strategies that complement and build on each other are key to any successful strategic communications effort. Employing a range of communications strategies to share information – from traditional broad-based tactics such as earned media to grassroots, community-based tactics such as community outreach – ensures that diverse audiences are reached more effectively wherever they are at across multiple mediums. Other communications strategies include: strategic consistent messaging, brand awareness, community awareness tactics such as distribution of collateral and sponsorship of community events, social media, and paid media which includes both traditional and digital advertising. Each of these alone cannot achieve the desired outcome of a more informed community, so a thoughtful and disciplined combination of all of these multiple information delivery vehicles is required. The depth and breadth of all elements are designed to ensure multiple touch-points and message saturation for diverse audiences that include families, civic organizations, faith communities, businesses, policymakers and more.

What the Data Tell Us

Since state fiscal year 2011, First Things First has led a collaborative, concerted effort to build public awareness and support across Arizona employing the integrated communications strategies listed above.

Results of these statewide efforts from SFY2011 through SFY2016 include:

More than 2,000 formal presentations to community groups which shared information about the importance of early childhood;

Nearly 230 tours of early childhood programs to show community members and community leaders in-person how these programs impact young children and their families;

Training of almost 8,700 individuals in using tested, impactful early childhood messaging and how to best share that message with others;

The placement of more than 2,400 stories about early childhood in media outlets statewide;

Increased digital engagement through online platforms for early childhood information, with particular success in the growth of First Things First Facebook Page Likes, which grew from just 3,000 in 2012 to 124,000 in 2016.

Statewide paid media campaigns about the importance of early childhood from FY10 through FY15 included traditional advertising such as television, radio and billboards as well as digital marketing. These broad-based campaigns generated millions of media impressions over that time frame; for example in FY15 alone, the media campaign yielded over 40 million media impressions.

In addition, First Things First began a community engagement effort in SFY2014 to recruit, motivate and support community members to take action on behalf of young children. The community engagement program is led by community outreach staff in regions which fund the First Things First Community Outreach strategy. This effort focuses on engaging individuals across sectors – including business, faith, K-12 educators, and early childhood providers – in the work of spreading the word about the importance of early childhood since they are trusted, credible messengers in their communities. FTF characterizes these individuals, depending on their level of involvement, as Friends, Supporters, and Champions. Friends are stakeholders who have a general awareness of early childhood development and health and agree to receive more information and stay connected through regular email newsletters. Supporters have been trained in early childhood messaging and are willing to share that information with their personal and professional networks. Champions are those who have been trained and are taking the most active role in spreading the word about early childhood.

Supporters and Champions in the engagement program reported a total of 1,088 positive actions taken on behalf of young children throughout Arizona as of the end SFY16. These actions range from sharing early childhood information at community events, writing letters to the editor to connecting parents to early childhood resources and more. Table 87 shows total recruitment of individuals in the tiered engagement program through SFY2016.

Table 87 First Things First Engagement of Early Childhood supporters, SFY2014 through SFY2016.

	Friends	Supporters	Champions
Coconino Region	871	435	88
Arizona	21,369	3,102	908

Source: First Things First Communications Division.

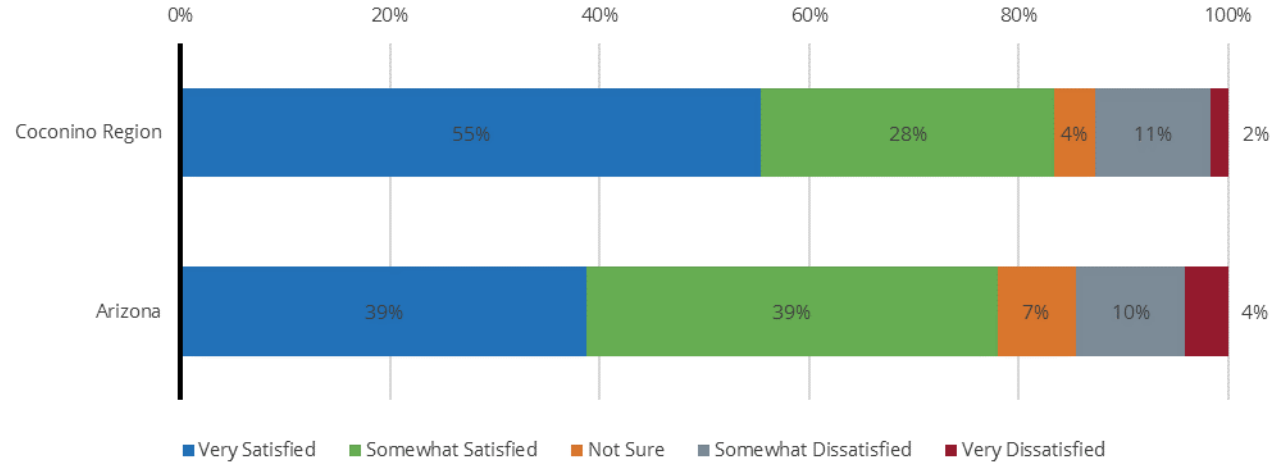
In addition to these strategic communications efforts, First Things First has also led a concerted effort of policymaker awareness-building throughout the state. This includes meetings with all members of the legislature to build their awareness of the importance of early childhood. FTF sends emails to all policymakers providing information on the impact of early childhood investments (such as the FTF annual report) and also has instituted a quarterly email newsletter for policymakers and their staff with the latest news regarding early childhood.

Furthermore, the Arizona Early Childhood Alliance – comprised of early childhood system leaders like FTF, the United Ways, Southwest Human Development, Children's Action Alliance, Read on Arizona, Stand for Children, Expect More Arizona and the Helios Foundation – represent the united voice of the early childhood community in advocating for early childhood programs and services.

Finally, FTF recently launched enhanced online information for parents of young children, including the more intentional and strategic placement of early childhood content and resources in the digital platforms that today's parents frequent. Future plans for this parenting site include a searchable database of early childhood programs funded in all the regions, as well as continuously growing the amount of high-quality parenting content available on the site and being "pushed out" through digital sources.

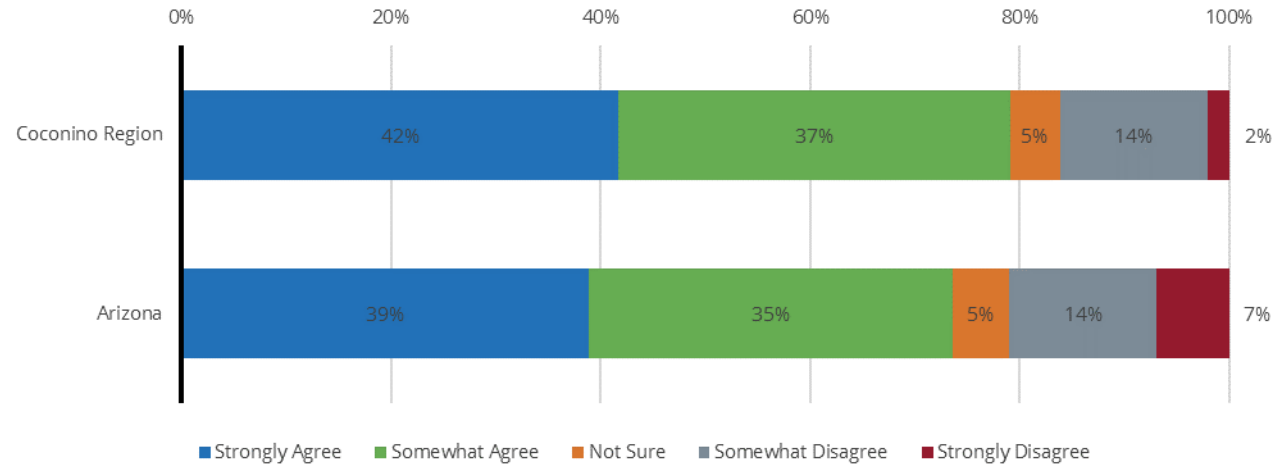
In addition to measuring parent knowledge, skills, and behaviors related to their young children, the 2012 First Things First Family and Community Survey collected data on parents' perceptions regarding resources available to young children and their families across Arizona. Results from the survey demonstrated that parents in the Coconino Region had greater levels of satisfaction with available information and resources and found these resources easier to locate compared to parents elsewhere in Arizona. Over half (55%) of Coconino Region respondents indicated they were "very satisfied" with "the community information and resources available to them about their children's development and health," compared to 39 percent of respondents across the state (see Figure 46). Seventy-nine percent of Coconino Region respondents "strongly agreed" or "somewhat agreed" that "it is easy to locate services that I want or need," compared to 74 percent of respondents across the state (see Figure 47). Respondents in both the region and the state were more likely to indicate satisfaction (42% in the region, 43% in the state) than dissatisfaction (34% in the region, 29% in the state) with how care providers and government agencies work together and communicate (see Figure 48).

Figure 46 Responses to "How satisfied are you with the community information and resources available to you about children's development and health?"



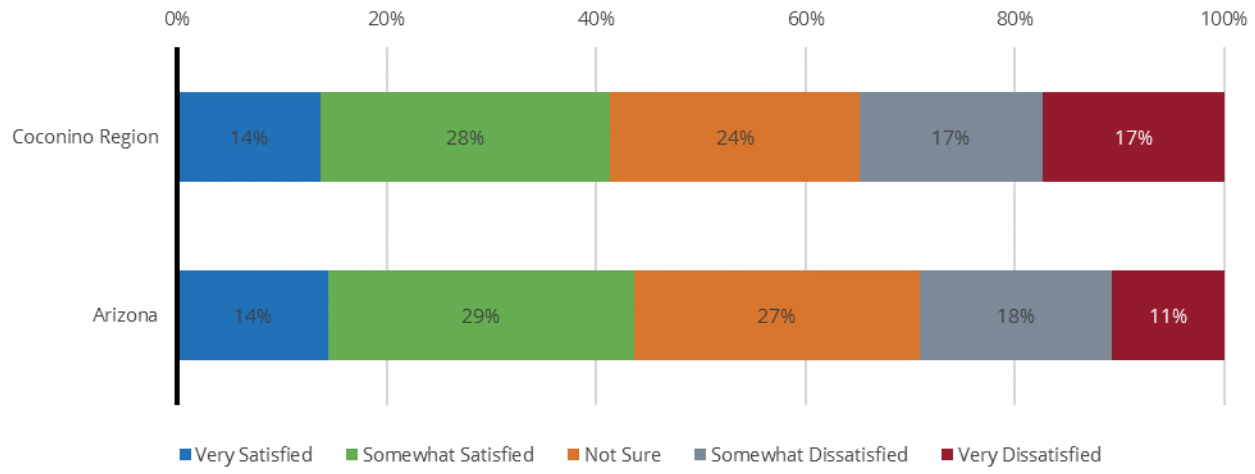
Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data...

Figure 47 Responses to “It is easy to locate services that I need or want.”



Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data...

Figure 48 Responses to "How satisfied are you with how care providers and government agencies work together and communicate with each other?"



Source: First Things First (2014). [2012 Family and Community Survey dataset]. Unpublished data.

SYSTEM COORDINATION AMONG EARLY CHILDHOOD PROGRAMS AND SERVICES

Why System Coordination Matters

The partners in Arizona's early childhood system encompass a diverse array of public and private entities dedicated to improving overall well-being and school readiness for children birth to 5 statewide. Together they strive to develop a seamless, coordinated, and comprehensive array of services that can meet the multiple and changing needs of young children and their families.

In January 2010, First Things First (FTF) convened the first Arizona Early Childhood Task Force, comprised of a diverse group of leaders from across Arizona. The goal of this inaugural Task Force was to establish a common vision for young children in Arizona and to identify priorities and roles to build an early childhood system that would enable this vision to be realized. The Task Force identified six outcomes to work towards, including that the "early childhood system is coordinated, integrated and comprehensive." First Things First's role in building this system is to foster cross-system collaboration among and between local, state, federal, and tribal organizations to improve the coordination and integration of Arizona programs, services, and resources for young children and their families.

Through strategic planning and system-building efforts that are funded through both FTF and other mechanisms, FTF is focused on developing approaches to connect various areas of the early childhood system. When the system operates holistically, families should experience a seamless system of coordinated services that they can more easily access and navigate in order to meet their needs. Agencies that work together and achieve a high level of coordination and collaboration help to establish and support a coordinated, integrated, and comprehensive system. At the same time, agencies also increase their own capacity to deliver services as they work collectively to identify and address gaps in the service delivery continuum.

Service coordination and collaboration approaches work to advance the early childhood system in the following ways:

- Build stronger collaborative relationships among providers
- Increase availability and access of services for families and children
- Reduce duplication
- Maximize resources
- Assure long term sustainability
- Leverage existing assets
- Improve communication
- Reduce fragmentation
- Foster leadership capacity among providers
- Improve quality
- Share expertise and training resources
- Influence policy and program changes

Coordination and Collaboration Survey:

To gain a better understanding of the coordination and collaboration occurring among early childhood system partners within FTF regions, First Things First developed the Coordination and Collaboration

Survey that was disseminated to non-tribal system partners in 18 FTF county-based regions via an online survey in October of 2016.[xli]

The Coordination and Collaboration survey asked system partners about their organization's role in the Early Childhood System; the system building efforts within each area of the Early Childhood System in the region/county (i.e., Family Support and Literacy, Early Learning, Child's Health and Professional Development); the level of collaboration that is occurring among system partners; the sectors engaged in system building work; and perceptions of the FTF regional partnership councils' role in system building efforts.

What the Data Tell Us

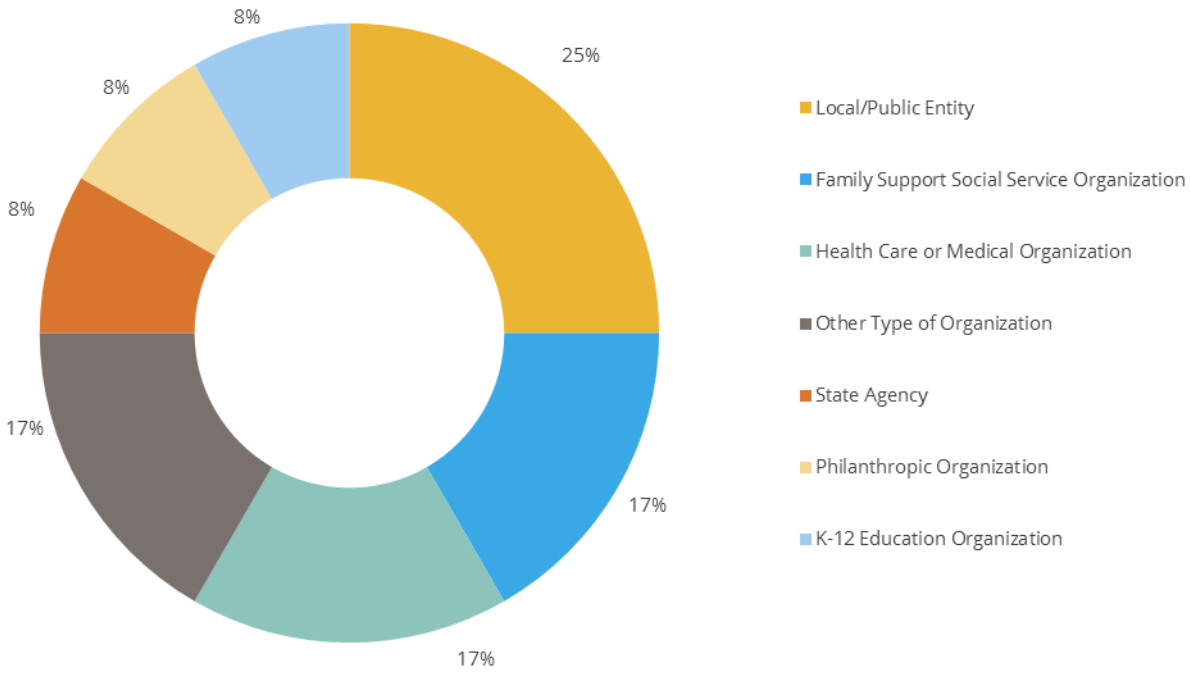
Through system-building, First Things First is focused on developing approaches to connect various components of the early childhood system. This is done in an effort to create a more holistic system

The results are based on the responses from 12 respondents that participated in the survey from Coconino County out of 16 that were contacted to participate, for a 75 percent overall survey response rate. However, please note that not all respondents answered each question, and that the number of respondents varies by question. Each figure or table indicates the number of people responding to that particular question.

Respondents represented many sectors of the early childhood system in the region. The most common organization type among respondents was Local/Public Entities (25%), followed by Family Support/Social Service Organizations (17%), Health Care and Medical Organizations (17%), "Other" agencies (17%), State agencies (8%), Philanthropic Organizations (8%), and K-12 Educational Organizations (8%). Businesses, Higher Education, Advocacy, and Early Care and Education Organizations were not represented in this survey (Figure 49).

[xli] *Partners located on tribal lands will be surveyed at a later date after tribal approvals are requested and received.*

Figure 49. Sectors with which organizations work (N=12)

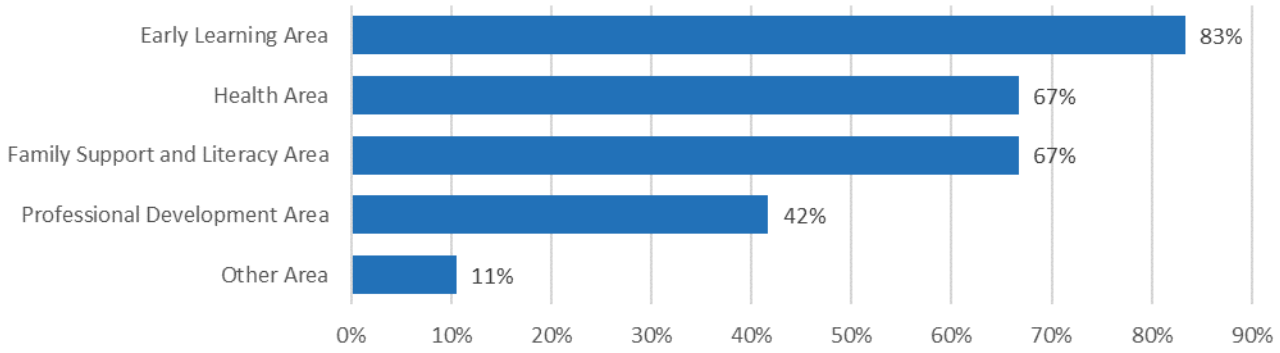


Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

System Partners' View of Their Role in the Early Childhood System

The majority of respondents (91%) consider themselves to be a part of the early childhood system in Coconino County. Although they were from diverse types of organizations, the area respondents most reported engaging with was Early Learning (83%), followed by Health (67%) and Family Support and Literacy (67%) (Figure 50). Most partners (75%) reported engaging with multiple key areas of the early childhood system.

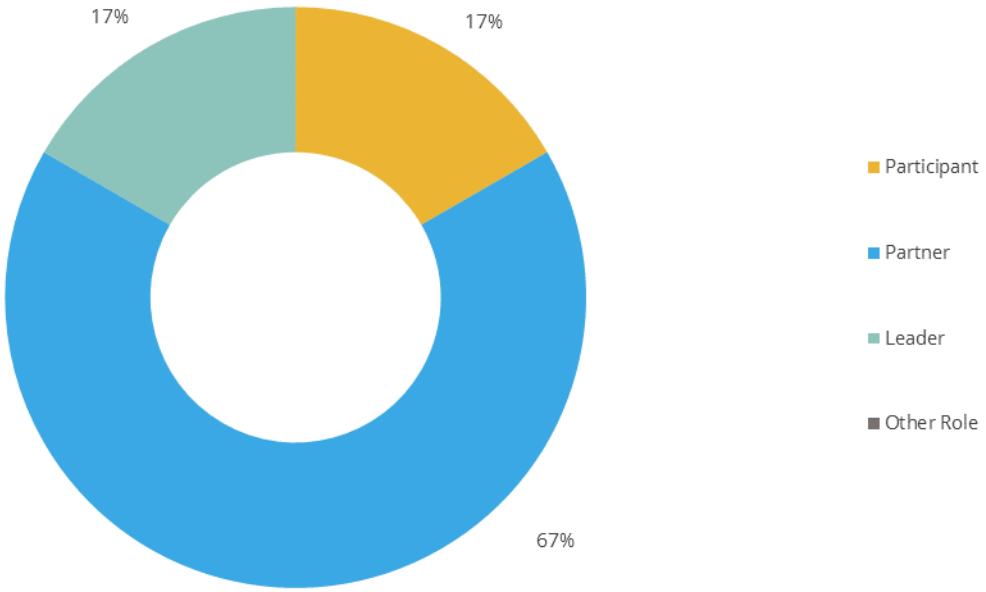
Figure 50 Area(s) of the early childhood system that organizations engage with (N=12)



Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

Role of an Organization in the Early Childhood System

Figure 51 Role of organization in the development and advancement of the Early Childhood System in Coconino County (N=12)



Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

When asked about their organization's role in the development and advancement of the early childhood system in Coconino County, respondents most commonly viewed their organization's role as a Partner (67%), i.e., part of a group responsible for co-convening and/or facilitation and one of many community members involved in a community-based initiative (Figure 51). Seventeen percent

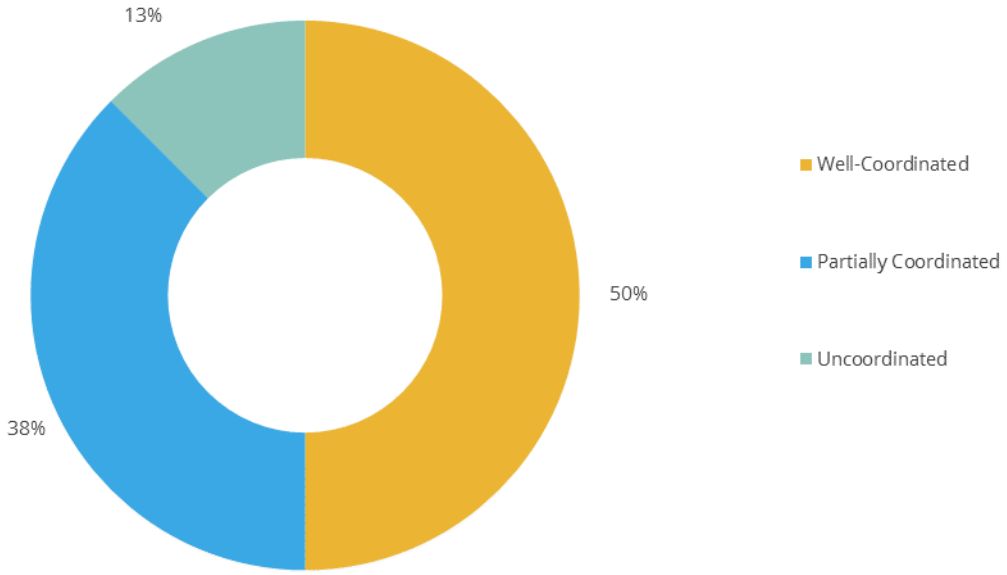
described their organization's role as Participant, i.e., one of many community organizations involved in supporting the early childhood system. Another seventeen percent indicated their organization was a Leader, i.e., they take the lead for convening and facilitating a group of community members.

In their role as participant, partner, or a leader, survey respondents noted several successful partnerships. Organizations that identified their role as that of a participant described partnering with other groups for monthly collaboration meetings with partnered agencies (e.g. Best for Babies) and collaboration across many agencies and communities to ensure families have access to holistic services. Organizations that identified their role as that of a partner also indicated that they participated in school readiness (e.g. KinderCamp) and literacy programs (e.g. Read On), supported participants with networking opportunities and governmental support, funding opportunities aimed at improving early childhood initiatives, and the facilitation of early childhood fairs and programs. Organizations that identified their role as that of a leader shared similar experiences in partnerships, with one organization actively organizing back-to-school fairs and other community events, while another organization facilitated community events to increase access to physical activity, healthy foods, and education on the preparation of healthy foods.

System Partners' Perspective on Systems Building

Respondents were also asked to provide their perspective on the existing early childhood system and systems building. Early childhood systems building is the ongoing process of developing approaches and connections that make all the components of an early childhood system operate as a whole to promote shared results for children and families. In Arizona, early childhood system partners work to promote and establish a seamless, coordinated, and comprehensive array of services that can meet the multiple and changing needs of young children and families to help ensure that kids arrive at school healthy and ready to succeed.

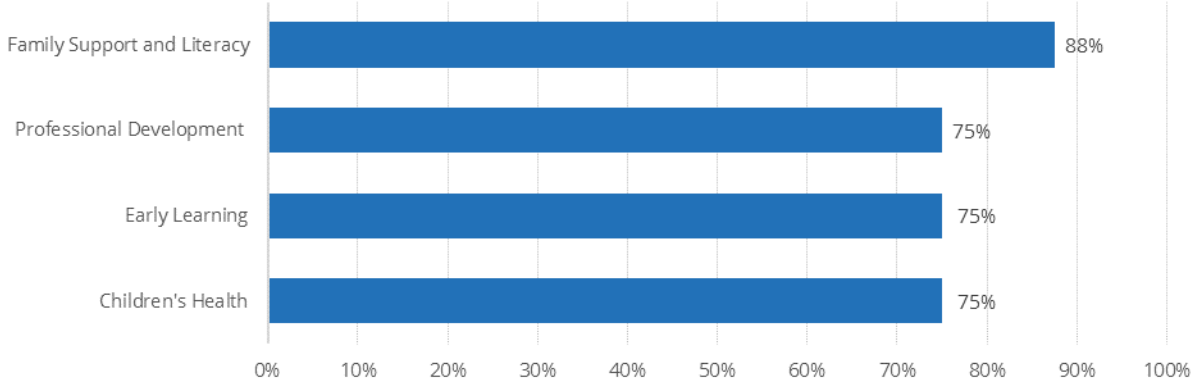
Figure 52. Describe the Early Childhood System in Coconino County (N=8)



Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

Half (50%; n=4) of survey respondents described the early childhood system in Coconino County as a well-coordinated system, with 38 percent (n=3) describing the system as a partially coordinated system, and 13 percent (n=1) viewing the early childhood system as a group of separate, uncoordinated system partners working in isolation (Figure 52).

Figure 53. Percent agreeing that the Early Childhood System in Coconino County effectively addresses the needs of young children and their families across key areas (N=8)



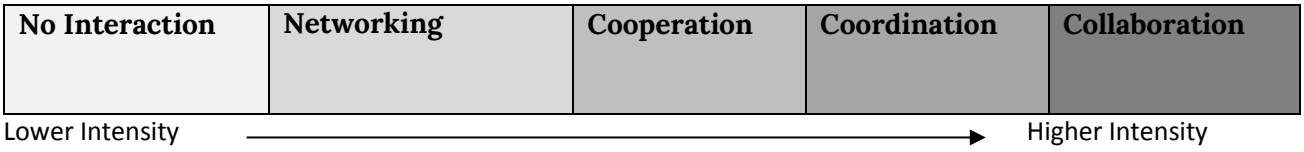
Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data...

The majority of respondents reported that the early childhood system in Coconino County effectively addresses the needs of young children and their families (Figure 53). Most respondents (88%) agreed that needs around family support and literacy are effectively addressed by the system in the region. Slightly fewer respondents felt that the professional development needs, early learning needs, and children health care needs are effectively addressed.

Continuum of Collaboration in the Early Childhood System Areas

In order to understand the current system and to track progress, First Things First uses a five-level continuum of collaboration model. The model consists of five levels describing progressively more intensive levels of collaboration: No Interaction, Networking, Cooperation, Coordination and Collaboration (Figure 54).

Figure 54 The five levels of the Continuum of Collaboration



These stages, as described by Frey and colleagues,[219] are:

No Interaction: No interactions occurring at all.

Networking: Activities that result in bringing individuals or organizations together for relationship building and information sharing. Networking results in an increased understanding of the current system of services. There is no effort directed at changing the existing system. There is no risk associated with networking.

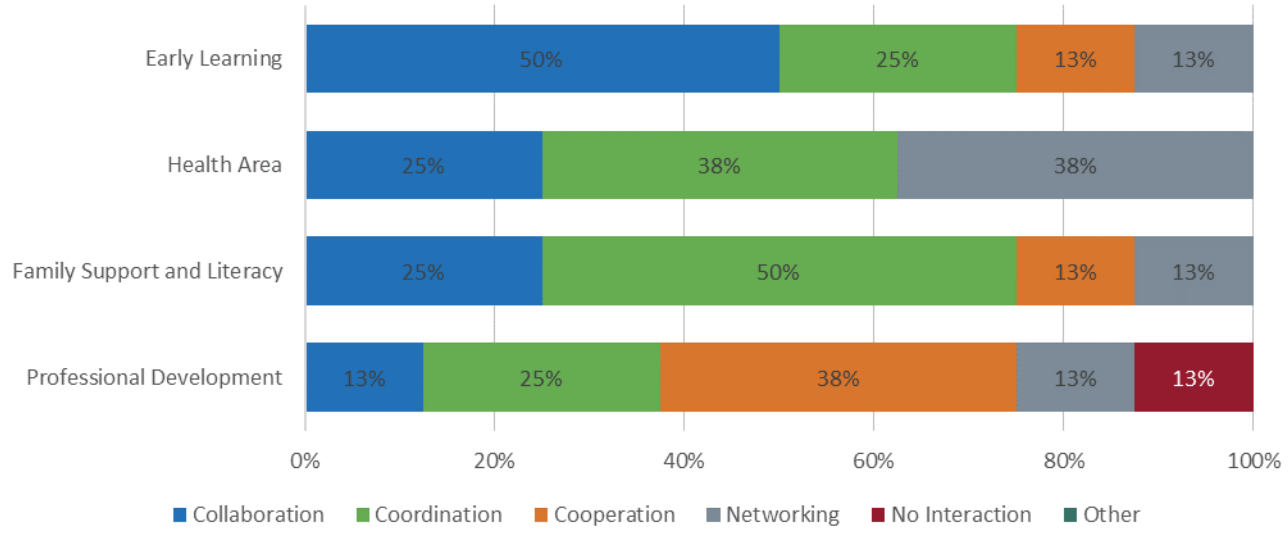
Cooperation: Characterized by short-term, informal relationships that exist without a clearly defined mission, structure, or planning effort. Cooperative partners share information only about the subject at hand. Each organization retains authority and keeps resources separate. There is very little risk associated with cooperation.

Coordination: Involves more formal relationships in response to an established mission. Coordination involves some planning and division of roles and opens communication channels between organizations. Authority rests with individual organizations, however, risk increases. Resources are made available to participants and rewards are shared.

Collaboration: Collaboration is characterized by a more durable and pervasive relationship. Participants bring separate organizations into a new structure, often with a formal commitment to a common mission. The collaborative structure determines authority and leadership roles. Risk is greater. Partners pool or jointly secure resources, and share the results and rewards.

Respondents were asked to refer to the Continuum of Collaboration and to indicate the level of collaboration that is occurring among partners in Coconino County for each area of the Early Childhood System. Two-thirds of the respondents chose to complete this section (n=8). In accordance with respondents' view of the early childhood system as a well- or partially coordinated system (Figure 52), the results indicated strong support for a high level of *collaboration*, the highest and most intense level of system partners working together along the Continuum of Collaboration, but only in certain areas. The most *collaboration* among partners in Coconino County reportedly happened within the area of Early Learning, where 50% of respondents indicated that *collaboration* was occurring. This was followed by the areas of Health (25%), Family Support and Literacy (25%), and Professional Development (13%) (Figure 55).

Figure 55 Continuum of Collaboration in the Early Childhood System Areas (n=8)



Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data...

Across the areas of Health and Family Support and Literacy, the greatest proportion of respondents indicated that they perceived *coordination* than indicated *collaboration*. *Coordination*, a relationship of relatively high intensity, involves more formal planning and division of roles and opens communication channels between organizations. In the area of Professional Development, the greatest percentage of respondents reported *cooperation* among system partners (Figure 55); a relationship characterized by short-term, informal relationships that exist without a clearly defined mission. *Networking*, a relationship of low intensity, characterized by bringing individuals or organizations together for relationship building and information sharing, was more frequently indicated in the area of Professional Development (13%) than in other areas.

Sectors involved in the Early Childhood Building

Within each of the four areas of the Early Childhood System, survey participants were asked to indicate which sectors are involved in building systems for that area.[xlii] In the area of Family Support and Literacy, respondents felt that Early Care and Education agencies (100%), Family Support/Social Service agencies (87.5%), K-12 Education (87.5%) agencies, and Public Entities (75%) were most involved in system building work in Coconino County (**Error! Reference source not found.**).

In the area of Children's Health, respondents indicated that the Health Care/Medical Sector (100%), State Agencies (100%), Family Support/Social Service agencies (75%), Advocacy groups (75%), and Public Entities (75%) were the most engaged in systems buildings.

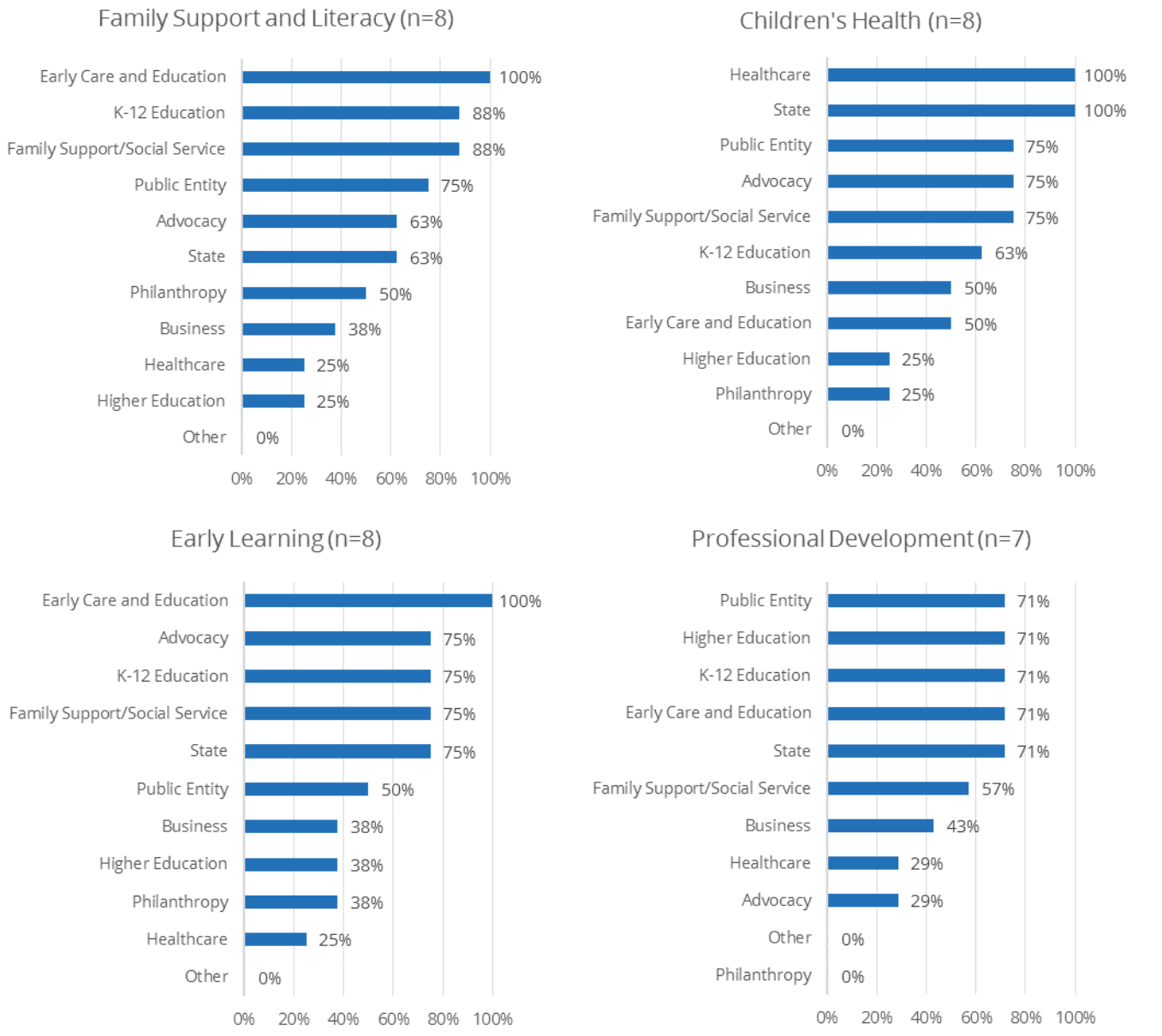
In the area of Early Learning, all respondents (100%), noted that the Early Care and Education sectors played a role in systems building. A majority of respondents also indicated engagement by K-12 Education (75%), Advocacy groups (75%), Family Support/Social Service agencies (75%) and State Agencies (75%).

Finally, in the area of Professional Development, most participants (71.4%) indicated that State agencies, Early Care and Education, K-12 Education, Higher Education, and Public Entities were involved.

Across all four areas, the Business, Philanthropy, and Higher Education sectors played fairly small roles in system building work in Coconino County (Figure 56). Philanthropy was most important for Family Support and Literacy, where 50 percent of participants indicated its involvement, and Higher Education was the most engaged in work around Professional Development, where 71.4 percent of respondents noted contribution from that sector.

[xlii] *Note that only 8 participants completed this portion of the survey; one organization's response now carries a weight of about 12.5 percent.*

Figure 56 Continuum of Collaboration in the Early Childhood System Areas (n=8)

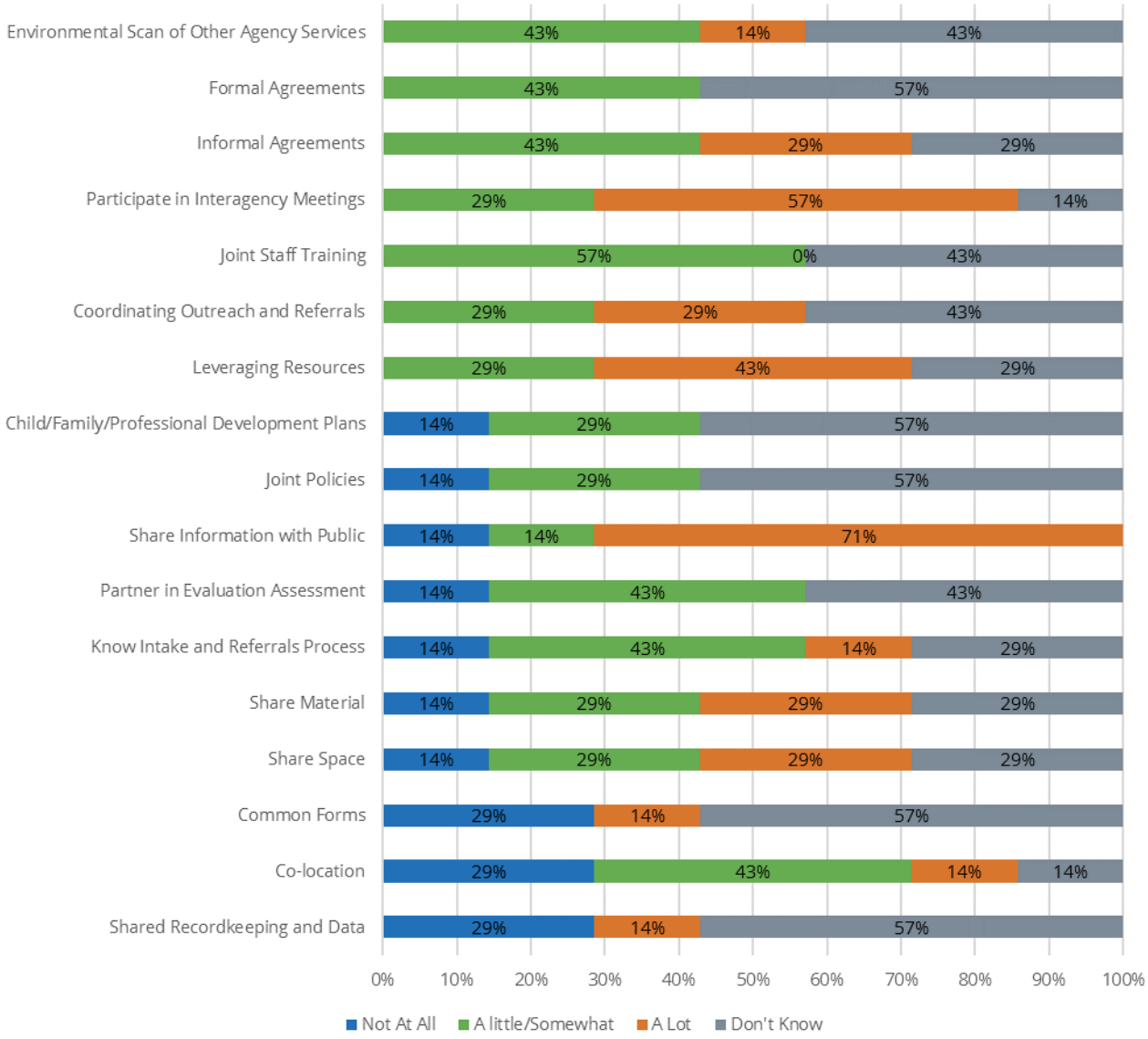


Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data...

The following data reflect questions asking respondents about how frequently key activities that are known indicators of collaborative work were occurring. It should be noted that many (5; 42%) of those

who agreed to take the survey opted not to respond to this portion of the survey.[xliii] Of those who did respond, many indicated that they did not know the answer for many activities.

Figure 57 Frequency of Activities: Family Support & Literacy (n=7)



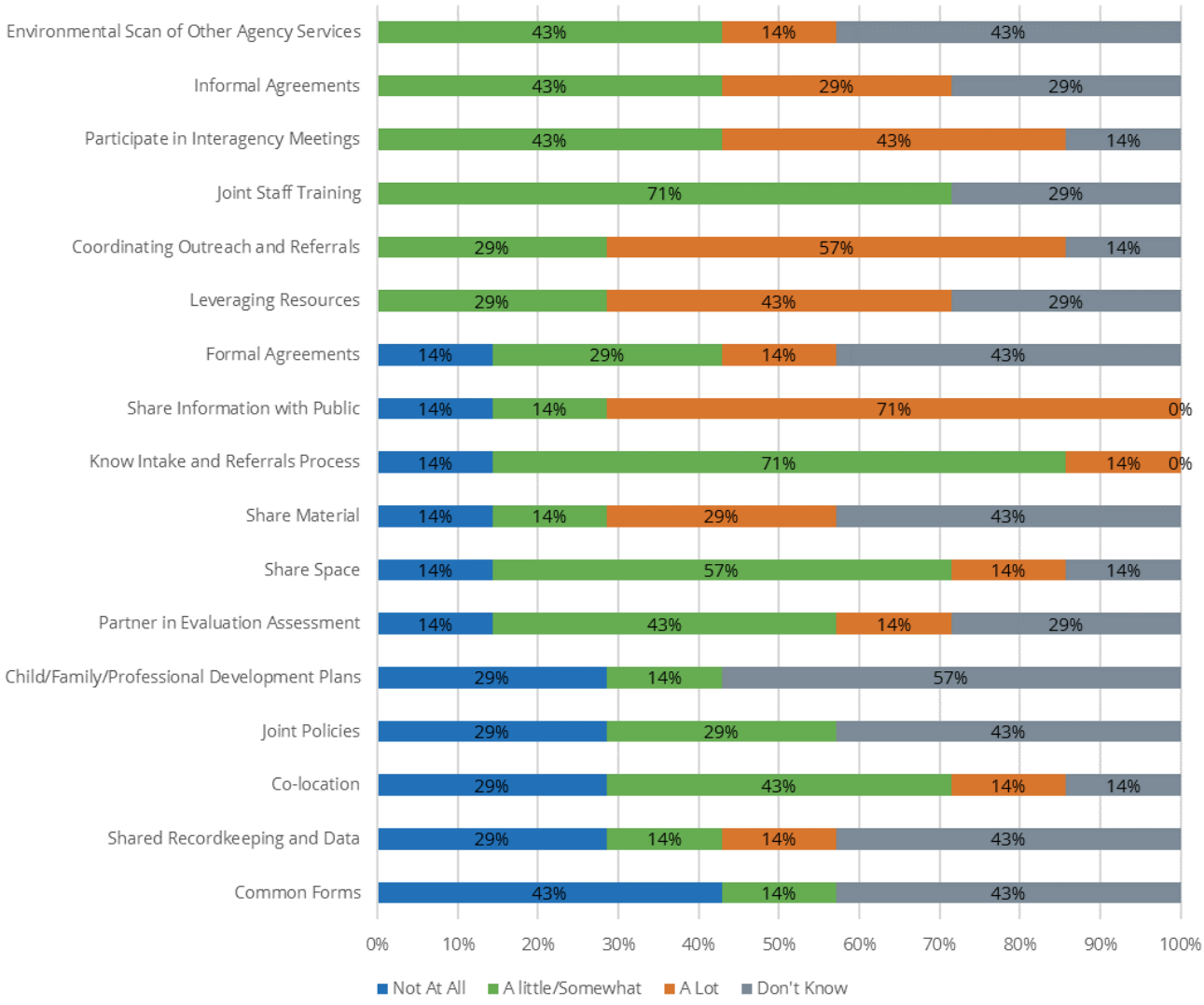
Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data...

Based on the answers (n=7), activities that system partners within Family Support and Literacy are using include: a shared approach to informing the public of available services, participating in inter-agency meetings, leveraging resources/funding across partners, sharing materials, sharing space, co-locating, and knowledge of other programs' intake requirements/referral process (Figure 57). Areas

[xliii] *Based on the pool of 16 organizations and agencies who were sent the survey, this portion of the survey has a response rate of 44-50%.*

where there is a low perceived level of activity include: using common forms (e.g., intake and/or referral forms), sharing recordkeeping and data, jointly implementing policy changes, creating formal agreements, or developing child/family/professional development plans. These activities represent opportunities for continued growth for system partners.

Figure 58 Frequency of Activities: Children's Health (n=7)

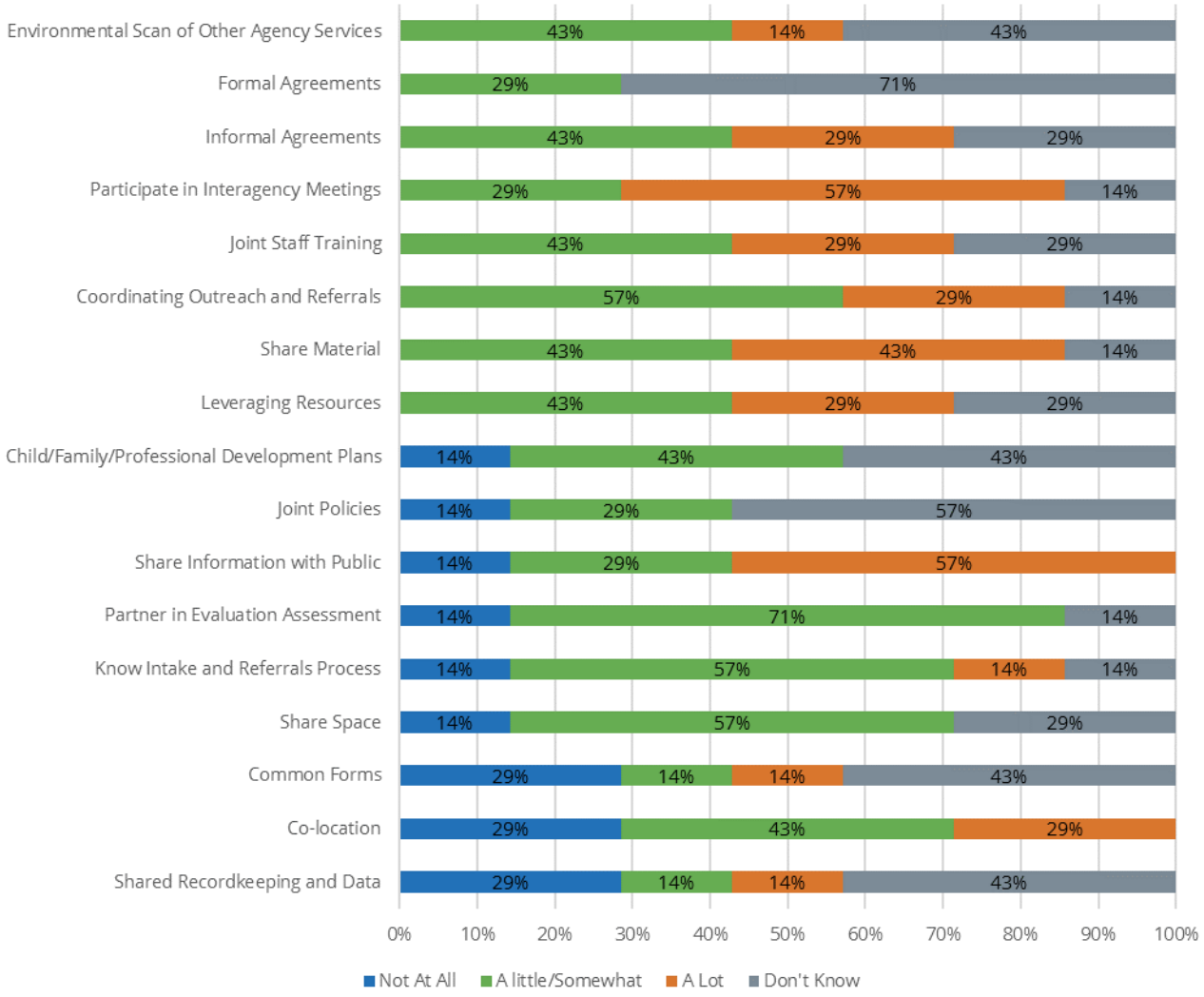


Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

Nearly all respondents (85%) thought that there was at least a modest level of activity with regard to using a shared approach to informing the public of available services. Additional activities that system partners within Children's Health area are using include: knowledge of other programs' intake requirements/referral process, coordination of outreach and referrals, and participation in standing

inter-agency committees (Figure 58). Areas where there is a low perceived level of activity include: jointly implementing policy changes, shared record keeping and management of data information systems, and use of common forms. These activities may be opportunities for system partners to collaborate on in the future.

Figure 59 Frequency of Activities: Early Learning (n=7)

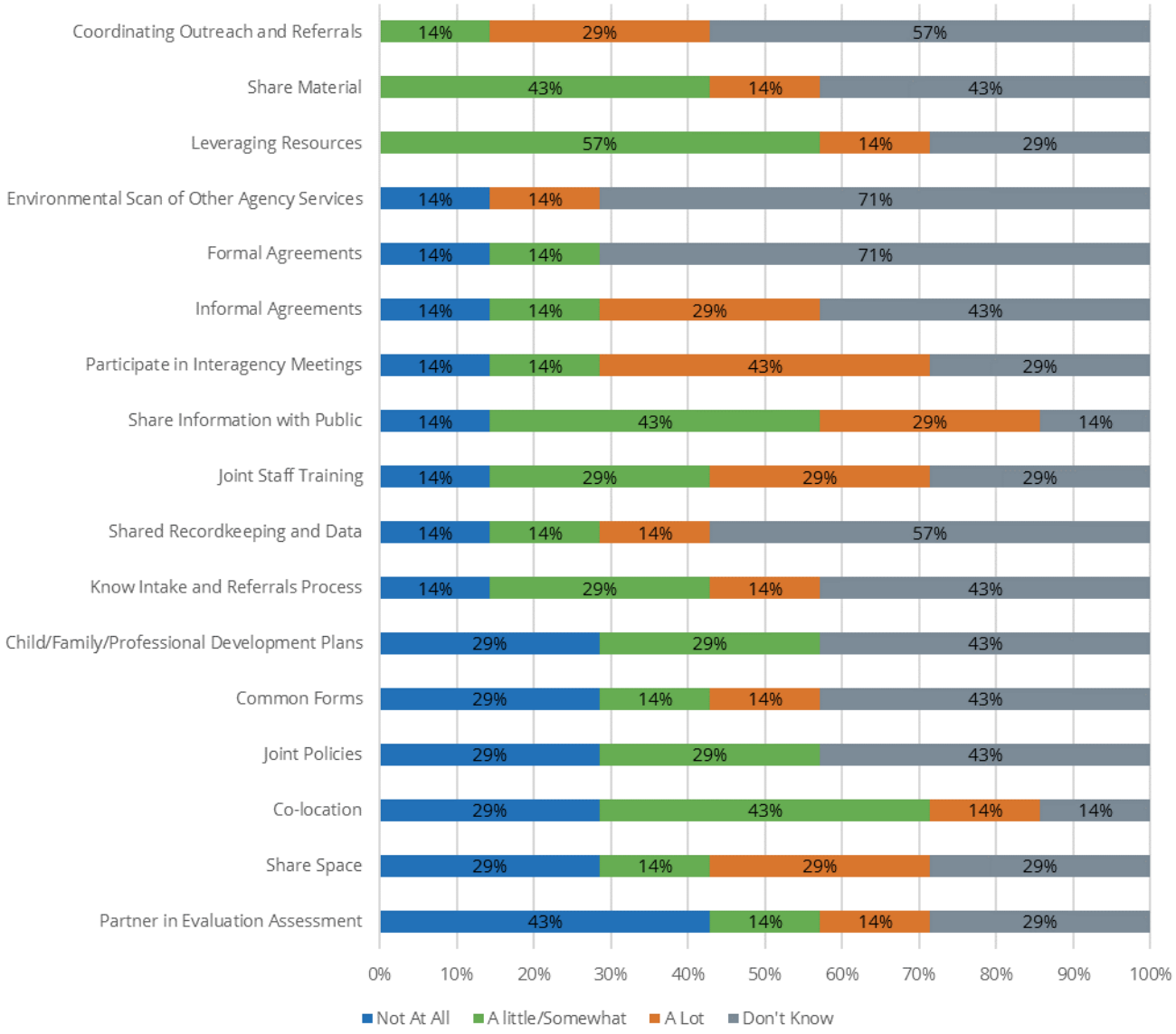


Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

Activities that system partners within the Early Learning area are perceived to be actively engaged in include: shared approach to informing the public of available services, participation in interagency meetings, coordination of outreach and referrals, and shared development of program materials (Figure 59). Activities where there is a low perceived level of use include: jointly implementing policy changes, informal agreements, using common forms, and shared record keeping and management of data information systems. These activities also had a low level of perceived use in the Children's

Health Area, which suggests that support for these activities could be beneficial across the early childhood system.

Figure 60 Frequency of Activities: Professional Development (n=7)



Source: First Things First (2016). [2016 Coordination and Collaboration Survey dataset]. Unpublished data.

Activities that system partners within the Professional Development area are perceived to be actively engaged in include: using shared approaches to informing the public of available services, leveraging

resources/funding across partners, participating in interagency meetings, and shared development of program materials (Figure 60). Activities where there is a low perceived level of use include: common forms (e.g., intake and/or referral forms), formal agreements, jointly implement policy changes, and partnerships in program evaluation and/or assessment.

Commonalities that emerged across all four topic areas were that respondents expressed relatively little knowledge about formal agreements, jointly implemented policy changes, and whether there were partnerships around sharing data or creating development plans.

Barriers and Future Directions

Participants were also asked to reflect on barriers in moving the system forward with other Early Childhood System Partners. The most commonly cited barrier was geographic; that is, the challenges of serving an area with high travel times and limited access in rural communities. Another related theme was the lack of consistent communication between partnered agencies (i.e. monthly meetings that bring representatives from all agencies together), and the Regional Partnership Council's insistence at holding meetings in Flagstaff (which requires travel for those in rural communities). Multiple respondents also noted that funding is a barrier in the region.

Additional ideas for ways that the Council could support Early Childhood System Building and collaboration efforts in Coconino County included more professional trainings on early childhood and an expansion of agency partnerships to expand services and resources to families in rural communities. Multiple respondents viewed the Early Childhood System Building and partner collaboration positively and in need of expansion rather than specific changes for improvements.

SUMMARY AND CONCLUSIONS

This Needs and Assets Report is the sixth biennial assessment of early education, health, and family support in the Coconino Region. In addition to providing an overview of the region, this report looks more closely at some of the community-level variation within it.

It is clear that the region has substantial strengths. We base this conclusion on the quantitative data reported here, as well as insights provided by participants in the data interpretation sessions (see About this Report). A summary of identified regional assets is included below.

Population Characteristics

- High percentages of residents speaking native North American Languages at home in the Hopi Tribe and Havasupai Tribe communities are an asset for cultural and language preservation in these communities.

Economic Circumstances

- Job earnings in the county increased by 11 percent since 2010, and unemployment rates decreased in cities in the region as well as the county as a whole between 2010 and 2015.
- The number of meals provided through the Summer Food Service Program nearly tripled between 2012 and 2015 due to an increase in the number of participating sites.
- The number of individuals in families who were homeless decreased between 2013 and 2015.

Educational Indicators

- Graduation rates in a number of regional school districts consistently exceeded state rates.
- Adults in the region had generally high rates of educational attainment, and across all communities but one at least three-quarters of adults had a high school diploma or GED.

Early Learning

- There was higher participation in nursery school, preschool, or kindergarten in the region compared to the state.
- Estimated child care capacity may be sufficient to meet demand in the Grand Canyon Village-Tusayan-Valle, Havasupai Tribe, and Kaibab Band of Paiute Indians communities.
- One in three registered child care providers in the region were participating in Quality First.
- Families in Coconino County paid a lower proportion of their overall income for child care than other families statewide (although costs for infants and toddlers are still above recommended 10%)
- The number of children receiving child care subsidies greatly increased.
- Teachers and assistant teachers for Head Start and Early Head Start programs in the region had high rates of educational attainment.

Child Health

- The percent of mothers reporting smoking during pregnancy in the Coconino Region was lower than the statewide percent. Smoking rates for the Hopi Tribe community were particularly low, and rates of smoking in households with young children enrolled in WIC fell to zero percent.

- The Coconino Region met the Healthy People 2020 goals that 11.4 percent of infants are born premature for premature births that 81.9 percent of infants are breastfed (for infants enrolled in WIC).
- The Coconino Region met Healthy People 2020 goal that 90 percent of children ages 19-35 months are up-to-date on immunizations among young children enrolled in child care centers.
- Nearly all children in the Havasupai Tribe and Hopi Tribe communities received topical fluorides through the Indian Health Service.
- A smaller percentage of children enrolled in WIC in the region were obese or overweight compared to those statewide. Obesity rates for adults in the county declined between 2011 and 2013.

System Coordination Among Early Childhood Programs and Services

- The majority of respondents (88%) to the 2016 Coordination and Collaboration Survey described the early childhood system in Coconino County as partially- or well-coordinated.
- Two-thirds of responding organizations felt that they were partners in developing and advancing the early childhood system.
- Survey respondents suggests that the Coconino Region is high on the Continuum of Collaboration in the areas of early learning and family support and literacy.

However, there continue to be challenges to fully serving the needs of families with young children throughout the region. It is particularly important to recognize that there is considerable variability in the needs of families across the region. Although the Greater Flagstaff Area is more likely to have resources and opportunities for young children and their families, there are continuing needs across all nine communities of the Coconino Region. These areas run the risk of being overlooked for services if only region or county-level "averages" are examined. A table containing a full summary of identified regional challenges can also be found in the appendix. Many of these have been recognized as ongoing issues by the Coconino Regional Partnership Council and are being addressed by current First Things First-supported strategies in the region.

- **A need for affordable, high quality and accessible child care** – The capacity of early care and education slots available compared to the number of young children in the region (3-4 children per slot) point to a shortage of affordable and accessible early care and learning opportunities in the region, particularly in a few communities in the region such as Williams-Parks and the Hopi Tribe. While families in the region pay a smaller proportion of their income for child care than others across the state, this still exceeds the recommended 10 percent of annual income. Continued regional investment in Quality First Scholarships, Coaching and Incentives, and Child Care Health Consultation strategies may help address this issue, especially with a focus toward communities with the greatest need for early care and education providers. Activities undertaken within the unfunded Systems Building Approach in the region to strengthen the early childhood system may also help meet this need.
- **The need for additional resources for children with special needs** – Information obtained through key informants and quantitative data on early intervention referrals and numbers served, points to the need for additional resources for children with developmental, behavioral and physical health care needs. Early intervention can also decrease the need for special education services once children reach school age. The Coconino Regional Partnership Council

has recognized this need and is investing in Home Visitation and Medical Home strategies as well as Parenting Education and Outreach and Awareness strategies in FY2017. These strategies aim to support children and their families to access support services and educate parents about child health and development and resource available in the community. Given the gap between the number of children expected to have special health care needs and the children receiving special needs services, outreach and developmental screenings remain a vital need to identify young children with special needs.

- **The need for greater access to oral health care** – Nearly one in three kindergarteners in the region experience untreated tooth decay and needed dental care, and nearly two-thirds of kindergarteners had experienced at least some dental decay. The Coconino Regional Partnership Council has recognized this need and invested in an Oral Health strategy in the region, which aims to enhance the oral health status of children in the region. This strategy supports oral health screenings for children and expectant mothers, referrals to oral health providers, fluoride applications for young children, and outreach and education to families and caregivers of young children.

This report also highlighted some needs that could be considered as additional targets by stakeholders in the region.

- **High rates of tobacco and alcohol use during pregnancy** – Though reported smoking rates for pregnant women across the region were low, high rates of smoking in particular communities could have serious impacts on young children's long-term health. This combined with high rates of fetal alcohol syndrome in the county suggest that further education and outreach about the importance of prenatal health may be needed.
- **High rates of food insecurity** – Child food insecurity rates in the county remain high, and enrollment in nutrition assistance programs has decreased in the region. Given the relatively high rates of poverty among young children in the region, outreach programs may be able to increase enrollment among eligible residents, providing additional supports to families in financial need.
- **Need for services for grandparents raising grandchildren and other kinship caregivers** – High percentages of children in some communities live with relatives or grandparents who are responsible for their care. Grandparent-headed families in all parts of the region are likely to have unique needs related to raising young children in all parts of the region. Additional services for kinship caregivers in the region could help support these families.

A full list of regional challenges highlighted in this report is shown below.

Population Characteristics

- High percentages of children in the Fredonia, Grand Canyon Village-Tusayan Valle, and Hopi Tribe communities live with relatives other than their parents or with non-relatives, and in these same communities, as well as the Williams-Parks and Winslow communities, a high percentage of grandchildren live with a grandparent without a parent present. These caregivers, particularly grandparents who may be older, may require additional support.

Economic Circumstances

- More than half of families in the region with children younger than 5 live below 185 percent of the Federal Poverty Level (FPL).
- TANF, SNAP, and WIC enrollment declined in the region despite high rates of families living below 185 percent poverty and continuing food insecurity.
- Nearly one in three children were food insecure in the county, and three-quarters of children were likely eligible for nutrition assistance, but rates of enrollment in nutrition assistance programs were not nearly that high for young children.
- In the Grand Canyon Village-Tusayan-Valle, Kaibab Band of Paiute Indians, Fredonia, and Havasupai Tribe communities, there were few SNAP or WIC retailers.
- Participation in CACFP by child care centers was very low, and the number of sites participating has declined over the past few years.
- A high percentage of housing units in the region had housing problems and low-income householders, who may be particularly vulnerable to housing burdens.

Educational Indicators

- The shares of students passing the AZMerit Math and English Language Arts Assessments were lower than that of the state, and particularly low in several regional school districts.
- Almost half of elementary school students in the region had chronic absences in regional school districts.

Early Learning

- The Fredonia, Williams-Parks, and Hopi Tribe communities have more than three young children per child care slot.
- Key informants in the region indicate that teacher retention may be a challenge for Head Start programs.
- Nationwide and statewide estimates of the percent of children with special health care needs suggest that a large number of children in the region may have special needs but not receive services. Less than 5 percent of children in the region received services for special needs, whereas national research suggests that 7 to 13 percent of children likely have special needs.

Child Health

- A higher percentage of young children lack insurance in the region than in the state as a whole. Combined with high population-to-provider ratios in certain communities, this suggests that access to health care may be lacking in parts of the region.
- The percent of mothers who reported smoking during pregnancy was extremely high in the Page community.
- The percent of pregnant women receiving prenatal care beginning in the first trimester of pregnancy decreased is no longer meeting the Healthy People 2020 goal of 77.9 percent or more.
- There was a higher rate of fetal alcohol syndrome in newborns in Coconino County than in the state overall.
- The Coconino Region did not meet the Healthy People 2020 goals that 95 percent or more children be up-to-date on vaccinations among kindergarteners for nearly all vaccines in 2015. Rates of personal exemptions for kindergarteners were very high.
- A higher percentage of kindergarteners in the region had some dental decay experience than in the state.

Family Support and Literacy

- The number of pregnant or parenting women and the number of young children receiving behavioral health services through the Arizona Department of Health Service decreased between 2012 and 2015, and a smaller percentage of young children in poverty in the region received behavioral health services compared to the state.

System Coordination Among Early Childhood Programs and Services

- Respondents to the 2016 Coordination and Collaboration Survey highlighted a geographic barrier to coordination and collaboration in the Region—high travel times and the remoteness of rural communities make attending meetings in Flagstaff difficult.
- Lack of funding and consistent communications such as monthly meetings were identified as another barrier to coordination and collaboration between Early Childhood System partners.

Successfully addressing the needs outlined in this report will require the continued concentrated effort of collaboration among First Things First and other state agencies, the Coconino Regional Partnership Council and staff, local providers, and other community stakeholders in the region. Although there are many challenges for families, leveraging unique opportunities for community collaboration, resource-sharing, and collective impact through both funded and unfunded strategies can help support the health, welfare, and development of the diverse families and young children of the Coconino Region.

APPENDICES

Table of Regional Strategies

Coconino Regional Partnership Council Planned Strategies for Fiscal Year 2017

Strategy	Strategy description
Quality First Child Care Health Consultation	The intent of this evidence based strategy is to provide statewide health and safety consultation specific to early care and education settings for children birth to age 5. The expected results are improved overall quality of care, reduced illness, and increased school readiness by supporting best practices that increase provider knowledge and promote behavior change, policy development and improvements in program environments.
Quality First Scholarships	The intent of this promising practice strategy is to provide financial support through scholarships for children to attend quality early care and education programs in order to assist low income families (200% of Federal Poverty Level and below) to afford a quality early care and education setting. The expected result is that more children will receive quality early childhood programs and services that will impact their learning and development and promote readiness for kindergarten.
Home Visitation	The intent of this evidence based strategy is to provide personalized support for families with young children, particularly as part of a comprehensive and coordinated system. Services may include developmental screenings, weekly home visits, linking families with needed community-based services, and advocacy and support services that empower families. Expected results that are common to home visitation programs include: improved child health and development, increase in children's school readiness, enhancement of parents' abilities to support their children's development; decreased incidence of child maltreatment; and improved family economic self-sufficiency and stability (US Department of Health and Human Services, 2014).
Parenting Education	The intent of this evidence based strategy is to offer learning activities designed to increase the knowledge and skills and promote positive parenting practices for parents and caregivers that result in enhanced child health and development when utilized by parents and caregivers. The expected results of effective parenting education programs are increased parental knowledge of child development and parenting skills, improved parent and child interactions, and more effective parental monitoring and guidance, decreased rates of child maltreatment, and better physical, cognitive and emotional development in children (Lundahl, Nimer & Parsons, 2012).
Parenting Outreach and Awareness	The intent of this promising practice strategy is to increase families' awareness of positive parenting; child development including health, nutrition, early learning and language acquisition; and, knowledge of available services and supports to support their child's overall development. The expected result is an increase in knowledge and a change in specific behaviors addressed through the information and activities provided.
Oral Health	The intent of this evidence-based strategy is to provide best practice approaches that enhance the oral health status of children birth through age 5. The expected results are prevention of tooth decay and reduction in the prevalence of early childhood tooth decay and the associated risks for pain and infections that can lead to lifelong complications to health and wellbeing. The approaches for this strategy include: oral health screening for children and expectant mothers with referrals to oral health providers for follow up care as needed; fluoride varnishes for children; oral health education for families and other caregivers; and, outreach to families, other caregivers including early learning and care providers, and oral health and medical professionals.
Care Coordination and Medical Home	The intent of the evidence-based Care Coordination/Medical Home strategy is to embed a care coordinator into a clinical practice to assist at-risk families with young children to navigate the complex health care and social service systems. The expected result of effective care coordination is that children receive well child visits, the services that they need, and that they use services efficiently to avoid duplication and unnecessary stress on their families. An important component of care coordination is its association with a medical clinic that is designated as a "medical home" for the child and their family.

Source: First Things First (2016): SFY 2017 Regional Funding Plan, Coconino Regional Partnership Council.

Methods and Data Sources

The data contained in this report come from a variety of sources. Some data were provided to First Things First by state agencies, such as the Arizona Department of Economic Security (DES), the Arizona Department of Education (ADE), and the Arizona Department of Health Services (ADHS). Other data were obtained from publically available sources, including the 2010 U.S. Census, the American Community Survey (ACS), the Arizona Department of Administration (ADOA), and the Arizona Health Care Cost Containment System (AHCCCS). In addition, regional data from the 2012 First Things first Family and Community Survey (FCS), 2015 Healthy Smiles Healthy Bodies Survey, and 2016 Coordination and Collaboration Survey are included. Methodologies for those surveys are included on the following pages.

U.S. Census and American Community Survey Data.

The U.S. Census[220] is an enumeration of the population of the United States. It is conducted every ten years, and includes information about housing, race, and ethnicity. The 2010 U.S. Census data are available by census block. There are about 115,000 inhabited blocks in Arizona, with an average population of 56 people each. The Census data for the Coconino Region presented in this report were calculated by identifying each block in the region, and aggregating the data over all of those blocks. (Note that the Census 2010 data in the current report may vary to a small degree from census data reported in previous Needs & Assets reports. The reason is that in the previous reports, the Census 2010 data were aggregated by zip code; the current report uses aggregation by census blocks.)

The American Community Survey[221] is a survey conducted by the U.S. Census Bureau each month by mail, telephone, and face-to-face interviews. It covers many different topics, including income, language, education, employment, and housing. The ACS data are available by census tract. Arizona is divided into about 1,500 census tracts, with an average of about 4,200 people in each. The ACS data for the Coconino Region were calculated by aggregating over the census tracts that are wholly or partially contained in the region. The data from partial census tracts were apportioned according to the percentage of the 2010 Census population in that tract living inside the Coconino Region. The most recent and most reliable ACS data are averaged over the past five years; those are the data included in this report. They are based on surveys conducted from 2010 to 2014. In general, the reliability of ACS estimates is greater for more populated areas. Statewide estimates, for example, are more reliable than county-level estimates.

Data Suppression

To protect the confidentiality of program participants, the First Things First Data Dissemination and Suppression Guidelines preclude reporting social service and early education programming data if the count is less than ten, and preclude our reporting data related to health or developmental delay if the count is less than twenty-five. In addition, some data received from state agencies may be suppressed according to their own guidelines. The ADHS, for example, does not report non-zero counts less than six, and DES does not report non-zero counts less than 10. Throughout this report, information which is not available because of suppression guidelines will be indicated by entries of "<10" or "<25" for counts or "DS" for percentages in the data tables.

For some data, an exact number was not available because it was the sum of several numbers provided by a state agency, and some numbers were suppressed in accordance with agency guidelines. In these cases, a range of possible numbers is provided, where the true number lies within that range. For example, for data from the sum of a suppressed number of children ages 0-12 months, 13 children ages 13-24 months, and 12 children ages 25-35 months, the entry in the table would read "26 to 34." This is because the suppressed number of children ages 0-12 months is between one and nine, so the possible range of values is the sum of the two known numbers plus one to the sum of the two known numbers plus nine. Ranges that include numbers below the suppression threshold of less than ten or twenty-five may still be included if the upper limit of the range is above ten or twenty-five. Since a range is provided rather than an exact number, the confidentiality of program participants is preserved.

Reporting Data over Time

To show changes over time, a percent change between two years is sometimes reported to show the relative increase or decrease during that period. Percent change between two years is calculated using the following formula:

$$\% \text{ Change} = \frac{(\#\ in\ Year\ 2 - \#\ in\ Year\ 1)}{\#\ in\ Year\ 1}$$

School District Data

A number of educational indicators were included in this report based on data received from the ADE at the school level. These data were then aggregated by region (e.g., the sum of all students in special education preschool in the region) and by regional portions of districts (e.g., the sum all students in special education preschool in a particular school district in the region) as well as by the county and state. Since ADE school districts do not follow FTF regional boundaries, district data may not represent the school district as a whole but rather the portion of that district which falls within a given region. School districts that straddle regional boundaries can be identified in Figure 17. For these districts, only the data for schools falling within regional boundaries was included in the district calculation. Data for charter schools were aggregated to a single number for all charter school located within a given region.

Child Care Capacity Calculations

One key indicator used in this report is the overall childcare and early education capacity in the region. This measure was calculated by summing the childcare and early education slots available in the region. However, some child care and early education providers may appear in multiple data source (e.g., a provider may be listed with both Quality First and the Child Care Resource and Referral guide). To avoid duplication of providers, a table with exclusive columns proceeding from left to right was created. Since high quality early education is a priority in the region, the number and capacity of Quality First providers has been included as the first category of provider. Each column from left to right excludes any provider already accounted for in a preceding column. Thus, the Head Start column counts all Head Start centers that are not Quality First providers (since all Quality First-enrolled Head Starts were counted in the Quality First column). The Public School provider column similarly excludes all Head Start centers operating in public schools and all Quality First-enrolled public school early care programs. The Other Child Care provider column provides the balance of child care and preschool providers that are listed in the Child Care Resource and Referral (CCRR) guide that are not

Quality First providers, Head Start centers, or Public School providers. Unlicensed or unregulated care providers could not be included in calculations of child care capacity as information on the location and capacity of these providers is not collected in a systematic way at a county or state level.

Child care and early education sites were assigned to regions by loading them into a GIS. Locations were determined using latitude and longitude pairs where available or addresses. Locations for tribal and rural communities where addresses may be less than accurate were corrected using satellite imagery and local knowledge. For centers from the CCRR dataset, centers were located through address geocoding using the Google Maps platform. Once the centers were loaded in the GIS, they were assigned to region and sub-region using the ArcGIS Identity tool and a set of sub-regional shapefiles, regional shapefiles, and county shapefiles. These centers were then summed by region, sub-region, county, and state.

2018 Report Process

For the 2018 Needs & Assets Report cycle, Regional Partnership Councils were asked to identify areas of particular focus, or priority areas. These priorities were developed during the spring of 2016, and potential data sources to address these priorities were identified collaboratively among the Council, The Regional Director, FTF Research and Evaluation staff, and CRED staff. For the current report, the Coconino Regional Partnership Council has identified the following topics as priority areas: early education and health (particularly in relation to children with special needs) and early literacy.

In the fall of 2016, a participatory Data Interpretation Session was held to review preliminary results of the data received, compiled and analyzed as of June 2016. Regional Partnership Council members and other participating key stakeholders were involved in facilitated discussion to allow them to share their local knowledge and perspective in interpreting the available data. The Coconino Region Data Interpretation Session was held in Flagstaff on September 12, 2016 and included invited community members as well as the members of the Regional Partnership Council and the Regional Director. Data Interpretation Sessions were also held with representative from each of the Coconino Region's tribal community. A session with representatives of the Hopi Tribe was held on September 12, 2016, with a representative of the Havasupai Tribe on September 27, 2016, and with a representative of the Kaibab Band of Paiute Indians on October 10, 2016. Feedback from participating session members are included as key informant citations within the report, as appropriate.

Oral Health Survey Methodology

The *Healthy Smiles Healthy Bodies Survey* was designed to obtain information on the prevalence and severity of tooth decay among Arizona's kindergarten children.[xliv] In addition, the survey collected information on behavioral and demographic characteristics associated with this condition. *Healthy Smiles Healthy Bodies* included the following primary components – (1) a dental screening and (2) an optional parent/caregiver questionnaire. During the 2014-2015 school year, *Healthy Smiles Healthy Bodies* collected information from children at 84 non-reservation district and charter schools

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[xliv] *Using another funding source, ADHS expanded data collection to include 3rd grade children but that information is not included in this report.*

throughout Arizona.[xlv] A total of 3,630 kindergarten children in Arizona received a dental screening. In the Coconino Region, 204 children received a dental screening.

Sampling

Healthy Smiles Healthy Bodies sampled children in kindergarten and third grade. District and charter elementary schools with at least 20 children in kindergarten were included in the sampling frame. The following were excluded from the sampling frame: (1) alternative, detention, and state schools for the deaf and the blind plus (2) schools located in tribal communities (based on the Arizona Department of Health Services list of tribal communities). To ensure a representative sample from every county and FTF region, the sampling frame was initially stratified by county. Where a county included more than one FTF region (Maricopa and Pima), the sampling frame was further stratified by FTF region. This resulted in 21 sampling strata; 13 county-level strata, 2 FTF strata within Pima County, and 6 FTF strata within Maricopa County. Within each stratum, schools were ordered by their National School Lunch Program (NSLP) participation rate. A systematic probability proportional to size sampling scheme was used to select a sample of five schools per stratum.[xlvi] Three counties (Apache, Greenlee, and La Paz) had fewer than five schools in the sampling frame. For these counties, all schools in the sampling frame were asked to participate. If a selected school did not have kindergarten or third grade, the appropriate feeder school was added to the sample. A systematic sampling scheme was used to select 99 schools. Of these, five did not have kindergarten or third grade so five feeder schools were added to the sample resulting in 104 schools representing 99 sampling intervals, of which 84 agreed to participate.

Survey Limitations

Although the original sample was representative of the state, not all schools participated, which may bias the results. The percentage of children eligible for the NSLP was 58% for schools in the sampling frame but was 72% for schools that participated, suggesting that lower income schools were more likely to participate. Given that lower income children have more disease; this survey may overestimate the prevalence of disease in the non-tribal communities in the state. Another limitation was the exclusion of tribal communities resulting in small sample sizes for the American Indian/Alaska Native population.

The parent/caregiver questionnaire was optional and was returned for only 44% (N=1,583) of the children screened. Because of this, information obtained from the questionnaire may not be representative of the state. In addition, the information was self-reported and may be affected by both recall and social desirability bias. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Family Caregiver Survey 2012 Survey Methodology

The Family and Community Survey was designed to measure many critical areas of parent knowledge, skills, and behaviors related to their young children. The survey contained over sixty questions, some

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[xlv] *Schools serving children with special needs and schools located in tribal communities were excluded.*

[xlvi] *Probability proportional to size sampling: a sampling technique where the probability that a particular school will be chosen in the sample is proportional to the enrollment size of the school*

of which were drawn from the national survey, *What Grown-Ups Understand About Child Development*.[222] Survey items explored multiple facets of parenting. The FTF Family and Community Survey had six major areas of inquiry:

- Early childhood development
- Developmentally appropriate child behavior
- Child care and sources of parenting advice and support
- Family literacy activities
- Perceptions of early childhood services
- Perceptions of early childhood policies

A total of 3,708 parents with children under six (FTF's target population) responded to the 2012 survey. The majority of respondents (83%) were the child's parent. The remaining respondents were grandparents (13%) or other relatives (4%). In the Coconino region, 147 parents and caregivers participated in the survey.

The sample data were weighted so that the sample would match the population of the state on four characteristics: Family income, Educational attainment, Sex, and Race-ethnicity. Data was weighted at both the statewide level to arrive at the Arizona results and at the regional level to arrive at the regional results. Please note that regional estimates are necessarily less precise than the state estimates; i.e. small differences observed might easily be due to sampling variability.

Coordination and Collaboration Survey Methods

System partners in 18 First Things First county-based regions were asked by First Things First to participate in the Coordination and Collaboration Survey in an effort to learn more about how system partners view their role in the region's early childhood system and to what extent they collaborate and coordinate with other system partners. Ten regions elected to conduct region-specific surveys including, Cochise, Coconino, Gila, Graham/Greenlee, La Paz Mohave, Navajo Apache, Pinal, Santa Cruz, Yavapai, and Yuma. Additionally, the six FTF regions in Maricopa County (i.e., Phoenix North, Phoenix South, East Maricopa, Northwest Maricopa, Southeast Maricopa, and Southwest Maricopa), and the two FTF regions in Pima County (Pima North and Pima South), elected to conduct combined county-wide surveys. Partners located on tribal lands will be surveyed at a later date after tribal approvals are requested and received.

FTF regional staff identified potential respondents of the survey. Each region was asked to determine who (across the categories listed below) the early childhood system stakeholders were in their communities that would be able to speak to their experience in the system. If there were no stakeholders representing a category, it was acceptable to not have representation from that category. Surveys on tribal lands were not conducted because tribal approvals for this survey have not yet been requested. Thus, the list of possible respondents was not a systematic or exhaustive list of potential respondents, and the pool of system partners who were invited to participate is not necessarily comparable across different regions.

Possible stakeholder areas:

- Higher Education
- K-12 Education
- Community Family Support Programs
- Public/Community Health Programs
- Child Care/Early Learning/Head Start programs
- Professional Development
- State/City/County Governments
- Public Library
- Philanthropy/Foundations
- Faith Based Organizations
- Military
- Coalition/Networking groups (including Read On)
- Community Service Groups
- FTF Grant Partner
- Other

Prospective participants received an email invitation to participate from the First Things First Regional Directors in October of 2016 and given three weeks to respond. Potential respondents were also contacted to remind them about the participation via either email and/or phone call.

Responses were collected via Survey Monkey. Data were then cleaned and compiled by region by the First Things First Evaluation team.

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