

FIRST THINGS FIRST

San Carlos Apache Region



2020 NEEDS AND ASSETS REPORT



San Carlos Apache Regional Partnership Council

2020 Needs and Assets Report

Prepared by

Community Research, Evaluation and Development (CRED)
John and Doris Norton School of Family and Consumer Sciences
College of Agricultural and Life Sciences
The University of Arizona

Funded by

First Things First San Carlos Apache Regional Partnership Council

John and Doris Norton School of Family and Consumer Sciences
College of Agricultural and Life Sciences
The University of Arizona
PO Box 210078
Tucson, AZ 85721-0462
Phone: (520) 621-8739
Fax: (520) 621-4979

<http://ag.arizona.edu/fcs/>

© 2020 Arizona Early Childhood Development and Health Board (First Things First) 4000 N. Central Ave., Ste. 800, Phoenix, AZ 85012 | 602.771.5100 Permission to copy, disseminate or otherwise use the information in this publication is granted, as long as appropriate acknowledgement is given.



Introduction

Ninety percent of a child's brain growth occurs before kindergarten and the quality of a child's early experiences impacts whether their brain will develop in positive ways that promote learning. First Things First (FTF) was created by Arizonans to help ensure that Arizona children have the opportunity to arrive at kindergarten prepared to be successful. 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 FTF San Carlos Apache Region helps community leaders and decision-makers understand the needs of young children, the resources available to meet those needs and gaps that may exist in those resources. Data collection and analysis for the 2020 report were completed prior to the COVID-19 pandemic and, therefore, do not reflect the impact of COVID-19 on families with young children and the services that support them. The report is organized by topic areas pertinent to young children in the region, such as the population characteristics or educational indicators. Within each topic area are sections that set the context for why the data found in the topic areas are important (Why it Matters), followed by a section that includes available data on the topic (What the Data Tell Us).

The FTF San Carlos Apache 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. It is our sincere hope that this information also will help guide community conversations about how we can best support school readiness for all children in the San Carlos Apache Region. To that end, this information may be useful to stakeholders in the 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 five years old throughout the region.



Acknowledgments

The FTF San Carlos Apache Regional Council wants to thank the Arizona Department of Economic Security, the Arizona Department of Health Services, the Arizona Department of Education and the U.S. Census Bureau, for their contributions of data for this report and their ongoing support and partnership with FTF on behalf of young children.

To the current and past members of the San Carlos Apache Regional Council, your vision, dedication and passion have been instrumental in improving outcomes for young children and families within the region. Our future 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.



LETTER FROM THE CHAIR

October 8, 2020

Message from the Chair:

Since the inception of First Things First, the San Carlos Apache 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 funded and unfunded 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 San Carlos Apache Regional Council would like to thank our Needs and Assets vendor, Community Research, Evaluation & Development (CRED) John & Doris Norton School of Family and Consumer Sciences, College of Agricultural and Life Sciences, The University of Arizona, for their knowledge, expertise and analysis of the San Carlos Apache 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 San Carlos Apache 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 of 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,



Flora Talas, Chair



SAN CARLOS APACHE REGIONAL PARTNERSHIP COUNCIL

2250 Highway 60, Suite K
Miami, Arizona 85539
Phone: 928.425.8172
Fax: 928.425.3129

Flora Talas, Chair

Christine Carlson, Vice Chair

Jaymie Swift Hooke

Randee Kitcheyan

Nolita April Noline

Kelly Pahe-Reede

Ronald Ritter

Delphine Rodriguez

Elliot Talgo, Sr.

Report Prepared by:

Community Research, Evaluation & Development (CRED)
John & Doris Norton School of Family and Consumer Sciences
College of Agricultural and Life Sciences
The University of Arizona

Table of Contents

Introduction	3
Acknowledgments.....	4
Letter from the Chair	5
Table of Contents.....	7
List of Tables	9
List of Figures	11
Executive Summary.....	12
The San Carlos Apache Region.....	18
Regional Boundaries	18
Data Sources	19
Population Characteristics	22
Why it Matters	22
What the Data Tell Us.....	24
Population, Race, and Ethnicity	26
Language Use	29
Family and Household Composition	31
Economic Circumstances	33
Why it Matters	33
What the Data Tell Us.....	37
Poverty	40
Food Insecurity.....	43
Employment.....	44
Housing Instability.....	45
Educational Indicators	48
Why it Matters	48
What the Data Tell Us.....	50
School Attendance and Absenteeism	52
Achievement on Standardized Testing	54
Graduation Rates and Adult Educational Attainment	57
Early Learning.....	60
Why it Matters	60
What the Data Tell Us.....	64
Access to Early Care and Education	66
High Quality Early Care and Education	68
Young Children with Special Needs	70
Child Health.....	73
Why it Matters	73
What the Data Tell Us.....	77
Access to Health Services.....	79
Maternal, Infant, and Child Health	81
Oral Health	82

Child Immunizations	82
Illness and Injury	85
Family Support and Literacy	87
Why it Matters	87
What the Data Tell Us	90
Child Removals and Foster Care	91
Systems Coordination among Early Childhood Programs and Services	92
Why it Matters	92
What the Data Tell Us	93
Communication, Public Information and Awareness	95
Why it Matters	95
What the Data Tell Us	96
Appendix 1: Map of Zip Codes of the San Carlos Apache Region.....	100
Appendix 2: Zip Codes of the San Carlos Apache Region	101
Appendix 3: Map of School Districts in the San Carlos Apache Region.....	102
Appendix 4: Data Sources	104
References	106

List of Tables

Table 1. Population and households, 2010.....	26
Table 2. Population of children by single year of age, 2010.....	26
Table 3. Race and ethnicity of the population of young children (ages 0-4), 2010.....	27
Table 4. Race and ethnicity of the adult population (ages 18 and older), 2010	28
Table 5. Race and ethnicity of mothers giving birth in calendar year 2017	28
Table 6. Language spoken at home by persons ages 5 and older	29
Table 7. English-language proficiency for persons ages 5 and older.....	29
Table 8. Limited-English-speaking households.....	30
Table 9. Living arrangements for children (ages 0-5)	31
Table 10. Heads of households in which children (ages 0-5) live, 2010.....	31
Table 11. Children (ages 0-5) living in the household of a grandparent, 2010	32
Table 12. Grandparents responsible for grandchildren (ages 0-17) living with them.....	32
Table 13. Median annual family income.....	40
Table 14. Families with young children (ages 0-5) living at various thresholds above poverty...	41
Table 15. Families participating in the Nnee Bich’o Nii TANF Program, Fiscal Years 2015 and 2016	42
Table 16. Children participating in the Nnee Bich’o Nii TANF Program, Fiscal Years 2015 and 2016	42
Table 17. Families with children (ages 0-5) participating in the SNAP program, Fiscal Years 2015 to 2018	43
Table 18. Children (ages 0-5) participating in the SNAP program, Fiscal Years 2015 to 2018	43
Table 19. Students (all grades) eligible for free or reduced-price lunch, 2015-16 to 2018-19	43
Table 20. Parents of young children (ages 0-5) who are or are not in the labor force	44
Table 21. Adult population (ages 16 and older) who are employed, unemployed, or not in the labor force.....	44
Table 22. Households who are paying thirty percent or more of their income for housing	45
Table 23. Households with and without computers and smartphones	45
Table 24. Persons (all ages) in households with and without computers and internet connectivity.....	46
Table 25. Children (ages 0-17) in households with and without computers and internet connectivity.....	46
Table 26. Households by type of internet access (broadband, cellular data, and dial-up).....	47
Table 27. Students enrolled in preschool through third grade, 2018-19.....	52
Table 28. Chronic absence rates, Kindergarten through 3rd grade, 2018-19	52
Table 29. Chronic absence rates, Kindergarten through 3rd grade, 2015-16 to 2018-19	52
Table 30. Chronic absence rates for students by grade (Grade K-3), 2018-19.....	53

Table 31. AzMERIT Assessment Results: 3rd Grade English Language Arts, 2017-18.....	54
Table 32. AzMERIT Assessment Results: 3rd Grade Math, 2017-18	55
Table 33. Graduation and dropout rates, 2017	57
Table 34. Trends in four-year graduation rates, 2015 to 2017	57
Table 35. Trends in five-year graduation rates, 2015 to 2017	58
Table 36. Trends in 7th-12th grade dropout rates, 2015-16 to 2017-18	58
Table 37. Level of education for mothers giving birth during calendar year 2017	59
Table 38. School enrollment for children (ages 3 and 4).....	66
Table 39. Participation in center-based early education programs	66
Table 40. Children receiving DES child care subsidies, 2015 to 2018.....	67
Table 41. DCS-involved children receiving DES child care subsidies, 2015 to 2018.....	67
Table 42. Eligible families not using DES child care subsidies, 2015 to 2018.....	67
Table 43. Children receiving DES subsidies in quality educational environments, 2017 and 2018	68
Table 44: First Things First Quality First child data, State Fiscal Year 2019.....	68
Table 45. First Things First Quality First child care provider data, State Fiscal Year 2019	69
Table 46. Children (ages 3-5) Enrolled in Special Education, 2015-16 to 2018-19.....	70
Table 47. Children (ages 3-5) Enrolled in Special Education by Type of Disability, 2018-19.....	70
Table 48. Percent of Students (Grade 1-3) Enrolled in Special Education, 2015-16 to 2018-19..	70
Table 49. Children referred to and found eligible for AzEIP, Federal Fiscal Years 2016 and 2017	71
Table 50. AzEIP caseloads, 2017 and 2018	71
Table 51. Children (ages 0-2) receiving services from DDD, State Fiscal Years 2015 to 2018	71
Table 52. Children (ages 3-5) receiving services from DDD, State Fiscal Years 2015 to 2018	72
Table 53. Health insurance coverage.....	79
Table 54. Payors for births during calendar year 2017.....	80
Table 55. Prenatal care for mothers giving birth during calendar year 2017	81
Table 56. Various risk factors for births during calendar year 2017	81
Table 57. Neonatal abstinence syndrome (NAS), calendar years 2016 and 2017	81
Table 58. First Things First oral health strategy data, State Fiscal Year 2019	82
Table 59. Cases of infectious diseases among young children (ages 0-5), 2015-2018 cumulative	82
Table 60. Children enrolled in the preschool program at Rice Elementary with required immunizations, 2018-19	83
Table 61. Kindergarteners with required immunizations, 2018-19	83
Table 62. Child care immunization exemption rates for children enrolled in the preschool program at Rice Elementary, 2016-17 to 2018-19	84

Table 63. Kindergarten immunization exemption rates, 2016-17 to 2018-19..... 84

Table 64. Non-fatal hospitalizations of young children (ages 0-5) for unintentional injuries, 2015-2018 cumulative 85

Table 65. Asthma hospitalizations and emergency-room visits, 2015-2017 cumulative..... 85

Table 66. Non-fatal emergency-room visits by young children (ages 0-5) for unintentional injuries, 2015-2018 cumulative 86

Table 67. Child mortality, 2015-2017 cumulative..... 86

Table 68. First Things First media awareness campaign impressions, SFY17-SFY19..... 97

Table 69. FTF Engagement of Early Childhood Supporters and Champions, SFY19..... 99

Table 70. Zip Code Tabulation Areas (ZCTAs) of the San Carlos Apache Region..... 101

Table 71. School Districts in the San Carlos Apache Region..... 103

List of Figures

Figure 1. The First Things First San Carlos Apache Region 19

Figure 2. Number of births per calendar year in the San Carlos Apache Region, 2013 to 2017.. 27

Figure 3. Percent of population (all ages) and young children (ages 0-5) living in poverty 40

Figure 4. Families with young children (ages 0-5) living at various poverty thresholds 41

Figure 5. AzMERIT Assessment Results: 3rd Grade English Language Arts, 2017-18..... 54

Figure 6. Trends in passing rates for 3rd-grade English Language Arts AzMERIT, 2015-16 to 2017-18 55

Figure 7. AzMERIT Assessment Results: 3rd Grade Math, 2017-18 56

Figure 8. Trends in passing rates for 3rd-grade Math AzMERIT, 2015-16 to 2017-18..... 56

Figure 9. Level of education for the adult population (ages 25 and older)..... 59

Figure 10. Health insurance coverage for the population (all ages) and for young children (ages 0 to 5) 79

Figure 11. Placement of Wards (ages 0-17), 2015 Monthly Averages 91

Figure 12. Map of the ZIP codes in the San Carlos Apache Region 100

Figure 13. Map of the school districts in the San Carlos Apache Region 102

Executive Summary

Regional Boundaries

The First Things First San Carlos Apache Region is geographically identical to the San Carlos Apache Reservation, an expanse of nearly three thousand square miles in east central Arizona. The reservation, which was established in 1871, includes four districts: Seven Mile Wash, Gilson Wash, Peridot, and Bylas.

Population Characteristics

The 2010 U.S. Census counted 10,068 residents of the San Carlos Apache Region, of whom 1,435 were young children under the age of six. More than one in three households in the region (36%) included a child under six, which is more than double the average statewide (16%). The number of babies born in the region has declined over the past few years, from a high of 318 in 2014 to 255 in 2017 (the last year for which a count is available). Nearly all of the residents of the region are American Indian.

Among the households in the region, about one-third (34%) report that they speak a language other than English or Spanish at home. There are an estimated 164 households in the region (7%) in which no adult speaks English well.

The majority (64%) of children under six live with one parent; most of the rest (25%) live with two parents (or step-parents). The remaining 10 percent of the young children live with relatives other than their parents, or with non-relatives.

Economic Circumstances

Many young children (58%) in the San Carlos Apache Region live in poverty. This proportion is somewhat higher than the average for all Arizona reservations (54%) and much higher than the statewide average (26%). The poverty rate for the population of all ages is also higher in the region (46%) than it is statewide (17%). Median annual family income is estimated to be lower in the region (\$36,033) than it is in Gila County (\$48,806) or in Arizona (\$63,812). As one might expect, families with single parents have a lower median income than two-parent families (by definition, half of all families have incomes less than the median, and half have incomes greater than the median). Another measure of incomes in the region is the proportion of families whose income falls below 150% of the poverty level. For the San Carlos Apache Region, an estimated 66 percent of families (compared to 38% statewide) are in this income category. Most of the young children in these families would qualify for Arizona Health Care Containment

System (AHCCCS).ⁱ During Fiscal Year 2016, approximately one-fourth of the families with young children participated in the Nnee Bich’o Nii Temporary Assistance for Needy Families (TANF) program.

Food insecurity is a problem, especially for low-income families. Two of the programs which address this need are the Supplemental Nutrition Assistance Program (SNAP) and free or reduced-price school lunches. The numbers of families and young children participating in SNAP has decreased from 2015 (1,036 families and 1,598 young children) to 2018 (880 families and 1,550 young children). The percentage of public-school students (of all ages) that are eligible for free or reduced-price lunch has remained high over the past few years; 94 percent of students were eligible in the 2018-19 school year.

The average unemployment rate over the five-year period from 2013 to 2017 is estimated to be 20 percent for the San Carlos Apache Region, which is twice the average for all Arizona reservations combined. In addition, an estimated 43 percent are not in the labor force, meaning that they are not working and not looking for work. This category includes stay-at-home caregivers and retired persons. This percentage is less than that for all Arizona reservations (54%). Four out of every five young children in the San Carlos Apache Region (80%) live in families in which at least one parent is employed. This is higher than the percentage in all Arizona reservations combined (67%).

Twelve percent of the households in the San Carlos Apache Region spend 30 percent or more of their monthly income on housing. Across all reservations in the state, the percentage is even higher (16%). Data from the American Community Survey, averaged over the years 2013 to 2017, indicate that access to computers and the internet is lower in the San Carlos Apache Region than it is in the state as a whole. Only about one-third (35%) of children (up to age 17) live in households with both a computer and the internet. Statewide, 83 percent of children have both computer and internet.

Educational Indicators

There were 627 children enrolled in preschool through third grade in the San Carlos Apache Region during the 2018-2019 school year. From school year 2015-2016 to school year 2018-2019, chronic absence rates in the San Carlos Apache Region were substantially higher than in Gila County and the state. In 2018-2019, the most recent year for which data are available, the combined chronic absence rate for children in grades K-3 was 40 percent, compared to 24 percent in Gila County and 12 percent in Arizona. Kindergarten children in the region had higher rates of absence than older children.

ⁱ AHCCCS is Arizona’s Medicaid agency

The state of Arizona requires third-grade children to take Arizona’s Measurement of Educational Readiness to Inform Teaching (AzMERIT) standardized tests in English Language Arts (ELA) and in Math. In the 2017-2018 school year, eight percent of third graders in the region passed ELA portion of the test and 14 percent passed the Math portion. These passing rates are much lower than the statewide averages of 44 percent and 53 percent.

Certain educational indicators are available for the adult population of the region. For high-school students, the four-year graduation rate was 65 percent (compared to 78% statewide) for the 2017 cohort of students. The drop-out rate for students in seventh grade and above was 14 percent in the 2017-2018 school year (compared to 5% statewide). Among adults (age 25 and older), 30 percent are estimated to have less than a high-school education. Of the births in the region during calendar year 2017, 32 percent were to mothers who had less than a high-school education, higher than the 17 percent statewide.

Early Learning

Early childhood education in the San Carlos Apache Region is available at the Apache Kid Child Care Center, the San Carlos Apache Head Start program, and Rice Elementary. The American Community Survey estimates that about one-third (34%) of three- and four-year-olds are enrolled in some form of school (which may be nursery school, preschool, or kindergarten). Data from the 2015-2016 school year showed a total of 339 young children enrolled in center-based care and education. While the Head Start program is at no cost to the families, the Apache Kid center charges between \$5 and \$15 per day, on a sliding scale. In State Fiscal Year 2019, seven child care providers in the San Carlos Apache Region participated in Quality First, five of which were quality-level settings (public 3-5 stars). Some San Carlos Apache families receive subsidies from the Arizona Department of Economic Security (DES). The number of subsidies has declined in recent years, from 46 in 2015 to 21 in 2018. It is estimated that about 27 percent of families who are eligible for the DES subsidies do not take advantage of them.

Child Health

Health insurance coverage is estimated to be lacking for 17 percent of the San Carlos Apache population. A somewhat smaller proportion of young children under six (14%) lack health insurance. Both of these proportions are larger than the statewide estimates (12% and 7%, respectively). Most of the births in the region during 2017 were paid for by either the Indian Health Service (53%) or Arizona’s Health Care Cost Containment System (AHCCCS) (40%).

Data from the Arizona Department of Health Services (ADHS) show that a large proportion of births in the San Carlos Apache Region were to women who did not get adequate prenatal care. In 2017 more than half of the births in the region (58%) were to women who had no prenatal care during the first trimester; more than one-third (35%) were to women who had fewer than

the recommended five prenatal visits; and almost one-tenth (9%) were to women who had no prenatal care at all. All three of these percentages are greater than the statewide percentages (26%, 8%, and 3%, respectively). Almost one in every seven births during 2017 (13.7%) was preterm (which is defined as less than 37 weeks), a rate that is higher than both the statewide (9.3%) and the Healthy People 2020 target (9.4%). The Healthy People 2020 target of tobacco use during pregnancy (of 1.4% or less) was not met in the region, where 5.9 of the births were to women who used tobacco while pregnant.

One of the First Things First strategies is to improve the oral health of children from birth to five years. In the San Carlos Apache Region, during 2019, 37 children received dental screenings and 34 received fluoride varnishes.

The San Carlos Apache Region is doing a good job with respect to childhood immunizations. All (100%) of the children enrolled in child care during the 2018-19 school year received all seven of the required vaccines. In Gila County as a whole, the percent receiving vaccines ranged from 75.7% for Hepatitis-A to 93.4% for Varicella (chicken pox). For kindergarten children in the region, vaccination rates for the five required were less than 100 percent but still greater than the Healthy People 2020 targets. They ranged from 95.7% for DTaP (diphtheria, tetanus, and pertussis) to 99.4% for Hepatitis-B and Varicella. All five rates were higher than the county or statewide rates for kindergarteners. None (0%) of the region's children (in child care or in kindergarten) requested to be exempt from vaccinations during the 2018-19 school year.

During the four-year period from 2015 to 2018, there were 32 non-fatal hospitalizations for unintentional injuries of San Carlos Apache children. The most common reason for hospitalization was burns (44%). Statewide, the most common reason was falls (33%). During the same four-year period, the region's young children made 296 non-fatal visits to emergency rooms. The most common reasons were falls (33%) and natural factors (such as hot or cold weather, lightning, and animal bites or stings) (24%). During the three-year period from 2015 to 2017, there were 16 hospitalizations or emergency-room visits related to asthma among the young children of the region, with an average length of stay of 2.4 days. During the same three-year period, there were 13 deaths of children under the age of five in the San Carlos Apache Region (excluding new-born infants).

Family Support and Literacy

The 2018 San Carlos Apache Regional Partnership Council's Needs and Assets Report suggested that parents and caregivers in the region should pay more attention to positive discipline, daily structure, and reading with their children. Access to books is a challenge, but it is being addressed by the Gila County Library District under contract to First Things First, and by the "Read On" program.

Current data on child welfare services are not included in this report, but in 2015 there were 159 substantiated cases of child abuse or neglect and there were 25 foster-care homes available to the children in the region.

Systems Coordination among Early Childhood Programs and Services

The First Things First San Carlos Apache Regional Partnership Council support coordination efforts in the region through its San Carlos Apache Early Childhood Development and Health Collaborative. The Collaborative brings together representatives from tribal, state and federal programs serving families in the region. Members meet every other month to exchange information about their programs, network and strengthen collaborative relationships among them.

The long-term objective of the Collaborative is to build stronger collaborative relationships among providers and to achieve high level of coordination that result in increased availability and access to services for families and children.

The Early Childhood Development and Health Collaborative exists to encourage coordination and collaboration among federal, state, and tribal programs in the region. The Collaborative has had results in the areas of early literacy, public health and primary health care, and early childhood education.

Communication, Public Information, and Awareness

First Things First regularly measures their progress toward building support for children birth to five through statewide surveys targeting both the general population and parents of young children. Their most recent statewide survey conducted in September 2018 found that, compared to previous surveys in 2012 and 2016, there was increased agreement in the general public and parents of young children with key First Things First messaging, including statements about the importance of early childhood health and development. These include: the state should ensure all children have access to early childhood services, a child who received early education and healthcare services before age five is more likely to succeed in school and beyond, and the state should put the same priority on early education as it does on K-12 education. While the survey also showed that awareness of First Things First has increased over time, there are still large portions of the general public (87%) and parents of young children (66%) who have never heard of First Things First.

In SFY 2019, First Things First secured 11 million advertising impressions through traditional media strategies, including television, radio, cinema, and billboard ads, and 76 million digital advertising impressions through digital media strategies, including online ads on desktop and smartphone devices. Particular success has been seen in the growth of Facebook Page Likes for FTF, which grew from just 3,000 in 2012 to 142,600 in 2019. Additional digital marketing

content in 2019 included 40 original, high-quality digital marketing pieces and the creation of an online searchable database of early childhood programs, which logged over 24,187 visits in its first six months.

Information and awareness are the first steps toward improving supports for young children in Arizona. Since 2011, First Things First has worked to communicate—to parents and to the general population—how we can improve the lives of the state's youngest residents. Survey data collected in 2018 show progress on several fronts, compared to 2012.

In the San Carlos Apache Region, data show that First Things First on-line advertising led viewers to the FTF website 4,228 times during State Fiscal Year 2019. Over the past few years, First Things First has also increased its social-media presence on Facebook, Twitter, LinkedIn, and Instagram.

First Things First also connects with the public via Community Engagement initiatives. In the San Carlos Apache Region, 128 supporters and 30 champions have been recruited.

First Things First reaches out to federal and state legislators and other policy makers on early-childhood issues, and encourages parents and the general public to do so as well.

The San Carlos Apache Region

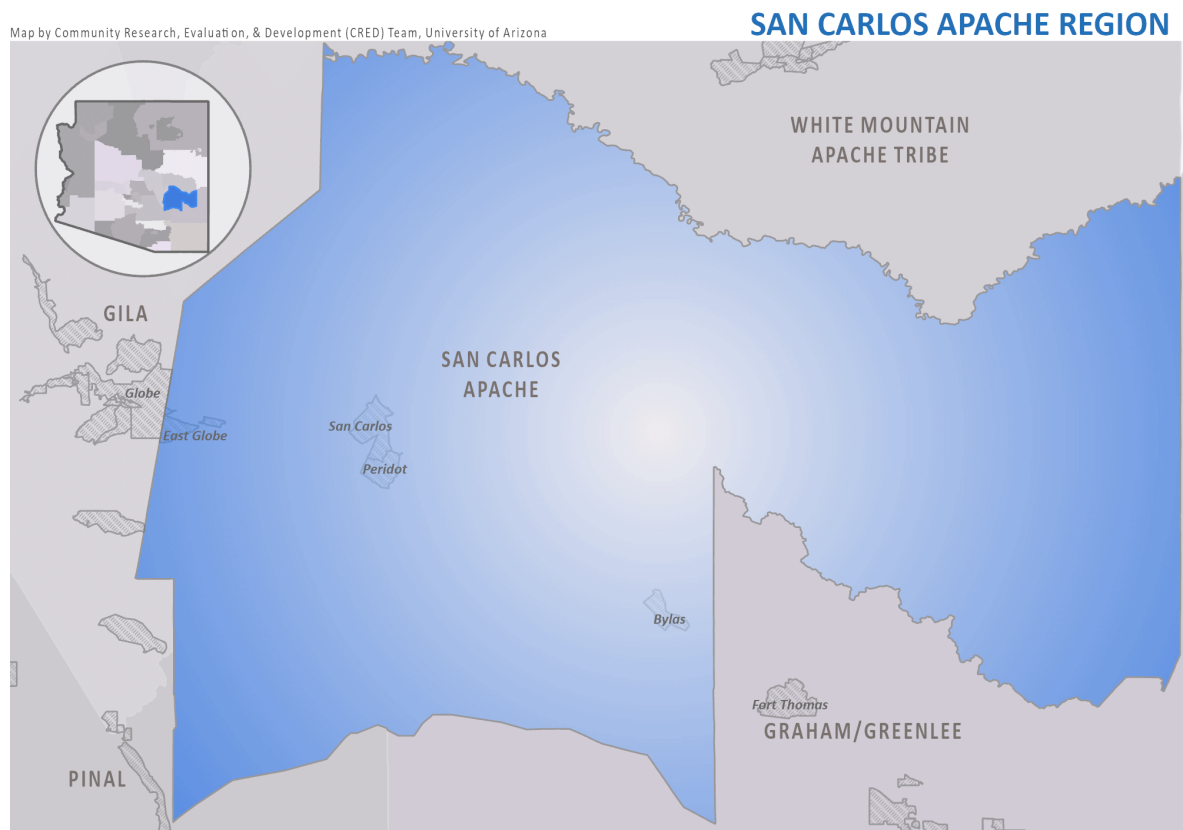
Regional Boundaries

The First Things First regional boundaries were established to create regions that (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, (d) facilitate the ability to convene a Regional Partnership Council, and (e) allow for the collection of demographic and indicator data.

The boundaries of the First Things First San Carlos Apache Regional Partnership Council are those of the San Carlos Apache Indian Reservation. When First Things First was established by the passage of Proposition 203 in November 2006, the government-to-government relationship with federally-recognized tribes was acknowledged. Each tribe with tribal lands located 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 San Carlos Apache Tribe was one of ten tribes that chose to be designated as its own region. This decision must be ratified every two years, and since then, the San Carlos Apache Tribe has opted to continue to be designated as its own region.

The region covers almost 3,000 square miles in east-central Arizona. Most of the region lies within Gila and Graham counties, although there is a small, uninhabited section in Pinal County. The reservation, which was established in 1871, is divided into four districts: Seven Mile Wash, Gilson Wash, Peridot, and Bylas. Figure 1 shows the geographical area covered by the San Carlos Apache Region. Additional information available at the end of this report includes a map of the region by zip code in Appendix 1, a table listing zip codes for the region in Appendix 2, and a map of school districts in the region in Appendix 3.

Figure 1. The First Things First San Carlos Apache Region



Custom map by the Community Research, Evaluation, and Development (CRED) Team using shapefiles obtained from First Things First and the U.S. Census Bureau 2019 TIGER/Line Shapefiles (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php>).

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 publicly available sources, including the 2010 U.S. Census, the American Community Survey (ACS), and the Arizona Department of Administration (ADOA). Where more recent data are not available, this report cites data from the 2018 First Things First San Carlos Apache Regional Partnership Council Needs and Assets Report.

The U.S. Census¹ 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. Census data presented in the report is drawn from the Census Geography for the San Carlos Apache Indian Reservation.

The American Community Survey² 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 are available for the San Carlos Apache Indian Reservation Census Geography. 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 2013 to 2017. In general, the reliability of ACS estimates is greater for more populated areas. Statewide estimates, for example, are more reliable than county-level estimates or estimates for small tribal communities.

These data sources are important for the unique information they are able to provide about children and families across the United States, but both of them have acknowledged limitations for their use on tribal lands. Although the Census Bureau asserted that the 2010 Census count was quite accurate in general, they estimate that “American Indians and Alaska Natives living on reservations were undercounted by 4.9 percent.”³ According to the State of Indian Country Arizona report⁴ there are particular challenges in using and interpreting ACS data from tribal communities and American Indians in general. There is no major outreach effort to familiarize the population with the survey (as is the case with the decennial census). Most important, the small sample size of the ACS makes it more likely that the survey may not accurately represent the characteristics of the population on a reservation. The State of Indian Country Arizona report indicates that at the National level, in 2010 the ACS failed to account for 14% of the American Indian/Alaska Native (alone, not in combination with other races) population that was actually counted in the 2010 decennial census. In Arizona the undercount was smaller (4%), but according to the State of Indian Country Arizona report, ACS may be particularly unreliable for the smaller reservations in the state.

While recognizing that estimates provided by ACS data may not be fully reliable, this report includes these estimates because they still are the most comprehensive publicly-available data that can help begin to describe the families that First Things First serve.

To protect the confidentiality of program participants, the First Things First Data Dissemination and Suppression Guidelines preclude our 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 six. In addition, some data received from state agencies may be suppressed according to their own guidelines. The Arizona Department of Health Services does not report counts less than six; the Arizona Department of Economic Security does not report counts between one and nine; and the Arizona Department of Education does not report counts less than eleven. Throughout this report, information which is

not available because of suppression guidelines will be indicated by entries of “<6” or “<10” or “<11” for counts, or “DS” (data suppressed) for percentages. Data are sometimes not available for particular regions, either because a particular program did not operate in the region or because data are only available at the county level. Cases where data are not available will be indicated by an entry of “N/A.”

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 six or ten may still be included if the upper limit of the range is above six or ten. Since a range is provided rather than an exact number, the confidentiality of program participants is preserved.

In most of the tables in this report, the top row of data corresponds to the First Things First San Carlos Apache Region. When available, the next rows show data that are useful for comparison purposes: all Arizona reservations combined, Gila County, and the state of Arizona. Please note that data are not always available for all of these geographies. Data labelled “All Arizona Reservations” come from either the 2010 U.S. Census or the 2013-2017 American Community Survey. These numbers are the totals for all residents of the 21 American Indian Areas within the state of Arizona. We include only the Arizona parts of the five reservations (Colorado River Indian Tribes, Fort Mojave, Fort Yuma, Navajo Nation, and Zuni) which have land in neighboring states.

Population Characteristics

Why it Matters

To support the healthy development and learning of young children across Arizona, advocates and decision makers need to understand who those children and their families are.⁵ Although parents are a child's first and most important teachers, families of young children often use community resources to help them promote positive outcomes for their children.⁶ The number and characteristics of young children and families in a region can inform the range of services in a community, helping to guide where to locate child care, health care, and social services so that they are accessible to those who need them.^{7,8} Tribal communities are often located in rural locations and often experience different economic conditions within the state such as access to jobs, food resources, schools, health care facilities and providers, and social services. These disparities have been associated with a number of poor outcomes for children including infant mortality and obesity, among others.⁹

Language use. Households with multiple languages spoken pose a unique balance of benefits for child learning and barriers to parental engagement, which counties with high rates of other languages spoken should specifically consider. Acknowledging and valuing linguistic heritage (such as through language preservation efforts) and recognizing needs for resources and services in languages other than English should remain important considerations for organizations and agencies across Arizona.^{10,11,12,13} Awareness of the levels of English proficiency and of other home languages spoken within a region provides information about a community's assets and allows for identifying relevant supports. Young children can benefit from exposure to multiple languages; mastery of more than one language is an asset in school readiness and academic achievement, and offers cognitive and social-emotional benefits in early school and throughout their lifetime.^{14,15,16,17} Although dual language learning is an asset, limited English speaking households (that is, households where none of the adult members speak English well) can face challenges. These families may experience barriers to accessing health care and social service information, as well as barriers to engaging in important parent-teacher interactions, all of which can impede their child's health and development.^{18,19} Providing information about resources and services in languages accessible to families in the region can help remove those barriers. Although Spanish is the most common second language spoken, Arizona is also home to a large number of Native communities, with Native languages spoken by families in those communities. Language preservation and revitalization are critical to strengthening culture in Native communities, addressing issues of educational equity, and to the promotion of social unity, community well-being, and Indigenous self-determination.^{20, 21}

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

Family and household composition. In addition to growing racial, ethnic and social diversity, U.S. and Arizona families are becoming more diverse in terms of family structure.^{22,23,24,25} Understanding the makeup of families in a region can help better prepare child care, school and agency staff to engage with families in ways that support positive interactions both within families and with staff to enhance each child’s early learning and development.²⁶

Multi-generational households, particularly those where grandparents live in the home with the child and parents, are common in some communities and cultures and can provide financial and social benefits.²⁷ The proportion of young children living in a grandparent’s household in all Arizona reservations combined (40%) is more than double that of the state rate (14%).²⁸ It is important to note that these households may be multigenerational—i.e., the grandparent and the child’s parent may live in the same household.ⁱⁱ However, parents are not always in the picture in these homes. Care of children by someone other than their parents, such as relatives or close friends, is known as kinship care and is increasingly common.²⁹ Children living in kinship care can also arrive in those situations for a variety of reasons, including a parent’s absence for work or military service, chronic illness, drug abuse, or incarceration, or due to abuse, neglect, or homelessness. Understanding who is caring for children can help in identifying and creating specific supports for these families. Children in kinship care often face special needs as a result of trauma, and therefore these families often require additional support and assistance to help children adjust and provide the best possible home environment.³⁰ A child’s risk of living in poverty is also higher for those living with grandparents, adding to the family stress.³¹ These families are likely to require access to information on resources, support services, benefits, and policies available to aid in their caregiving role.³² Though it varies from one Native community to another, extended, multigenerational families, and kinship care are common in Native communities.^{33,34} The strengths associated with this 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.³⁵ Grandparents are often central to these multigenerational households, in many cases sharing and strengthening Native language, history, and culture.^{36, 37}

ⁱⁱ Note that there is difference between families/sub-families and householders in Census data. For example, a child living with their single mother in their grandparent’s married household would be counted as living with a single parent in the living arrangements but as living in a married couple household in the composition of households table. That is, the living arrangements figure looks at the presence of a child’s parents within the household (whether or not the parent is the householder).

What the Data Tell Us

Population, Race, and Ethnicity

- According to the 2010 U.S. Census, the total population of the San Carlos Apache Region was 10,068, of whom 1,435 were children ages birth to five years. About one-third (36%) of the 844 households in the region had one or more children ages birth to five years. The proportion of households with young children in the San Carlos Apache Region is higher than those in all Arizona reservations combined (26%), Gila County (11%), and Arizona (16%) (Table 1).
- After an increase between 2013 and 2014, the number of births in the San Carlos Apache Region has declined from 318 in 2014, to 255 in 2017, the last year for which data are available (Figure 2).
- Almost all the children ages birth to four in the San Carlos Apache Region (98%) are American Indian. This proportion is higher than that in all Arizona reservations combined (92%) and substantially higher than in the state (6%) (Table 3).
- The majority of adults in the region also identify as American Indian (95%), compared to only four percent of Arizona adults who identify that way (Table 4).
- Similarly, almost all births in the San Carlos Apache Region in 2017 (99%) were to mothers who identified as American Indian, a much higher proportion than in Gila County (32%) and the state (6%) (Table 5).

Language Use

- More than one-third (34%) of individuals ages five or older in the region speak a language other than English or Spanish at home. This proportion is lower than that in all Arizona reservations combined (50%), but much higher than in the state (6%) (Table 6).ⁱⁱⁱ
- There is a higher proportion of the population five and older who speak only English at home in the San Carlos Apache Region (65%) than in all Arizona reservations (46%). Nine percent speak another language at home and do not speak English “very well,” compared to 13 percent in all Arizona reservations and 9 percent in the state (Table 7).

ⁱⁱⁱ Please note that the most recent estimates from the American Communities Surveys (ACS) no longer specify what those other languages are. Based on ACS data included in previous Needs and Assets Reports for the San Carlos Apache Region, it is likely that the other languages spoken at home in the region are Native North American languages. See

<https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20San%20Carlos%20Apache.pdf>

Family and Household Composition

- The living arrangements of young children are similar in the San Carlos Apache Region and all Arizona reservations combined: Almost two-thirds of children ages birth to five live in households with either one-parent or stepparent, and about one in four live with two parents or stepparents (Table 9).
- Of the 1,624 children (ages 0-17) living in a grandparent's household, close to half (48%) live with a grandparent who is responsible for them. This percentage is lower than in all Arizona reservations combined (55%) (Table 12).

Population, Race, and Ethnicity

Table 1. Population and households, 2010

GEOGRAPHY	TOTAL POPULATION	POPULATION (AGES 0-5)	TOTAL NUMBER OF HOUSEHOLDS	HOUSEHOLDS WITH ONE OR MORE CHILDREN (AGES 0-5)	PERCENT OF HOUSEHOLDS WITH ONE OR MORE CHILDREN (AGES 0-5)
San Carlos Apache Region	10,068	1,435	2,320	844	36%
All Arizona Reservations	178,131	20,511	50,140	13,115	26%
Gila County	53,597	3,657	22,000	2,488	11%
Arizona	6,392,017	546,609	2,380,990	384,441	16%
United States	308,745,538	24,258,220	116,716,292	17,613,638	15%

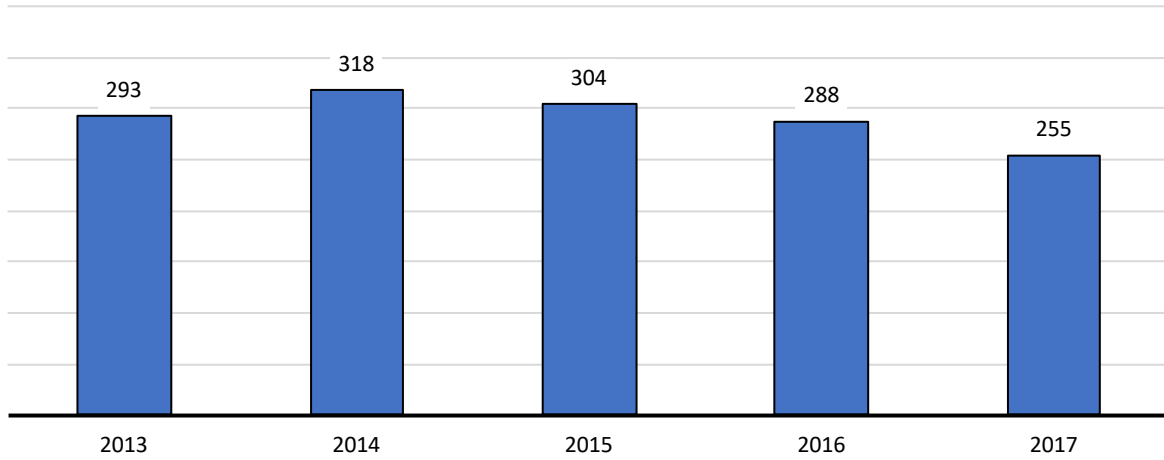
Source: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P4, and P20

Table 2. Population of children by single year of age, 2010

GEOGRAPHY	POPULATION (AGES 0-5)	AGE 0	AGE 1	AGE 2	AGE 3	AGE 4	AGE 5
San Carlos Apache Region	1,435	238	282	242	212	232	229
All Arizona Reservations	20,511	3,390	3,347	3,443	3,451	3,430	3,450
Gila County	3,657	635	624	632	599	569	598
Arizona	546,609	87,557	89,746	93,216	93,880	91,316	90,894
United States	24,258,220	3,944,153	3,978,070	4,096,929	4,119,040	4,063,170	4,056,858

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

Figure 2. Number of births per calendar year in the San Carlos Apache Region, 2013 to 2017



Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Table 3. Race and ethnicity of the population of young children (ages 0-4), 2010

GEOGRAPHY	POPULATION (AGES 0-4)	HISPANIC	WHITE, NOT HISPANIC	BLACK OR AFRICAN-AMERICAN	AMERICAN INDIAN	ASIAN OR PACIFIC ISLANDER
San Carlos Apache Region	1,206	5%	1%	<1%	98%	0%
All Arizona Reservations	17,061	9%	1%	<1%	92%	<1%
Gila County	3,059	27%	42%	<1%	29%	<1%
Arizona	455,715	45%	40%	5%	6%	3%
United States	20,201,362	25%	51%	14%	1%	5%

Source: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P12B-H

Table 4. Race and ethnicity of the adult population (ages 18 and older), 2010

GEOGRAPHY	POPULATION 18 YEARS AND OVER	HISPANIC	WHITE, NOT HISPANIC	BLACK OR AFRICAN- AMERICAN, NOT HISPANIC	AMERICAN INDIAN, NOT HISPANIC	ASIAN OR PACIFIC ISLANDER, NOT HISPANIC	OTHER, NOT HISPANIC
San Carlos Apache Region	6,214	3%	2%	<1%	95%	<1%	1%
All Arizona Reservations	117,049	5%	5%	<1%	88%	<1%	1%
Gila County	42,126	15%	71%	<1%	12%	1%	1%
Arizona	4,763,003	25%	63%	4%	4%	3%	1%
United States	234,564,071	14%	67%	12%	1%	5%	1%

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

Table 5. Race and ethnicity of mothers giving birth in calendar year 2017

GEOGRAPHY	TOTAL NUMBER OF BIRTHS IN 2017	MOTHER WAS HISPANIC OR LATINA	MOTHER WAS WHITE, NOT HISPANIC	MOTHER WAS BLACK OR AFRICAN- AMERICAN	MOTHER WAS AMERICAN INDIAN OR ALASKAN	MOTHER WAS ASIAN OR PACIFIC ISLANDER
San Carlos Apache Region	255	DS	DS	DS	99%	DS
Gila County	541	20%	46%	DS	32%	1%
Arizona	81,664	41%	44%	6%	6%	4%

Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Language Use

Table 6. Language spoken at home by persons ages 5 and older

GEOGRAPHY	POPULATION (AGES 5 AND OLDER)	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK ONLY ENGLISH AT HOME	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK SPANISH AT HOME	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK OTHER LANGUAGES AT HOME
San Carlos Apache Region	9,271	65%	1%	34%
All Arizona Reservations	171,213	46%	4%	50%
Gila County	50,112	84%	8%	8%
Arizona	6,375,189	73%	21%	6%
United States	301,150,892	79%	13%	8%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table C16001

Note: The most recent estimates from the American Community Survey (ACS) no longer specify the proportion of the population who speak a Native North American language for geographies smaller than the state. Based on ACS data included in previous Needs and Assets Reports for the San Carlos Apache Region, it is likely that the other languages spoken at home in the region are Native North American languages. See

<https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20San%20Carlos%20Apache.pdf>

Table 7. English-language proficiency for persons ages 5 and older

GEOGRAPHY	POPULATION (AGES 5 AND OLDER)	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK ONLY ENGLISH AT HOME	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK ANOTHER LANGUAGE AT HOME, AND SPEAK ENGLISH "VERY WELL"	PERCENT OF THE POPULATION (AGES 5+) WHO SPEAK ANOTHER LANGUAGE AT HOME, BUT DO NOT SPEAK ENGLISH "VERY WELL"
San Carlos Apache Region	9,271	65%	26%	9%
All Arizona Reservations	171,213	46%	41%	13%
Gila County	50,112	84%	12%	4%
Arizona	6,375,189	73%	18%	9%
United States	301,150,892	79%	13%	9%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B16005

Table 8. Limited-English-speaking households

GEOGRAPHY	TOTAL NUMBER OF HOUSEHOLDS	NUMBER OF "LIMITED ENGLISH SPEAKING" HOUSEHOLDS	PERCENT OF HOUSEHOLDS WHICH ARE "LIMITED ENGLISH SPEAKING"
San Carlos Apache Region	2,332	164	7%
All Arizona Reservations	49,638	5,955	12%
Gila County	21,585	550	3%
Arizona	2,482,311	108,133	4%
United States	118,825,921	5,305,440	4%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table 16002

Family and Household Composition

Table 9. Living arrangements for children (ages 0-5)

GEOGRAPHY	CHILDREN (0-5) LIVING IN HOUSEHOLDS	CHILDREN (0-5) LIVING WITH TWO PARENTS OR STEPPARENTS	CHILDREN (0-5) LIVING WITH ONE PARENT OR STEPPARENT	CHILDREN (0-5) LIVING WITH RELATIVES (NOT PARENTS)	CHILDREN (0-5) LIVING WITH NON- RELATIVES
San Carlos Apache Region	1,633	25%	64%	9%	1%
All Arizona Reservations	18,635	27%	64%	8%	1%
Gila County	3,667	40%	51%	6%	2%
Arizona	520,556	59%	37%	2%	2%
United States	23,817,787	62%	34%	2%	2%

Source: U.S. Census Bureau (2018). 2013-2017 American Community Survey 5-Year Estimates, Tables B05009, B09001, and B17006

Table 10. Heads of households in which children (ages 0-5) live, 2010

GEOGRAPHY	HOUSEHOLDS WITH ONE OR MORE CHILDREN (AGES 0-5)	MARRIED FAMILY HOUSEHOLDS	SINGLE-MALE HOUSEHOLDS	SINGLE-FEMALE HOUSEHOLDS
San Carlos Apache Region	844	45%	12%	43%
All Arizona Reservations	13,115	45%	13%	42%
Gila County	2,488	56%	14%	29%
Arizona	384,441	65%	11%	24%
United States	17,613,638	67%	9%	24%

Source: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P20 and P32

Table 11. Children (ages 0-5) living in the household of a grandparent, 2010

GEOGRAPHY	POPULATION (AGES 0-5)	CHILDREN (0-5) LIVING IN A GRANDPARENT'S HOUSEHOLD	PERCENT OF CHILDREN (0-5) WHO LIVE IN A GRANDPARENT'S HOUSEHOLD
San Carlos Apache Region	1,435	681	47%
All Arizona Reservations	20,511	8,239	40%
Gila County	3,657	1,015	28%
Arizona	546,609	74,153	14%
United States	24,258,220	2,867,165	12%

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

Table 12. Grandparents responsible for grandchildren (ages 0-17) living with them

GEOGRAPHY	GRANDCHILDREN UNDER 18 LIVING WITH GRANDPARENT HOUSEHOLDER	PERCENT OF GRANDCHILDREN UNDER 18 LIVING WITH A GRANDPARENT HOUSEHOLDER WHO IS RESPONSIBLE FOR THEM
San Carlos Apache Region	1,624	48%
All Arizona Reservations	18,864	55%
Gila County	2,304	59%
Arizona	147,707	51%
United States	5,781,786	49%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B10002

Note: This table includes both (a) grandchildren living with grandparents with no parent present and (b) grandchildren who live in multigenerational homes where the grandparent has assumed responsibility for the child, despite the presence of a parent.

Economic Circumstances

Why it Matters

A family's economic stability is a powerful predictor of child well-being and is one of the key social determinants of health.³⁸ Factors contributing to economic stability—or lack thereof—include **poverty, food insecurity, employment, and housing instability.**³⁹

Economic circumstances in tribal communities can be much more complex than in other parts of the state. For many historical and legal reasons, economic development in tribal areas has followed a different trajectory than in other areas. Economic disparities between non-Native and Native communities have compounded over decades, affecting the poverty, employment, housing instability and food security in tribal areas.⁴⁰ At the same time, it is common for tribal governments to be involved in community and economic development, investing in forestry, fisheries, gaming, and many other economic arenas to strengthen the social and economic conditions of their people.⁴¹

Poverty. Childhood poverty can negatively affect the way children's bodies grow and develop, including fundamental changes to the architecture of the brain.⁴² Children raised in poverty are at a greater risk of a host of negative outcomes including low birth weight, lower school achievement, and poor health.^{43,44,45,46,47} They are also more likely to remain poor later in life.^{48,49} As a benchmark, the 2019 Federal Poverty Guideline – the criterion used for establishing eligibility for some safety net programs—for a family of four was \$25,750.⁵⁰ However the federal poverty guideline definition of poverty was developed in the 1950s, and estimates only what a family would need to earn to afford basic nutrition, without taking into account other costs of living,⁵¹ it is widely considered to be well below what a family actually needs to earn to make ends meet.⁵² The “self-sufficiency standard” attempts to estimate how much families need to earn to fully support themselves, accounting for local costs of housing, transportation, and childcare, and other budget items.⁵³ The 2018 self-sufficiency standard for an Arizona family with two adults, one preschooler, and one school-age child was \$56,143—over twice the poverty threshold.⁵⁴

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 support services to children and families. Eligibility is based on citizenship or qualified resident status, Arizona residency, and limits on resources and monthly income. In recognition of tribal sovereignty, federally-recognized tribes have the option to administer their own TANF program. The San Carlos Apache Tribe is one of the six Arizona tribes that operate a Tribal TANF program. Since tribes set their own priorities for their communities and many design their own social services, some

Tribal TANF program requirements may differ 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 to meet the needs of their own communities. With a focus on self-sufficiency, tribal TANF programs can include community and social programs that are unique to their spiritual and cultural traditions.⁵⁵

Food insecurity. A limited or uncertain availability of food is negatively associated with many markers of health and well-being for children, including heightened risks for developmental delays,⁵⁶ and overweight and obesity.⁵⁷ The USDA defines food deserts as areas that are low-income and have low access to sources of healthy food, specifically grocery stores and supermarkets.^{iv,58} A large portion of tribal lands in Arizona are in food deserts, adding to food insecurity in tribal communities.^v Sixty-five percent of populated tribal lands are considered food deserts, whereas only 17 percent of all populated areas in Arizona meet the definition of a food desert.⁵⁹ To help reduce food insecurity, there are a variety of federally-funded programs including the Supplemental Nutrition Assistance Program (SNAP),⁶⁰ the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC),⁶¹ the National School Lunch Program,⁶² the School Breakfast Program,⁶³ the Summer Food Service Program,⁶⁴ and the Child and Adult Care Food Program (CACFP).⁶⁵ However, only about 58 percent of food insecure households nationwide report participating in federally-funded nutrition assistance programs.⁶⁶ Income-eligible American Indians residing on some reservations in Arizona may have access to the federal Food Distribution Program on Indian Reservations (FDPIR).⁶⁷ On rural Indian reservations, the FDPIR exists to distribute food to eligible Native residents who do not have access to SNAP offices or SNAP-approved businesses.⁶⁸

SNAP. Administered by the Arizona Department of Economic Security and also referred to as “Nutrition Assistance” and “food stamps,” SNAP has been shown to help reduce hunger and improve access to healthier food.⁶⁹ SNAP benefits support working families whose incomes simply do not provide for all their needs. For low-income working families, the additional funds available to access food from SNAP can help make a meaningful difference. For example, for a three-person family with one person who earns a minimum wage, SNAP benefits can boost take-home income by 10-20 percent.⁷⁰

WIC. Administered by the Arizona Department of Health Services, this federally-funded program serves pregnant, postpartum, and breastfeeding women, as well as infants and young

^{iv} Low access is defined differently for urban (within ½-1 mile) and rural areas (within 10-20 miles).

^v A food desert is defined as an area where there is a low-income population and low access to food within 1 mile in urban areas and 10 miles in rural areas. See, Arizona Department of Health Services. (n.d). AZ Food Deserts. *GIS Applications*. Retrieved from <https://azdhs.gov/gis/az-food-deserts/index.php>

children (under the age of five) who are economically disadvantaged (i.e., family incomes at or below 185 percent of the federal poverty level). The program offers funds for nutritious food, breastfeeding and nutrition education, and referrals to health and social services.⁷¹

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.⁷²

National School Lunch Program. Administered by the Arizona Department of Education, the National School Lunch Program 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 for free lunch, and 185 percent of the federal poverty level for reduced price lunch.

Employment. Unemployment and underemployment can affect a family's ability to meet the expenses of daily living, as well as 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.⁷³ Unemployment can also put families at greater risk for stress, family conflict, and homelessness.⁷⁴ Note that this does not include persons who have dropped out of the labor force entirely, including those who wanted to but could not find suitable work and thus have stopped looking for employment.⁷⁵ Due to many historical and legal reasons as well as differences in practical economic structures, employment rates in Native communities can vary greatly from state rates.⁷⁶

Housing instability. Examining indicators related to housing quality, costs, and availability can reveal additional factors affecting the health and well-being of young children and their families in a region. Housing challenges such as issues paying rent or mortgage, overcrowded living conditions, unstable housing arrangements, and homelessness can have harmful effects on the physical, social-emotional, and cognitive development of young children.⁷⁷ Traditionally, housing has been deemed affordable for a family if it costs less than 30 percent of their annual income.⁷⁸ High housing costs, relative to family income, are associated with increased risk for overcrowding, frequent moving, poor nutrition, declines in mental health, and homelessness.^{79,80} On tribal lands, even when housing is affordable, housing *availability* is typically lower due to the legal complexities of land ownership and the lack of rental properties. These circumstances often lead to a shortage of safe, quality housing.⁸¹

One increasingly critical need for modern homes is a reliable means of internet access. Families often rely on communication and information technologies to access information, connect socially, pursue an education, and apply for employment opportunities. Parents are also more likely to turn to online resources, rather than in-person resources, for information about obtaining health care and sensitive parenting topics including bonding, separation anxiety, and

managing parenting challenges.⁸² The term “digital divide” refers to disparities in communication and information technologies,⁸³ and the lack of sustained access to information and communication technologies in low-income communities is associated with economic and social inequality.⁸⁴ Low-income households may experience regular disruptions to this increasingly important service when they cannot pay bills, repair or update equipment, or access public locations that may offer connectivity (e.g., computers at local libraries).⁸⁵

Nationally, Americans are increasingly reliant on smartphones as their sole source of internet access. Particularly for individuals who are younger, lower-income, and non-white, broadband service at home is less common and smartphone-only internet use is more common.⁸⁶

Households in rural areas typically experience more limited coverage from mobile networks and slower-speed internet services, as well as limited internet provider options which can result in higher monthly costs.^{87,88,89} This is especially true of the more rural Native American communities in the state, where broadband services are sometimes non-existent.^{90, 91}

What the Data Tell Us

Poverty

- Fifty-eight percent of young children in the San Carlos Apache Region live in poverty, a higher proportion than that in all Arizona reservations combined (54%) and substantially higher than the state (26%). Among the overall population, the percentage of those living in poverty is also higher in the region (46%) compared to all Arizona reservations (40%), and the state (17%) (Figure 3).
- The median income for all families in the region is \$36,033, lower than in Gila County (\$48,806), and substantially lower than in the state of Arizona (\$63,812). Single parent-headed families with children (ages 0-17) in the region have a median income that is much lower than the income in married couple families (\$12,768 for single male head and \$18,594 for single female head compared to \$47,885 for married couple families) (Table 13).
- Eligibility for some public assistance programs is determined by different poverty thresholds. For example, family income at or below 141 percent of the federal poverty threshold is one criterion for eligibility for the Arizona Health Care Cost Containment System (AHCCCS)^{vi} for children ages one to five, and at or below 147 percent of the federal poverty threshold for children under one year old.⁹² In the San Carlos Apache Region, the percentage of families with young children who may qualify for AHCCCS (those under 130% of FPL and between 130% and 149% of FPL) (66%) is substantially higher than in the state (38%) but similar to that in all Arizona reservations combined (67%) (Table 14 and Figure 4).
- In Fiscal Year 2016, the most recent year for which data are available, 213 families with young children in the San Carlos Apache Region participated in the Temporary Assistance for Needy Families (TANF) Program, called Nnee Bich’o Nii in the San Carlos Apache Tribe; this number represents an estimated 25 percent of all households with young children in the region, a proportion that is substantially higher than in Gila County (9%) and the state (4%). There is a similar pattern in the proportions of young children participating in the TANF program in 2016 in the region (18%), Gila County (8%) and the state (4%) (Table 15 & Table 16).

^{vi} Arizona Health Care Containment System (AHCCCS) is Arizona’s Medicaid agency

Food Insecurity

- The number of families with young children participating in the Supplemental Nutrition Assistance Program (SNAP) in the San Carlos Apache Region gradually decreased from 1,036 in Fiscal Year (FY) 2015 to 880 in FY 2018. The total number of young children who received SNAP benefits, however, increased between FY 2015 and 2016 (from 1,598 to 1,728) and then decreased in the two subsequent Fiscal Years. In 2018, the number of children receiving benefits (1,550) was slightly lower than that in 2015 (Table 17 & Table 18).
- The percent of students in the San Carlos Apache Region that qualified for free or reduced-price lunches remained above 90 percent from school year 2015-16 to school year 2018-19. In school year 2018-2019, 94 percent of students qualified for free or reduced-price lunches (Table 19).

Employment

- Eighty percent of young children in the San Carlos Apache Region live in families with at least one parent in the labor force, compared to 67 percent in all Arizona reservations combined and 89 percent in the state. The proportion of children who live with only one parent and such parent is not in the labor force is lower in the region (20%) compared to all Arizona reservations (31%) (Table 20).
- The average unemployment rate in the region for the 2013-2017 period was 20 percent, twice the estimated ten percent in all Arizona reservations combined, and five times the average state rate of four percent. Forty-three percent of the population in the region is not in the labor force (i.e. they are neither employed nor looking for work), a proportion that is close to that in the state (40%), but lower than in all Arizona reservations combined (54%) (Table 21).

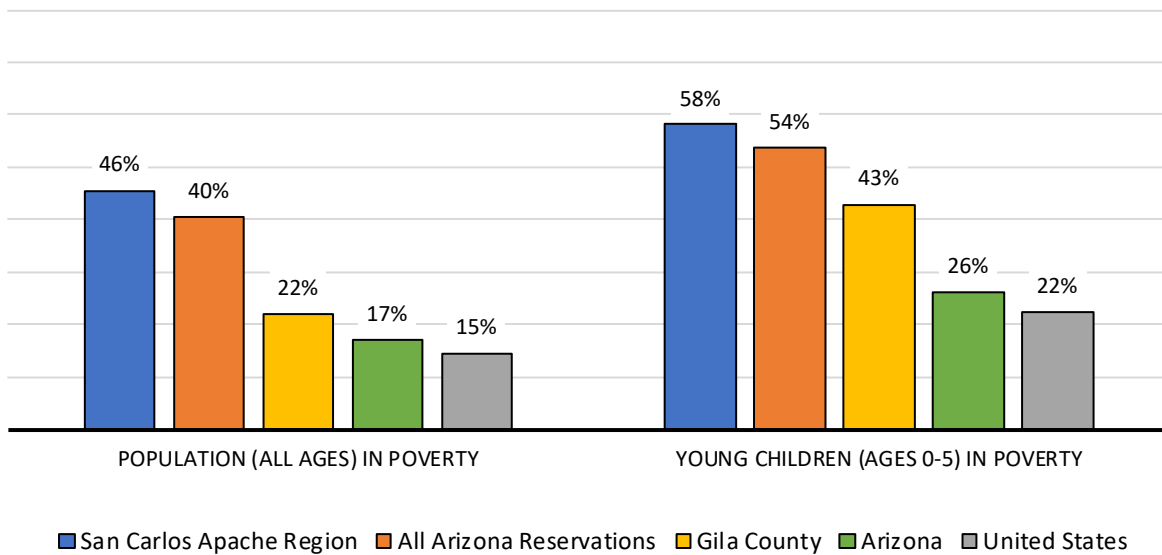
Housing Instability

- Twelve percent of households in the region spend 30 percent or more of their income on housing-related costs, a lower proportion than in all Arizona reservations combined (16%) (Table 22).
- Almost one-third (31%) of households in the region have both a smartphone and computer, a proportion that is similar than in all Arizona reservations combined (30%) but notably lower than the state of Arizona (67%) (Table 23).
- Similar proportions of residents in the San Carlos Apache Region and all Arizona reservations live in households with internet and a computer (40% and 38%, respectively). Both percentages, however, are much lower than in the state (82%) (Table 24).

- Over one-third (35%) of children (ages 0-17) live in households with a computer and internet, a proportion that is lower than in all Arizona reservations combined (41%), and substantially lower than in the state (83%) (Table 25).
- Of people living in households with a computer and internet in the region, 18 percent rely solely on a cellular data plan (Table 26).

Poverty

Figure 3. Percent of population (all ages) and young children (ages 0-5) living in poverty



Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B17001

Table 13. Median annual family income

GEOGRAPHY	MEDIAN INCOME FOR ALL FAMILIES	MEDIAN INCOME FOR MARRIED COUPLE FAMILIES WITH CHILDREN (0-17)	MEDIAN INCOME FOR FAMILIES WITH CHILDREN (0-17), SINGLE MALE HEAD	MEDIAN INCOME FOR FAMILIES WITH CHILDREN (0-17), SINGLE FEMALE HEAD
San Carlos Apache Region	\$36,033	\$47,885	\$12,768	\$18,594
Gila County	\$48,806	\$66,224	\$31,346	\$19,643
Arizona	\$63,812	\$80,533	\$38,650	\$26,907
United States	\$70,850	\$91,621	\$41,054	\$26,141

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B19126

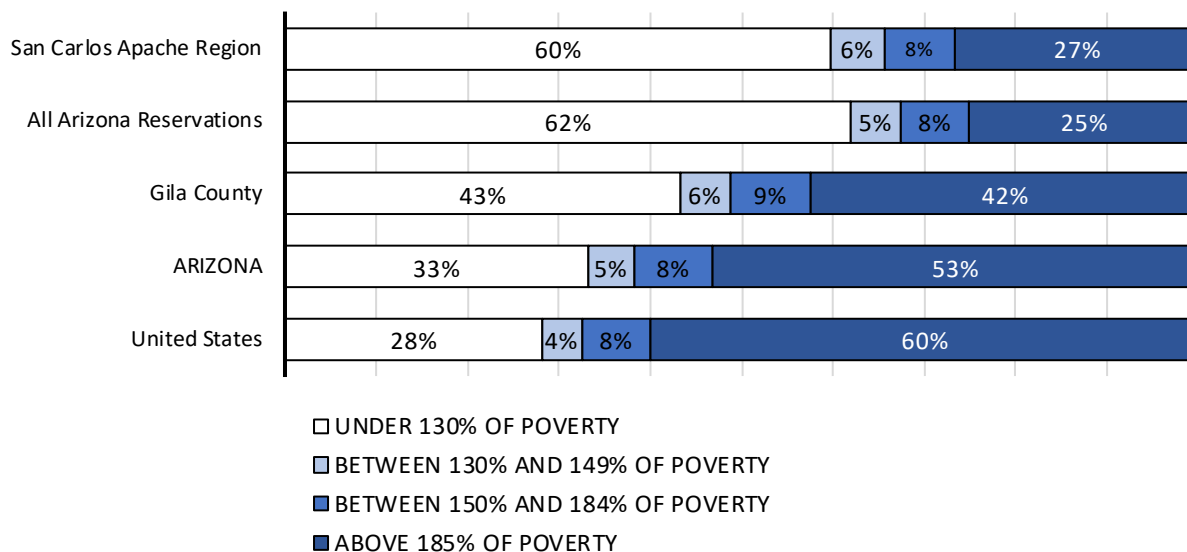
Table 14. Families with young children (ages 0-5) living at various thresholds above poverty

GEOGRAPHY	TOTAL NUMBER OF FAMILIES WITH YOUNG CHILDREN (AGES 0-5)	PERCENT OF FAMILIES WITH YOUNG CHILDREN (AGES 0-5) UNDER 130% OF POVERTY	PERCENT OF FAMILIES WITH YOUNG CHILDREN (AGES 0-5) BETWEEN 130% AND 149% OF POVERTY	PERCENT OF FAMILIES WITH YOUNG CHILDREN (AGES 0-5) BETWEEN 150% AND 184% OF POVERTY	PERCENT OF FAMILIES WITH YOUNG CHILDREN (AGES 0-5) ABOVE 185% OF POVERTY
San Carlos Apache Region	643	60%	6%	8%	27%
All Arizona Reservations	8,812	62%	5%	8%	25%
Gila County	2,052	43%	6%	9%	42%
Arizona	295,926	33%	5%	8%	53%
United States	13,951,604	28%	4%	8%	60%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Tables B17001 and B17022.

Note: Poverty refers to the poverty threshold used by the U.S. Census Bureau to determine whether or not a family lives in poverty based on their income. In 2017, the most recent year of ACS data used in this report, the poverty threshold for a family of four was \$24,848. For more information about poverty thresholds, see <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>

Figure 4. Families with young children (ages 0-5) living at various poverty thresholds



Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Tables B17001 & B17022

Note: Poverty refers to the poverty threshold used by the U.S. Census Bureau to determine whether or not a family lives in poverty based on their income. In 2017, the most recent year of ACS data used in this report, the poverty threshold for a family of four was \$24,848. For more information about poverty thresholds, see <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>

Table 15. Families participating in the Nnee Bich’o Nii TANF Program, Fiscal Years 2015 and 2016

GEOGRAPHY	HOUSEHOLDS WITH ONE OR MORE CHILDREN (AGES 0-5)	NUMBER OF FAMILIES PARTICIPATING IN TANF		PERCENT OF HOUSEHOLDS WITH YOUNG CHILDREN (0-5) PARTICIPATING IN TANF IN 2016
		FY 2015	FY 2016	
San Carlos Apache Region	844	305	213	25%
Gila County	2,488	331	228	9%
Arizona	384,441	18,165	16,399	4%

Sources: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Table P20 and Arizona Department of Economic Security, Division of Benefits and Medical Eligibility (2019). Unpublished data received by request.

Table 16. Children participating in the Nnee Bich’o Nii TANF Program, Fiscal Years 2015 and 2016

GEOGRAPHY	NUMBER OF YOUNG CHILDREN (AGES 0-5) IN THE POPULATION	NUMBER OF CHILDREN PARTICIPATING IN TANF		PERCENT OF YOUNG CHILDREN (0-5) PARTICIPATING IN TANF IN 2016
		FY 2015	FY 2016	
San Carlos Apache Region	1,435	365	264	18%
Gila County	3,657	406	287	8%
Arizona	546,609	23,862	22,326	4%

Sources: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Table P20 and Arizona Department of Economic Security, Division of Benefits and Medical Eligibility (2019). Unpublished data received by request.

Food Insecurity

Table 17. Families with children (ages 0-5) participating in the SNAP program, Fiscal Years 2015 to 2018

NUMBER OF FAMILIES PARTICIPATING IN SNAP				
GEOGRAPHY	FY 2015	FY 2016	FY 2017	FY 2018
San Carlos Apache Region	1,036	996	947	880
Gila County	1,935	1,872	1,844	1,685
Arizona	179,988	172,014	164,092	151,819

Sources: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Table P20 and Arizona Department of Economic Security, Division of Benefits and Medical Eligibility (2019). Unpublished data received by request.

Table 18. Children (ages 0-5) participating in the SNAP program, Fiscal Years 2015 to 2018

NUMBER OF CHILDREN PARTICIPATING IN SNAP				
GEOGRAPHY	FY 2015	FY 2016	FY 2017	FY 2018
San Carlos Apache Region	1,598	1,728	1,673	1,550
Gila County	2,879	3,037	3,009	2,744
Arizona	249,707	258,556	247,418	229,291

Sources: U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Table P20 and Arizona Department of Economic Security, Division of Benefits and Medical Eligibility (2019). Unpublished data received by request.

Table 19. Students (all grades) eligible for free or reduced-price lunch, 2015-16 to 2018-19

GEOGRAPHY	STUDENTS ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH (2015-16)	STUDENTS ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH (2016-17)	STUDENTS ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH (2017-18)	STUDENTS ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH (2018-19)
San Carlos Apache Region	98%	91%	98%	94%
Gila County	72%	70%	67%	65%
Arizona	58%	57%	57%	56%

Source: Arizona Department of Education (2019). 2015-16 to 2018-19 Free and Reduced-Price Lunch Data. Custom tabulation of eligibility data.

Employment

Table 20. Parents of young children (ages 0-5) who are or are not in the labor force

GEOGRAPHY	TOTAL NUMBER OF CHILDREN (AGES 0-5) LIVING IN FAMILIES or SUBFAMILIES	WITH TWO PARENTS, BOTH IN LABOR FORCE	WITH TWO PARENTS, ONE IN LABOR FORCE AND ONE NOT	WITH TWO PARENTS, NEITHER IN LABOR FORCE	WITH ONE PARENT, IN LABOR FORCE	WITH ONE PARENT, NOT IN LABOR FORCE
San Carlos Apache Region	1,465	17%	11%	0%	52%	20%
All Arizona Reservations	16,902	13%	14%	3%	40%	31%
Gila County	3,356	27%	15%	1%	46%	10%
Arizona	498,102	31%	29%	1%	29%	10%
United States	22,939,897	38%	26%	1%	27%	8%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B23008

Note: The labor force includes all persons who are currently employed, including those on leave, furlough, or temporarily laid off. Persons who are unemployed but actively looking for work are also considered to be in the labor force. Persons who are not working or looking for work (e.g., retired persons, stay-at-home parents, students) are considered to be "not in the labor force" in the American Community Survey.

Table 21. Adult population (ages 16 and older) who are employed, unemployed, or not in the labor force

GEOGRAPHY	TOTAL POPULATION (AGES 16 AND OLDER)	PERCENT WHICH IS EMPLOYED	PERCENT WHICH IS UNEMPLOYED	PERCENT WHICH IS NOT IN THE LABOR FORCE
San Carlos Apache Region	7,035	37%	20%	43%
All Arizona Reservations	136,081	37%	10%	54%
Gila County	43,414	42%	6%	53%
Arizona	5,371,341	55%	4%	40%
United States	255,797,692	59%	4%	37%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B23025

Note: The labor force includes all persons who are currently employed, including those on leave, furlough, or temporarily laid off. Persons who are unemployed but actively looking for work are also considered to be in the labor force. Persons who are not working or looking for work (e.g., retired persons, stay-at-home parents, students) are considered to be "not in the labor force" in the American Community Survey.

Housing Instability

Table 22. Households who are paying thirty percent or more of their income for housing

GEOGRAPHY	TOTAL NUMBER OF OCCUPIED HOUSING UNITS	PERCENT OF HOUSING UNITS FOR WHICH HOUSING COSTS 30% OF INCOME OR MORE
San Carlos Apache Region	2,332	12%
All Arizona Reservations	49,638	16%
Gila County	21,585	26%
Arizona	2,482,311	31%
United States	118,825,921	32%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B25106

Table 23. Households with and without computers and smartphones

GEOGRAPHY	TOTAL NUMBER OF HOUSEHOLDS	PERCENT WITH COMPUTER (BUT NO SMARTPHONE)	PERCENT WITH SMARTPHONE (BUT NO COMPUTER)	PERCENT WITH BOTH SMARTPHONE AND COMPUTER	PERCENT WITH NEITHER SMARTPHONE NOR COMPUTER
San Carlos Apache Region	2,332	10%	20%	31%	39%
All Arizona Reservations	49,638	9%	14%	30%	47%
Gila County	21,585	16%	11%	51%	21%
Arizona	2,482,311	12%	9%	67%	12%
United States	118,825,921	12%	9%	66%	13%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B28010

Note: In this table, "computer" includes both desktops and laptops.

Table 24. Persons (all ages) in households with and without computers and internet connectivity

GEOGRAPHY	NUMBER OF PERSONS (ALL AGES) LIVING IN HOUSEHOLDS	PERCENT IN HOUSEHOLDS WITH COMPUTER AND INTERNET	PERCENT IN HOUSEHOLDS WITH COMPUTER BUT NO INTERNET	PERCENT IN HOUSEHOLDS WITHOUT COMPUTER
San Carlos Apache Region	10,604	40%	27%	33%
All Arizona Reservations	185,192	38%	21%	40%
Gila County	52,154	63%	19%	17%
Arizona	6,656,124	82%	9%	9%
United States	312,916,765	83%	9%	9%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B28005

Table 25. Children (ages 0-17) in households with and without computers and internet connectivity

GEOGRAPHY	NUMBER OF CHILDREN (AGES 0-17) LIVING IN HOUSEHOLDS	PERCENT IN HOUSEHOLDS WITH COMPUTER AND INTERNET	PERCENT IN HOUSEHOLDS WITH COMPUTER BUT NO INTERNET	PERCENT IN HOUSEHOLDS WITHOUT COMPUTER
San Carlos Apache Region	3,979	35%	30%	35%
All Arizona Reservations	57,156	41%	24%	35%
Gila County	10,812	59%	25%	16%
Arizona	1,619,346	83%	10%	8%
United States	73,392,369	85%	9%	5%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B28005

Table 26. Households by type of internet access (broadband, cellular data, and dial-up)

GEOGRAPHY	PEOPLE LIVING IN HOUSEHOLDS WITH COMPUTER AND INTERNET (ALL AGES)	PERCENT WITH FIXED BROADBAND WITH CELLULAR DATA PLAN	PERCENT WITH FIXED BROADBAND WITHOUT CELLULAR DATA PLAN	PERCENT WITH CELLULAR DATA PLAN, WITHOUT FIXED BROADBAND	PERCENT WITH DIAL-UP INTERNET ONLY
San Carlos Apache Region	4,228	11%	69%	18%	1%
All Arizona Reservations	71,139	29%	42%	25%	3%
Gila County	33,076	37%	48%	14%	1%
Arizona	5,475,311	54%	35%	10%	1%
United States	258,531,929	55%	35%	10%	1%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B28008

Educational Indicators

Why it Matters

Measures of educational engagement and achievement in a community have important implications for the developmental and economic resources available to children and families in that region. Individuals with higher levels of education tend to live longer and healthier lives.⁹³ Indicators such as school attendance and absenteeism, achievement on standardized testing, high school graduation rates, and adult educational attainment can provide valuable information about a region's educational engagement and success. Early learning can set the stage for future educational achievement, and is discussed more fully in the following section.

School attendance and absenteeism. School attendance and academic engagement early in life can significantly impact the direction of a child's schooling trajectory. Chronic absenteeism is defined as missing more than ten percent of the school days within a school year, and it affects even the youngest children, with more than ten percent of U.S. kindergarteners and first graders considered chronically absent.⁹⁴ Poor school attendance can cause children to fall behind, leading to lower proficiency in reading and math and increased risk of not being promoted to the next grade.⁹⁵ Consistent school attendance is particularly important for children from economically disadvantaged backgrounds, the group of children most at risk for chronic absenteeism.^{96,97}

Achievement on standardized testing. A child's third-grade reading comprehension skills have been identified as a critical indicator of future academic success.⁹⁸ Students who are at or above grade level reading in third grade are more likely to go on to graduate high school and attend college.⁹⁹ The link between poor reading skills and risk of dropping out of high school is even stronger for children living in poverty. More than a quarter (26%) of children who were living in poverty and not reading proficiently in third grade did not finish high school. This is more than six times the high school dropout rate of proficient readers.¹⁰⁰

In 2010, the Arizona legislature, recognizing the importance of early identification and targeted intervention for struggling readers, enacted *Move on When Reading* legislation. As of 2015, the statewide assessment tool for English language arts (ELA), including reading and writing, is Arizona's Measurement of Education Readiness to Inform Teaching (AzMERIT).^{vii,101} AzMERIT scores are used to determine promotion from the third grade in accordance with the *Move on When Reading* policy. *Move on When Reading* legislation states that a student shall not be promoted to fourth grade if their reading score falls far below the third-grade level, as established by the State Board of Education.¹⁰² Exceptions exist for students identified with or

^{vii} AzMERIT was renamed AzM2, a change that will take effect during the 2019-2020 school year.

being evaluated for learning disabilities and/or reading impairments, English language learners, and those who have demonstrated reading proficiency on alternate forms of assessment approved by the State Board of Education.

Graduation rates and adult educational attainment. Ultimately, adult educational attainment speaks to the assets and challenges of a community's workforce, including those who are working with or on behalf of young children and their families. Adults who have graduated from high school have better health and financial stability, lower risk for incarceration, and better socio-emotional outcomes compared to adults who dropped out of high school.^{103,104} Children whose parents have higher levels of education are more likely to have positive outcomes related to school readiness and educational achievement, promoting academic success across generations.¹⁰⁵ Given the cascading effect of early education on later academic achievement and success in adulthood, it is critical to provide substantial support for early education and promote policies and programs that encourage the persistence and success of Arizona's children.

What the Data Tell Us

School Attendance and Absenteeism

- In the 2018-19 school year, there were a total of 627 children enrolled in preschool through third grade in schools in the San Carlos Apache Region (Table 27).
- From school year 2015-2016 to school year 2018-2019, chronic absence rates in the San Carlos Apache Region were substantially higher than in Gila County and the state. In 2018-2019, the most recent year for which data are available, the combined chronic absence rate for children in grades K-3 was 40 percent, compared to 24 percent in Gila County and 12 percent in Arizona. In that same school year, the highest chronic absence rate in the San Carlos Apache was observed among kindergarteners (48%), with declining rates in first to third grades. In all grade levels, however, the chronic absence rates in the region are notably higher than in the state and Gila County (Table 28, Table 29 & Table 30).

Achievement on Standardized Testing

- In school year 2017-2018, 151 third-grade students in schools located within the boundaries of the San Carlos Apache Region completed the English Language Arts (ELA) portion of the required statewide Arizona's Measurement of Educational Readiness to Inform Teaching (AzMERIT) test. In that year, the ELA passing rate for third-graders in the region (8%) was substantially lower than the rates in Gila County (27%) and Arizona (44%), a pattern similar to that in 2016-2017 (8%, 32% and 44%, respectively) (Table 31 & Figure 6).
- Between school years 2015-2016 and 2017-2018, AzMERIT math passing rates have also been substantially lower in the region compared to both Gila County and the state. In 2017-2018, fourteen percent of third-graders in the San Carlos Apache Region achieved a passing rate in math; this percentage was about half that in Gila County (31%) and also much lower than the state rate (53%) (Figure 8).

Graduation Rates and Adult Educational Attainment

- In 2017, the four-year graduation rate for the region was 65 percent and the five-year graduation rate was 68 percent.^{viii} Between 2015 and 2017, four-year graduation rates have been lower in the region than in both Gila County and the state (Table 33 & Table 34).

^{viii} Please note that these are combined rates for San Carlos High School, San Carlos Unified School District Alternative High School, and Mt. Turnbull Academy.

- The 7th-12th grade dropout rate for the San Carlos Apache Region remained stable between school years 2015-2016 and 2017-2018. In the 2017-2018 school year, the dropout rate for the region was 14 percent (Table 36).
- The educational attainment among adults 25 and older in the San Carlos Apache Region mirrors that in all Arizona reservations combined, with similar percentages of adults with a high school degree or GED (35% and 36%, respectively), and more than a high school education (35% and 38%, respectively) (Figure 9).
- In 2017, two-thirds (66%) of births in the San Carlos Apache Region were to mothers who had at least a high school diploma or higher educational attainment, compared to 82 percent in Arizona (Table 37).

School Attendance and Absenteeism

Table 27. Students enrolled in preschool through third grade, 2018-19

GEOGRAPHY	PRESCHOOL	KINDERGARTEN	1ST GRADE	2ND GRADE	3RD GRADE
San Carlos Apache Region	23	138	151	140	175
Gila County	231	549	589	538	604
Arizona	21,238	79,990	81,913	81,951	83,037

Source: Arizona Department of Education (2019). 2018-19 October 1 Enrollments. Custom tabulation of enrollment data facilitated by state agency staff.

Note: Data on enrollments were calculated at the district-level. These numbers represent both Rice Elementary and Mt. Turnbull Elementary. See appendix 3 for a full list of districts within the region.

Table 28. Chronic absence rates, Kindergarten through 3rd grade, 2018-19

GEOGRAPHY	TOTAL STUDENTS	STUDENTS WITH CHRONIC ABSENCES	CHRONIC ABSENCE RATE
San Carlos Apache Region	686	273	40%
Gila County	2,667	650	24%
Arizona	402,206	46,482	12%

Source: Arizona Department of Education (2019). 2018-19 Chronic Absenteeism Data. Unpublished data received by request.

Note: The definition of chronic absenteeism used in this table includes children who are absent due to chronic illness.

Table 29. Chronic absence rates, Kindergarten through 3rd grade, 2015-16 to 2018-19

GEOGRAPHY	CHRONIC ABSENCE RATE (2015-16)	CHRONIC ABSENCE RATE (2016-17)	CHRONIC ABSENCE RATE (2017-18)	CHRONIC ABSENCE RATE (2018-19)
San Carlos Apache Region	38%	31%	39%	40%
Gila County	19%	22%	25%	24%
Arizona	9%	10%	11%	12%

Source: Arizona Department of Education (2019). 2015-16 to 2018-19 Chronic Absenteeism Data. Unpublished data received by request.

Note: The definition of chronic absenteeism used in this table includes children who are absent due to chronic illness.

Table 30. Chronic absence rates for students by grade (Grade K-3), 2018-19

GEOGRAPHY	CHRONIC ABSENCE RATE (KINDERGARTEN)	CHRONIC ABSENCE RATE (1ST GRADE)	CHRONIC ABSENCE RATE (2ND GRADE)	CHRONIC ABSENCE RATE (3RD GRADE)
San Carlos Apache Region	48%	39%	38%	35%
Gila County	23%	26%	25%	24%
Arizona	13%	12%	11%	10%

Source: Arizona Department of Education (2019). 2015-16 to 2018-19 Chronic Absenteeism Data. Unpublished data received by request.

Note: The definition of chronic absenteeism used in this table includes children who are absent due to chronic illness.

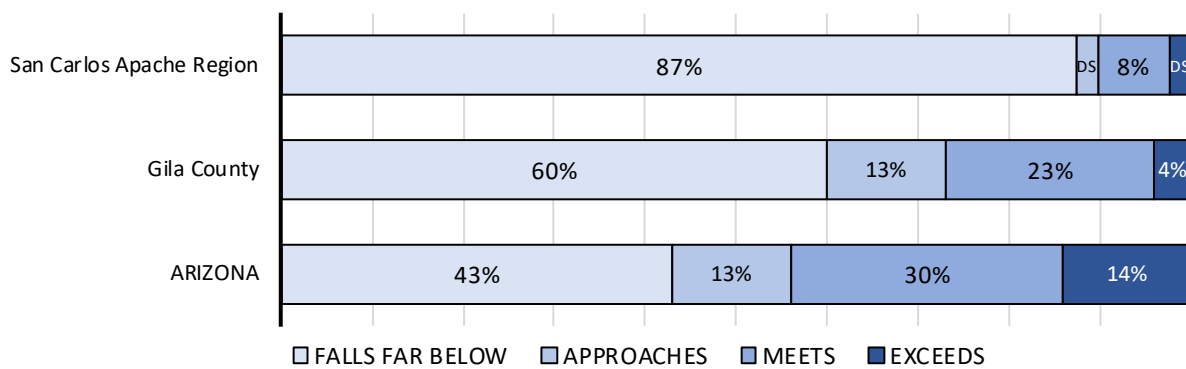
Achievement on Standardized Testing

Table 31. AzMERIT Assessment Results: 3rd Grade English Language Arts, 2017-18

GEOGRAPHY	STUDENTS TESTED	FALLS FAR BELOW	APPROACHES	MEETS	EXCEEDS	PASSING
San Carlos Apache Region	151	87%	DS	8%	DS	8%
Gila County	597	60%	13%	23%	4%	27%
Arizona	84,922	43%	13%	30%	14%	44%

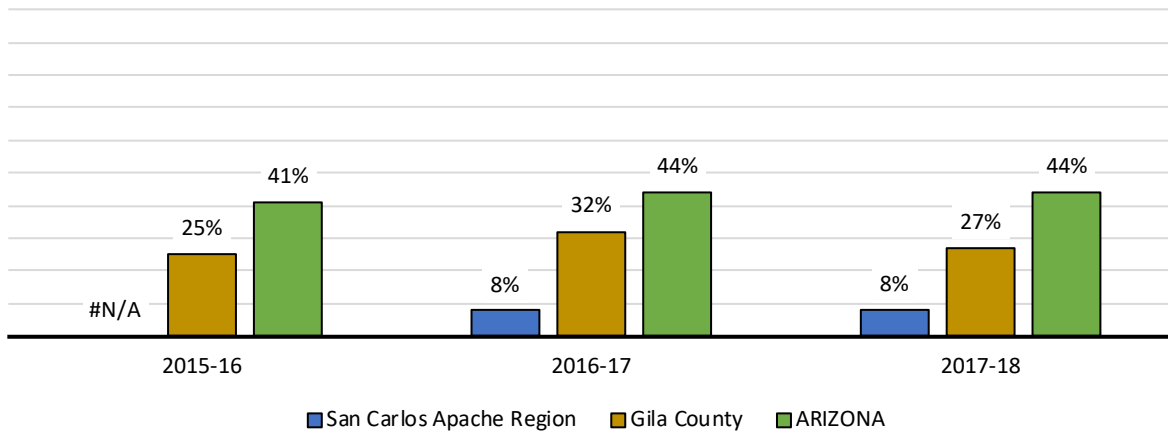
Source: Arizona Department of Education (2019). 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Figure 5. AzMERIT Assessment Results: 3rd Grade English Language Arts, 2017-18



Source: Arizona Department of Education (2019). 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Figure 6. Trends in passing rates for 3rd-grade English Language Arts AzMERIT, 2015-16 to 2017-18



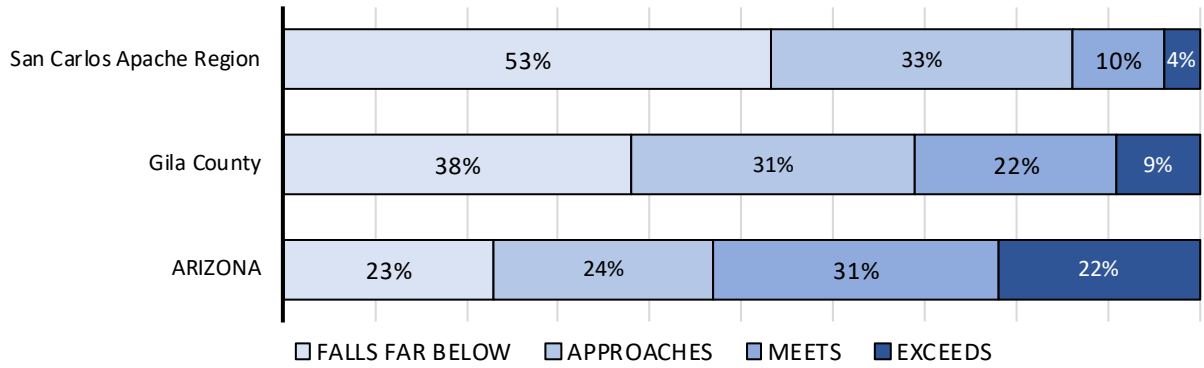
Source: Arizona Department of Education (2019). 2015-16 to 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Table 32. AzMERIT Assessment Results: 3rd Grade Math, 2017-18

GEOGRAPHY	NUMBER OF STUDENTS TESTED	FALLS FAR				
		BELOW	APPROACHES	MEETS	EXCEEDS	PASSING
San Carlos Apache Region	152	53%	33%	10%	4%	14%
Gila County	607	38%	31%	22%	9%	31%
Arizona	85,105	23%	24%	31%	22%	53%

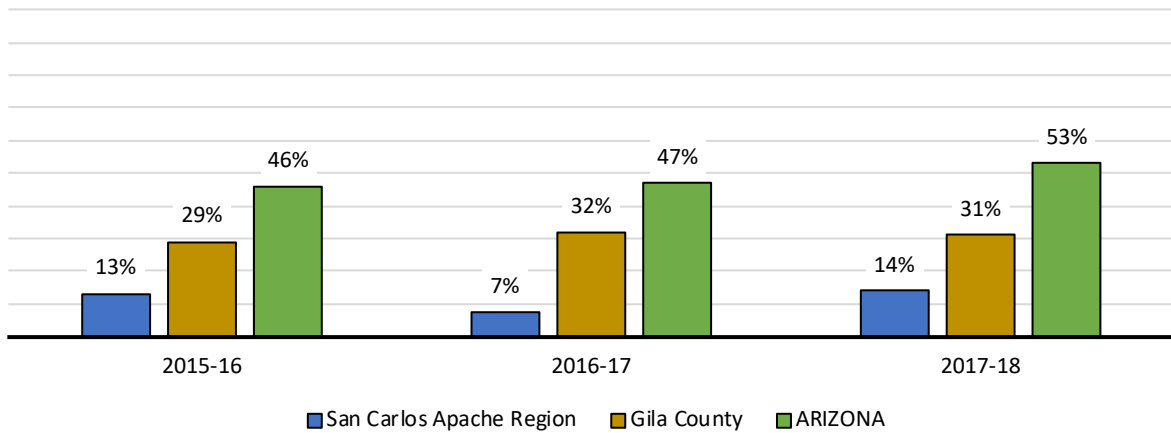
Source: Arizona Department of Education (2019). 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Figure 7. AzMERIT Assessment Results: 3rd Grade Math, 2017-18



Source: Arizona Department of Education (2019). 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Figure 8. Trends in passing rates for 3rd-grade Math AzMERIT, 2015-16 to 2017-18



Source: Arizona Department of Education (2019). 2015-16 to 2017-18 AzMERIT Assessment Results. Custom tabulation of assessment data.

Graduation Rates and Adult Educational Attainment

Table 33. Graduation and dropout rates, 2017

GEOGRAPHY	FOUR-YEAR SENIOR COHORT	FOUR-YEAR GRADUATES	FOUR-YEAR GRADUATION RATE	FIVE-YEAR GRADUATES	FIVE-YEAR GRADUATION RATE	DROPOUT RATE (7TH TO 12TH GRADES)
San Carlos Apache Region	110	71	65%	76	68%	14%
Gila County	597	448	75%	477	79%	6%
Arizona	84,802	66,363	78%	70,178	82%	5%

Source: Arizona Department of Education (2019). Cohort 2017 Four Year Graduation Rate Data, Cohort 2017 Five Year Graduation Rate Data, and Dropout Rates 2017. Retrieved from <https://www.azed.gov/accountability-research/data/>

Note: These are combined rates for San Carlos High School, San Carlos Unified School District Alternative High School, and Mt. Turnbull Academy.

Table 34. Trends in four-year graduation rates, 2015 to 2017

GEOGRAPHY	FOUR-YEAR GRADUATION RATE (2015)	FOUR-YEAR GRADUATION RATE (2016)	FOUR-YEAR GRADUATION RATE (2017)
San Carlos Apache Region	68%	69%	65%
Gila County	80%	82%	75%
Arizona	79%	80%	78%

Source: Arizona Department of Education (2019). Cohort 2014-2017 Four Year Graduation Rate Data. Retrieved from <https://www.azed.gov/accountability-research/data/>

Note: These are combined rates for San Carlos High School, San Carlos Unified School District Alternative High School, and Mt. Turnbull Academy.

Table 35. Trends in five-year graduation rates, 2015 to 2017

GEOGRAPHY	FIVE-YEAR GRADUATION RATE (2015)	FIVE-YEAR GRADUATION RATE (2016)	FIVE-YEAR GRADUATION RATE (2017)
San Carlos Apache Region	79%	74%	68%
Gila County	84%	84%	79%
Arizona	82%	83%	82%

Source: Arizona Department of Education (2019). Cohort 2014-2017 Five Year Graduation Rate Data. Retrieved from <https://www.azed.gov/accountability-research/data/>

Note: These are combined rates for San Carlos High School, San Carlos Unified School District Alternative High School, and Mt. Turnbull Academy.

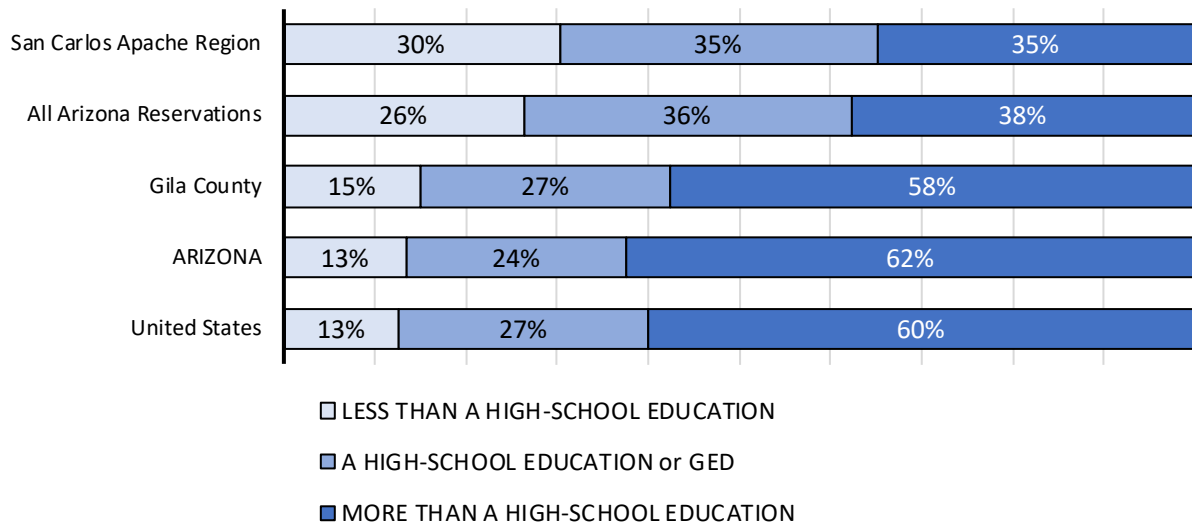
Table 36. Trends in 7th-12th grade dropout rates, 2015-16 to 2017-18

GEOGRAPHY	DROPOUT RATE (2015-16)	DROPOUT RATE (2016-17)	DROPOUT RATE (2017-18)
San Carlos Apache Region	13%	15%	14%
Gila County	6%	6%	6%
Arizona	4%	5%	5%

Source: Arizona Department of Education (2019). Dropout Rates 2015-2018. Retrieved from <https://www.azed.gov/accountability-research/data/>

Note: These are combined rates for San Carlos High School, San Carlos Unified School District Alternative High School, and Mt. Turnbull Academy.

Figure 9. Level of education for the adult population (ages 25 and older)



Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B15002

Table 37. Level of education for mothers giving birth during calendar year 2017

GEOGRAPHY	TOTAL NUMBER OF BIRTHS IN 2017	MOTHER HAD LESS THAN A HIGH-SCHOOL EDUCATION	MOTHER HAD HIGH-SCHOOL DIPLOMA OR GED	MOTHER HAD MORE THAN HIGH-SCHOOL
San Carlos Apache Region	255	32%	44%	22%
Gila County	541	22%	38%	38%
Arizona	81,664	17%	26%	56%

Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Note: Due to a small number of births for which the mother's educational attainment is unknown, entries in this table may not sum to 100%.

Early Learning

Why it Matters

Early childhood is an exciting time of rapid physical, cognitive, and social-emotional development. The experiences young children have during these early years are critical for healthy brain development and set the stage for lifelong learning and well-being.^{106,107} Just as rich, stimulating environments can promote development, early negative experiences can have lasting effects. For example, gaps in language development between children from disadvantaged backgrounds and their more advantaged peers can be seen by 18 months of age;¹⁰⁸ those disparities that persist until kindergarten tend to predict later academic problems.¹⁰⁹

Access to early care and education. Though high-quality early care and education can promote development, families often face barriers in accessing these opportunities for their children. Families living in rural areas are more likely to face an inadequate child care supply, but Arizona families in both urban and rural areas face a gap between the number of young children and the availability of licensed child care.^{110,111,112} In fact, Arizona has a deficit of about 22,230 licensed early care and education slots to meet the needs of working families, without accounting for parents continuing their own education, or those not in the workforce but seeking out early learning programs to help assure their preschool age children are able to make a strong start in school.¹¹³ Even when early education is available, the cost can be prohibitive. According to the U.S. Department of Education, only 19 percent of four-year-olds in Arizona are enrolled in publicly-funded free or reduced cost preschool programs, compared to 41 percent nationally.¹¹⁴ If not enrolled in publicly-funded programs, 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.^{115,116}

Child care subsidies can be a support for families who have financial barriers to accessing early learning services.¹¹⁷ In June 2019, for the first time since the Great Recession, the Arizona Department of Economic Security's (DES) child care subsidy waiting list was suspended, meaning all children who qualify for subsidies are able to receive them, assuming that they are able to find a provider.¹¹⁸ This is due to \$56 million in additional federal funds from the Child Care and Development Fund (CCDF) that was authorized by the State Legislature, and the funding increase has also allowed DES to increase provider reimbursement rates, which may make it easier for families to use their child care subsidies.¹¹⁹

High quality early care and education. In addition to the early experiences children have in their homes, high quality early care and education services can also promote physical, cognitive, and social-emotional development and health, particularly for children from

disadvantaged backgrounds.^{120,121,122} 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 from high school.¹²³ This translates into a return on investment to society through increased educational achievement and employment, reductions in crime, and better overall health of children as they mature into adults.^{124,125} Not only does access to affordable, quality child care make a positive difference for children's health and development, it also allows parents to maintain stable employment and support their families.¹²⁶ The early care education system in tribal communities often consists of a complex network of center-based and home-based care and education settings with funding from varied sources including tribal governments, federal grants, and the Arizona Department of Education.¹²⁷

Establishing that available early care and education programs meet quality standards is important to ensure these early environments support positive outcomes for children's well-being, academic achievement, and success later in life.¹²⁸ Providers are considered quality educational environments by the Arizona Department of Economic Security if they receive a Quality First three-star rating or higher (see below) or are accredited by a national organization, such as the Association for Early Learning Leaders or the National Association for the Education of Young Children (NAEYC).¹²⁹

High quality early education environments have teachers with more education, experience, and supports that increase their skills in developing positive teacher-child interactions, providing enriching age-appropriate experiences and guiding appropriate behaviors.¹³⁰ These quality environments may be particularly important for children with challenging behaviors, because lower teacher-child ratios and access to professional development and early childhood mental health consultation can help avoid preschool expulsion.^{131,132,133}

Quality First is Arizona's Quality Improvement and Rating System (QIRS) for early child care and preschool providers.¹³⁴ A Quality First Star Rating represents where along the continuum of quality (1 to 5 stars) a program was rated and how they are implementing early childhood best practices. One star indicates a program is participating in Quality First, is regulated, in good standing, and is making the commitment to work on quality improvement. Three stars indicate that a program is of good quality care, and families can be confident that children are well cared for in such an environment. Five stars indicate the highest level of quality attainable, where families will find low staff-child ratios and group sizes, highly educated personnel, and strong curriculum which optimizes children's comprehensive development.¹³⁵ The number of providers across the state that meet quality standards (three-star rating or higher) has increased across the last five years such that 25 percent of the 857 participating providers in

2013 met or exceeded quality standards, and 76 percent of 1,032 participating providers in 2019 met or exceeded quality standards.¹³⁶

High quality early care and education practices, including lower teacher-child ratios, access to professional development, and early childhood mental health consultation, can help avoid preschool expulsion.^{137,138} Nationally, preschool expulsions and suspensions occur at high rates and disproportionately impact children of color, specifically young Black boys.^{139,140} In 2016, an estimated 50,000 preschoolers were suspended and 17,000 preschoolers expelled nationwide, with Black children 2.2 times more likely to be suspended or expelled than other children.¹⁴¹ The U.S. Department of Education Office of Civil Rights began collecting data on preschool suspension and expulsion in 2011 and, as a result of federal changes to the Child Care Development Block Grant in 2014, Arizona began collecting provider-reported data on early learning environment expulsion in 2017.^{142,143} Given the positive impact of early educational experiences on children’s cognitive and emotional development and the negative impact of suspension and expulsion on educational outcomes, it is essential to identify areas with higher rates of expulsion to provide targeted supports.¹⁴⁴

As an alternative to expulsion, early education providers in Arizona have an opportunity to identify young children as being at risk for expulsion and to receive consultation from experts to help intervene in problem behaviors. Consultation is provided through on-site mental health consultation, available for Quality First and some non-Quality First providers in most but not all regions in the state, as well as through a statewide Department of Economic Security (DES)-managed hotline. If that child is then able to remain in the center, this is documented as a prevented expulsion and their case is closed out. The reported number of prevented expulsions of young children receiving subsidies increased from seven in 2017 to 45 in 2018.¹⁴⁵

Young children with special needs. 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 and some tribal communities. Children with special health care needs 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.”¹⁴⁶ According to the National Survey of Children’s Health, children with special health care needs are more likely to experience more adverse childhood experiences (ACEs)^{ix} than typically-developing children,¹⁴⁷

^{ix} ACEs include eight categories of traumatic or stressful life events experienced before the age of 18 years. The eight ACE categories are sexual abuse, physical abuse, emotional abuse, household adult mental illness, household substance abuse, domestic violence in the household, incarceration of a household member, and parental divorce or separation.

and are at an increased risk for maltreatment and neglect,^{148,149} suggesting they may particularly benefit from high quality teacher-child interactions in classrooms.^{150,151} Nationally, American Indian/Alaska Native children receive special education services at the highest rates (18%) of any racial/ethnic group, with notably higher rates of services than their white (14%) and Hispanic (13%) peers.¹⁵² Almost half (46%) of families with a child with special needs in Arizona have incomes below 200 percent of the federal poverty level, suggesting that even if they can identify an appropriate provider, affording quality care is likely to be a burden.¹⁵³

Ensuring all families have access to timely and appropriate screenings for children who may benefit from early identification of special needs can help improve 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.^{154,155} It also reduces educational costs by decreasing the need for special education.¹⁵⁶ In Arizona, services available to families with children with special needs include those provided through the Arizona Early Intervention Program (AzEIP),¹⁵⁷ the Arizona Department of Education Early Childhood Special Education program,¹⁵⁸ and the Division of Developmental Disabilities (DDD).¹⁵⁹

What the Data Tell Us

Access to Early Care and Education

- Families in the San Carlos Apache Region can access early childhood education and care services through the tribally-operated Apache Kid Child Care Center and San Carlos Apache Head Start Program, as well as through the school-based preschool at Rice Elementary, a local public school in San Carlos operated by the Arizona Department of Education.¹⁶⁰
- About one third (34%) of children ages three to four are enrolled in school (i.e. nursery school, preschool, or kindergarten) in the San Carlos Apache Region, a proportion that is lower than in all Arizona reservations (41%) (Table 38).
- According to the San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report, in 2016-2017, a total of 339 young children were enrolled in center-based early care and education programs. Most of the center-based slots available in the region are for preschool-age children. Apache Kid Child Care is the only center providing services to infants and toddlers, with a total capacity of 28 slots for the birth to age two range. The capacity of the centers in the region to serve preschool-age children, on the other hand, is much larger (Table 39).¹⁶¹
- Cost of care at Apache Kid Child Care Center is based on a sliding scale fee and it ranges between \$5 and \$15 per day. Participation in the San Carlos Head Start program is free of cost.¹⁶²
- In addition to the child care subsidies provided through the Apache Kid Child Care Center, some families in the San Carlos Apache Region also receive subsidies from the Arizona Department of Economic Security (DES). The number of young children receiving DES subsidies in the region declined from 46 in 2015, to 21 in 2018 (Table 40).
- There were no children involved with the Department of Child Safety receiving DES child care subsidies in the region between 2015 and 2018 (Table 41).
- The proportion of eligible families not using DES child care subsidies in the San Carlos Apache Region doubled from 13 percent in 2015, to 27 percent in 2018. A similar increase occurred in Gila County (from 8 percent to 17 percent, respectively). At the state level there was only a slight increase in the number of families who did not use the subsidies (from 6 percent to 8 percent) (Table 42).

High Quality Early Care and Education

- The Department of Economic Security (DES) defines early care and education “quality environments” as providers that are accredited by a national organization or providers that have received a state-approved quality indicator that is recognized by the

department.^x In 2017 and 2018, no children receiving child care subsidies from DES in the region were served in quality environment settings, as defined by DES (Table 43).

- In State Fiscal Year 2019, a total of seven child care providers in the San Carlos Apache Region participated in Quality First, five of which were quality-level settings (public 3-5 stars). That same year, there were 36 children enrolled at a Quality First Site in the region. All of those children were enrolled in quality-level settings (public 3-5 stars) (Table 44 & Table 45).

Young Children with Special Needs

- From school year 2015-2016 to school year 2018-2019 the number of children ages three to five enrolled in special education in schools in the San Carlos Apache Region ranged from 29 to 58 (Table 46).
- For students in first through third grades, the proportion of those enrolled in special education increased from ten percent in school year 2015-2016, to 16 percent in 2016-2017, and remained stable in the two school years that followed (Table 48).
- In Fiscal Year 2017, between 26 and 42 children ages birth to two were referred to the Arizona Early Intervention Program (AzEIP) in the region and between 12 and 28 were found eligible for services. In 2018, there were 17 active AzEIP cases in the region, down from 20 cases in 2017 (Table 49 & Table 50).
- Fewer than ten children (in the age ranges of 0-2 and 3-5, each) received services by the Division of Developmental Disabilities (DDD) in the region in Fiscal Year 2018, the most recent year for which data are available (Table 51 & Table 52).

^x Providers are considered quality educational environments by the Arizona Department of Economic Security if they receive a Quality First three-star rating or higher or are accredited by a national organization, such as the Association for Early Learning Leaders or the National Association for the Education of Young Children (NAEYC).

Access to Early Care and Education

Table 38. School enrollment for children (ages 3 and 4)

GEOGRAPHY	POPULATION OF CHILDREN (AGES 3-4)	NUMBER ENROLLED IN SCHOOL	PERCENT ENROLLED IN SCHOOL
San Carlos Apache Region	648	223	34%
All Arizona Reservations	6,574	2,673	41%
Gila County	1,337	413	31%
Arizona	182,970	69,712	38%
United States	8,190,503	3,892,317	48%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B14003

Note: In this table, "school" may include nursery school, preschool, or kindergarten.

Table 39. Participation in center-based early education programs

PROGRAM	AGES	NUMBER OF STUDENTS ENROLLED
San Carlos Apache Head Start	3 to 4	233
Apache Kid Child Care	0 to 4	43
San Carlos Apache Child Readiness Program	4	40
Rice Elementary Preschool	3 to 4	23
TOTAL	0 to 4	339

Sources: First Things First. (2018). San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report.

Notes: This table presents data for school year 2015-2016 for all centers except Rice Elementary Preschool, for which enrollment as of October 1, 2015 is shown.

Table 40. Children receiving DES child care subsidies, 2015 to 2018

GEOGRAPHY	NUMBER OF CHILDREN RECEIVING SUBSIDIES, 2015	NUMBER OF CHILDREN RECEIVING SUBSIDIES, 2016	NUMBER OF CHILDREN RECEIVING SUBSIDIES, 2017	NUMBER OF CHILDREN RECEIVING SUBSIDIES, 2018
San Carlos Apache Region	46	33	27	21
Gila County	105	91	72	57
Arizona	19,040	17,784	16,922	19,813

Source: Arizona Department of Economic Security (DES) (2019). 2015-2018 Child Care Assistance Data. Unpublished data received by request.

Note: This table reflects children receiving subsidies who are not Department of Child Safety (DCS)-involved.

Table 41. DCS-involved children receiving DES child care subsidies, 2015 to 2018

GEOGRAPHY	NUMBER OF DCS CHILDREN RECEIVING SUBSIDIES				PERCENT OF ELIGIBLE DCS CHILDREN RECEIVING SUBSIDIES			
	2015	2016	2017	2018	2015	2016	2017	2018
San Carlos Apache Region	0	0	0	0	N/A	N/A	N/A	N/A
Gila County	54	54	33	21	87%	86%	85%	70%
Arizona	13,098	13,352	12,201	12,219	91%	89%	88%	82%

Source: Arizona Department of Economic Security (DES) (2019). 2015-2018 Child Care Assistance Data. Unpublished data received by request.

Table 42. Eligible families not using DES child care subsidies, 2015 to 2018

GEOGRAPHY	FAMILIES NOT USING SUBSIDIES 2015	FAMILIES NOT USING SUBSIDIES 2016	FAMILIES NOT USING SUBSIDIES 2017	FAMILIES NOT USING SUBSIDIES 2018
San Carlos Apache Region	13%	14%	19%	27%
Gila County	8%	6%	8%	17%
Arizona	6%	6%	7%	8%

Source: Arizona Department of Economic Security (DES) (2019). 2015-2018 Child Care Assistance Data. Unpublished data received by request.

High Quality Early Care and Education

Table 43. Children receiving DES subsidies in quality educational environments, 2017 and 2018

GEOGRAPHY	TOTAL NUMBER OF CHILDREN IN QUALITY ENVIRONMENTS, 2017	TOTAL NUMBER OF CHILDREN IN QUALITY ENVIRONMENTS, 2018
San Carlos Apache Region	0	0
Gila County	29	2 to 18
Arizona	13,706	17,295

Source: Arizona Department of Economic Security (DES) (2019). Child Care Assistance Dataset. Unpublished data received by request.

Note: These data only reflect children receiving child care subsidies from DES. Quality educational environments are defined by the Department of Economic Security as providers that are accredited by a national organization or providers that have received a state-approved quality indicator that is recognized by the department. More information about Arizona's quality educational environments can be found in the DES CCDF State Plan FY2019-FY2021, available at <https://des.az.gov/documents-center>

Table 44: First Things First Quality First child data, State Fiscal Year 2019

GEOGRAPHY	QUALITY FIRST SCHOLARSHIPS: NUMBER OF CHILDREN SERVED	NUMBER OF CHILDREN ENROLLED AT A QUALITY FIRST PROVIDER SITE	NUMBER OF CHILDREN ENROLLED AT A QUALITY FIRST PROVIDER SITE WITH A PUBLIC 3-5 STAR RATING	PERCENT OF CHILDREN IN A QUALITY-LEVEL SETTING (PUBLIC 3-5 STARS)
San Carlos Apache Region	0	391	118	30%
Arizona	9,179	62,215	45,278	73%

Sources: First Things First (2019). Quality First, a Signature Program of First Thing First. Unpublished data received by request; Nolita April Noline, San Carlos Apache Tribe Early Childhood Program Director. Text message. June 5, 2020. Christine Carlson, San Carlos Unified School District. Text message. June 5, 2020.

Note: These data reflect regionally-funded Quality First provider sites and statewide-funded Quality First Redesign provider sites. Data reflect children enrolled at provider sites with a public rating. Star ratings are not publicly available when provider sites decline to publish their initial rating or when a rating is not yet assigned.

Table 45. First Things First Quality First child care provider data, State Fiscal Year 2019

GEOGRAPHY	NUMBER OF CHILD CARE PROVIDERS SERVED	NUMBER OF CHILD CARE PROVIDERS SERVED WITH A PUBLIC 3-5 STAR RATING	PERCENT OF CHILD CARE PROVIDERS SERVED WITH A PUBLIC 3-5 STAR RATING
San Carlos Apache Region	7	5	71%
Arizona	1,119	821	73%

Source: First Things First (2019). Quality First, a Signature Program of First Thing First. Unpublished data received by request

Note: These data reflect regionally-funded Quality First provider sites and statewide-funded Quality First Redesign provider sites. Data reflect children enrolled at provider sites with a public rating. Star ratings are not publicly available when provider sites decline to publish their initial rating or when a rating is not yet assigned.

Young Children with Special Needs

Table 46. Children (ages 3-5) Enrolled in Special Education, 2015-16 to 2018-19

GEOGRAPHY	CHILDREN (AGES 3-5) IN SPECIAL EDUCATION (2015-16)	CHILDREN (AGES 3-5) IN SPECIAL EDUCATION (2016-17)	CHILDREN (AGES 3-5) IN SPECIAL EDUCATION (2017-18)	CHILDREN (AGES 3-5) IN SPECIAL EDUCATION (2018-19)
San Carlos Apache Region	29	58	58	46
Gila County	121	162	168	178
Arizona	14,295	15,257	16,159	16,432

Source: Arizona Department of Education (2019). 2015-16 to 2018-19 Special Education Enrollments. Unpublished data received by request.

Note: These data reflect children enrolled in Rice Elementary and Mt. Turnbull Elementary schools.

Table 47. Children (ages 3-5) Enrolled in Special Education by Type of Disability, 2018-19

GEOGRAPHY	CHILDREN (AGES 3-5) IN SPECIAL EDUCATION	DEVELOPMENTAL DELAY	SPEECH OR LANGUAGE IMPAIRMENT	PRE-SCHOOL SEVERE DELAY	AUTISM	HEARING IMPAIRMENT	OTHER DISABILITIES
San Carlos Apache Region	46	67%	DS	DS	DS	DS	DS
Gila County	178	56%	34%	7%	DS	DS	DS
Arizona	16,432	42%	39%	12%	3%	1%	3%

Source: Arizona Department of Education (2019). 2018-19 Special Education Enrollments. Unpublished data received by request.

Table 48. Percent of Students (Grade 1-3) Enrolled in Special Education, 2015-16 to 2018-19

GEOGRAPHY	STUDENTS IN SPECIAL EDUCATION (2015-16)	STUDENTS IN SPECIAL EDUCATION (2016-17)	STUDENTS IN SPECIAL EDUCATION (2017-18)	STUDENTS IN SPECIAL EDUCATION (2018-19)
San Carlos Apache Region	10%	16%	16%	17%
Gila County	12%	12%	14%	14%
Arizona	11%	11%	12%	12%

Source: Arizona Department of Education (2019). 2015-16 to 2018-19 Special Education Enrollments. Unpublished data received by request.

Table 49. Children referred to and found eligible for AzEIP, Federal Fiscal Years 2016 and 2017

GEOGRAPHY	NUMBER OF CHILDREN (AGES 0-2) REFERRED TO AzEIP, FFY2016	NUMBER OF CHILDREN (AGES 0-2) ELIGIBLE FOR AzEIP, FFY2016	PERCENT OF REFERRALS FOUND ELIGIBLE, FFY2016	NUMBER OF CHILDREN (AGES 0-2) REFERRED TO AzEIP, FFY2017	NUMBER OF CHILDREN (AGES 0-2) ELIGIBLE FOR AzEIP, FFY2017	PERCENT OF REFERRALS FOUND ELIGIBLE, FFY2017
San Carlos Apache Region	30 to 46	3 to 27	DS	26 to 42	12 to 28	DS
Gila County	138	65	47%	131	70	53%
Arizona	16,063	9,383	58%	16,344	9,770	60%

Source: Arizona Department of Economic Security (2019). Arizona Early Intervention Program (AZEIP) Service Dataset. Unpublished data received by request.

Table 50. AzEIP caseloads, 2017 and 2018

GEOGRAPHY	CUMULATIVE ACTIVE AzEIP CASES, 2017	CUMULATIVE ACTIVE AzEIP CASES, 2018	PERCENT CHANGE IN AzEIP CASELOADS FROM 2017 TO 2018
San Carlos Apache Region	20	17	-15%
Gila County	74	74	0%
Arizona	10,934	11,600	+6%

Source: Arizona Department of Economic Security (2019). Arizona Early Intervention Program (AZEIP) Service Dataset. Unpublished data received by request.

Table 51. Children (ages 0-2) receiving services from DDD, State Fiscal Years 2015 to 2018

GEOGRAPHY	CHILDREN (AGES 0-2) RECEIVING DDD SERVICES, SFY2015	CHILDREN (AGES 0-2) RECEIVING DDD SERVICES, SFY2016	CHILDREN (AGES 0-2) RECEIVING DDD SERVICES, SFY2017	CHILDREN (AGES 0-2) RECEIVING DDD SERVICES, SFY2018	PERCENT CHANGE FROM 2015 TO 2018
San Carlos Apache Region	<10	12	10	<10	DS
Gila County	26	29	16	20	-23%
Arizona	3,948	4,095	4,505	5,012	+27%

Source: Arizona Department of Economic Security (2019). 2015-2018 Division Developmental Disabilities (DDD) Data. Unpublished data received by request.

Table 52. Children (ages 3-5) receiving services from DDD, State Fiscal Years 2015 to 2018

GEOGRAPHY	CHILDREN (AGES 3-5) RECEIVING DDD SERVICES, SFY2015	CHILDREN (AGES 3-5) RECEIVING DDD SERVICES, SFY2016	CHILDREN (AGES 3-5) RECEIVING DDD SERVICES, SFY2017	CHILDREN (AGES 3-5) RECEIVING DDD SERVICES, SFY2018	PERCENT CHANGE FROM 2015 TO 2018
San Carlos Apache Region	0	0	<10	<10	DS
Gila County	<10	<10	<10	<10	DS
Arizona	887	898	1,049	1,154	+30%

Source: Arizona Department of Economic Security (2019). 2015-2018 Division Developmental Disabilities (DDD) Data. Unpublished data received by request.

Child Health

Why it Matters

The physical and mental health of both children and their parents are important for optimal child development and well-being. Starting with the mother's health before pregnancy, many factors influence a child's health.¹⁶³ Exposures and experiences in utero, at birth, and during the early years set the stage for health and well-being throughout a child's life.^{164,165} Access to health insurance and preventive care influence not only a child's current health, but long-term development and future health.^{166,167,168} Various health care services, depending on the region, are available to members of federally-recognized Indian tribes from Indian Health Service (IHS) facilities and/or other tribally-administered health care facilities.^{169,170}

Access to health services. The ability to obtain health care is critical for supporting the health of pregnant mothers and young children. Health care during pregnancy, or prenatal care, can reduce maternal and infant mortality and complications during pregnancy.^{171,172} In the early years of a child's life, well-baby and well-child visits allow clinicians to assess and monitor the child's development and offer developmentally appropriate information and guidance to parents.¹⁷³ Families without health insurance are more likely to skip these visits, and are less likely to receive preventive care for their children, or care for health conditions and chronic diseases.^{174,175} Thus, access to health insurance is an indicator of children's access to health services. Children who lack health insurance are also more likely to be hospitalized and to miss school.¹⁷⁶ Despite being eligible to receive health care services through IHS facilities and/or tribally-operated facilities, Native communities often struggle to access adequate, high quality care. Services and funding are often limited at IHS facilities,¹⁷⁷ and eligibility for IHS services alone does not meet the minimum essential coverage requirement under the Affordable Care Act.¹⁷⁸ Transportation is a challenge in many rural tribal regions, which can also limit access to care. Close to one in 5 households on tribal lands do not have a vehicle available (17%), which is more than double the proportion of households without a vehicle statewide (7%).¹⁷⁹

Maternal, infant, and child health. A number of factors occurring before conception and in utero influence child health, making characteristics of pregnant women important determinants of the birth and developmental outcomes of their children. 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.¹⁸⁰ 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.^{181,182,183}

In addition to age, a mother's health status before, during, and after pregnancy influences her child's health. Women who are obese before they become pregnant are at a higher risk of birth

complications and neonatal and infant mortality than women who are normal weight before pregnancy.^{184,185} Babies born to obese women are at risk for chronic conditions later in life such as diabetes and heart disease.¹⁸⁶ 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 (fewer than 5 pounds, 8 ounces) are also at increased risk of infant mortality and longer-term health problems such as diabetes, hypertension and cardiac disease.¹⁸⁷

Maternal mental health is a factor for children's well-being as well. Maternal depression during and after pregnancy negatively influences the mother's ability to maintain a healthy pregnancy as well as meet the demands of motherhood and form a secure attachment with her baby.^{188,189} Quality preconception counseling and early-onset prenatal care can help reduce some of these risks for poor prenatal and postnatal outcomes by providing information, conducting screenings, and supporting an expectant mother's health and nutrition.¹⁹⁰

Substance use disorders. A mother's use of substances such as drugs and alcohol also has implications for her baby. Babies born to mothers who smoke are more likely to be born early (pre-term), have low birth weight, die from sudden infant death syndrome (SIDS) and have weaker lungs than babies born to mothers who do not smoke.^{191,192} Opiate use during pregnancy, either illegal or prescribed, has been associated with neonatal abstinence syndrome (NAS), a group of conditions that causes infants exposed to these substances in the womb to be born exhibiting withdrawal symptoms.¹⁹³ This can create longer hospital stays, increase health care costs and increase complications for infants born with NAS. Infants exposed to cannabis (marijuana) in utero often have lower birth weights and are more likely to be placed in neonatal intensive care compared to infants whose mothers had not used the drug during pregnancy.¹⁹⁴

Parental substance abuse also has other impacts on family wellbeing. According to the National Survey of Children's Health, young children in Arizona are more than twice as likely to live with someone with a problem with alcohol or drugs than children in the US as a whole (9.8 percent compared to 4.5 percent). Children of parents with substance use disorders are more likely to be neglected or abused and face a higher risk of later mental health and behavioral health issues, including developing substance use disorders themselves. Substance abuse treatment and supports for parents and families grappling with these issues can help to ameliorate the short and long-term impacts on young children.

Nutrition and weight status. 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.¹⁹⁵ The American Academy of Pediatrics recommends exclusive breastfeeding for about six months, and continuing to breastfeed as new foods are introduced

for 1 year or longer.¹⁹⁶ American Indians have the lowest breastfeeding rate nationwide. There is a movement to reclaim breastfeeding among Native women to benefit the health of the mother, child, and community. In one example of an effort to address this issue, the Indian Health Service (IHS) has been tasked to make all IHS birthing hospitals baby-friendly, which includes breastfeeding support as part of maternity care.¹⁹⁷

A child's weight status can have long-term impacts on health and well-being. Nationwide, an estimated three percent of children ages 2-19 are underweight, 16.6 percent are overweight, and 18.5 percent are obese.^{198,199} Obesity can have negative consequences on physical, social, and psychological well-being that begin in childhood and continue into and throughout adulthood.²⁰⁰ 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 and increased risk for obesity and metabolic syndrome (which is linked to an increase risk of heart disease, stroke, and diabetes).^{201, 202}

Oral health. Oral health and good oral hygiene practices are important to children's overall health. Tooth decay and early childhood cavities can have short- and long-term consequences including pain, poor appetite, disturbed sleep, lost school days, and reduced ability to learn and concentrate.²⁰³ A national study showed that low-income children were more likely than higher income children to have untreated cavities.²⁰⁴ Despite high percentages of young Arizona children who have preventative dental care visits (68.4%) compared to the national average (57.8%), there is a relatively high percentage who have had decayed teeth or cavities (11.1%) compared to those across the nation overall (7.7%).²⁰⁵ Low-income children in Arizona, specifically, are more likely to have untreated cavities and less likely to have had an annual dental visit than their higher-income peers.²⁰⁶ According to a 2015 study, among kindergarteners, American Indian children in Arizona had significantly higher incidences of decay (75% AIAN versus 52% all races), and untreated decay (48% AIAN versus 24% all races), relative to all kindergarteners.²⁰⁷

First Things First's Oral Health strategy was able to provide 24,664 children birth to age 5 with a dental screening, and 16,837 children with a fluoride varnish in the Arizona State Fiscal Year 2019.²⁰⁸ Many children had untreated tooth decay and other oral health needs identified through the screenings. Further, attempts were made to connect children to dental homes who either did not already have a dental home or who needed dental care.

Childhood immunizations. Immunization against preventable diseases protects children and the surrounding community from illness and potentially death. In order to ensure community immunity of preventable diseases, which helps to protect unvaccinated children and adults, rates of vaccination in a community need to remain high.²⁰⁹

Illness and injury. Asthma is the most common chronic illness affecting children,²¹⁰ and it is more prevalent among boys, Black children, American Indian or Alaska Native children, and children in low-income households.^{211,212} The total healthcare costs of childhood asthma in the United States are estimated to be between \$1.4 billion and \$6.4 billion, but these costs could be reduced through better management of asthma to prevent hospitalizations.²¹³ Unintentional injuries are the leading cause of death for children in Arizona²¹⁴ and nationwide.²¹⁵ It is estimated that as many as ninety percent of unintentional injury-related deaths could be preventable through better safety practices, such as use of proper child restraints in vehicles and supervision of children around water.²¹⁶ Children in rural areas are at higher risk of unintentional injuries than those who live in more urban areas, as are children in Native communities, suggesting that injury prevention is an especially salient need in these areas.^{217,218}

One useful metric for evaluating child health in Arizona are the Healthy People objectives. These science-based objectives define priorities for improving the nation's health and are updated every 10 years. Understanding where Arizona mothers and children fall in relation to these current national benchmarks (Healthy People 2020) can help highlight areas of strength in relation to young children's health and those in need of improvement in the state. The Arizona Department of Health Services monitors state level progress towards a number of maternal, infant and child health objectives for which data are available at the county level, including increasing the proportion of pregnant women who receive prenatal care in the first trimester; reducing low birth weight; reducing preterm births; and increasing abstinence from cigarette smoking among pregnant women.²¹⁹

What the Data Tell Us

Access to Health Services

- In the San Carlos Apache Region, almost one in five (17%) people lack health insurance coverage, a percent that is lower than that in all Arizona reservations (22%), but higher than the state of Arizona (12%). The proportion of young children who are uninsured is lower than that of the general population in all three geographies, with higher rates in the region (14%) and all Arizona reservations (16%) than the state (7%). It is important to note that the U.S. Census Bureau does not consider coverage by the Indian Health Service (IHS) to be insurance coverage (Table 53 & Figure 10).
- In 2017, the most recent year for which data are available, Arizona Health Care Containment System (AHCCCS) paid for 40 percent of the 255 births in the region, while IHS paid for 53 percent of them (Table 54).

Maternal, Infant, and Child Health

- A high proportion of births in the San Carlos Apache Region in 2017 were to women who did not have adequate prenatal care. More than half (58%) of births in the region were no mothers who had no prenatal care in their first trimester, a percentage that is substantially higher than the Healthy People 2020 target of not more than 22.1 percent. Similarly, over one-third (35%) of births were to women who had fewer than five prenatal visits, compared to twelve percent in Gila County and eight percent in the state (Table 55).
- The proportion of babies born at low birth weight is slightly higher in the San Carlos Apache Region (7.8%) than the state (7.5%), but both meet the Healthy People 2020 target of 7.8 percent or lower (Table 56).
- Almost one in seven (13.7%) births in the region in 2017 were preterm births (i.e. fewer than 37 weeks), higher than the state rate of 9.3 percent, and also higher than the Healthy People 2020 target of not more than 9.4 percent (Table 56).
- The percentage of births to women using tobacco during pregnancy in 2017 did not meet the Healthy People 2020 target (i.e. no more than 1.4 percent) in the region (5.9%), Gila County (14.6%) and the state (4.7%) (Table 56).
- In 2017, a higher proportion of the births in the San Carlos Apache Region (4%) were to mothers younger than 18 compared to Gila County (2%) and the state (2%) (Table 56).

Oral Health

- In 2019, 37 children aged birth to five years in the San Carlos Apache Region received dental screenings. Thirty-four young children received fluoride varnishes (Table 58).

Child Immunizations

- The trend for immunization for children in child care in the region during the 2018-2019 school year was high. One hundred percent of students in child care received required immunizations (Table 60 & Table 62).
- In school year 2018-2019 vaccination rates among kindergarteners in the San Carlos Apache Region were above 95 percent for all required immunizations for their age. Vaccination rates in the region were higher than rates in Gila County and the state, and met the Healthy People 2020 targets (Table 61).
- There were no exemptions from all required vaccinations among kindergarteners in the San Carlos Apache Region in school years 2017-2018 and 2018-2019. During school year 2017-2018, 0.6 percent of kindergarteners received an exemption for personal beliefs. In all three school years, immunization exemption rates were consistently lower in the region than in Gila County and the state (Table 63).

Illness and Injury

- From 2015 to 2018 there were 32 non-fatal inpatient hospitalizations for unintentional injuries of young children from the San Carlos Apache Region. The most common reason (44%) for hospitalization was for burns. For the state, the most common reasons for hospitalization were falls (33%) and poisoning (15%) (Table 64).
- From 2015 to 2017 there were 16 inpatient hospitalizations and emergency room visits for asthma among young children from the region. The average length of stay for asthma hospitalization (2.4 days) was higher for the San Carlos Apache Region than the state (1.9 days) (Table 65).
- From 2015 to 2018 there were 296 emergency room visits for non-fatal incidents for young children in the region. The most common reasons for these non-fatal emergency room visits were falls (33%) and 'natural or environment' factors (24%). For Gila County and Arizona, the most common unintentional injuries were caused by falls (38% and 46%, respectively), and then being 'struck by or against' an object or person (16% and 14%, respectively) (Table 66).
- From 2015 to 2017, a total of 15 child deaths occurred in the San Carlos Apache Region, of which 13 were young children (ages 0-4) (Table 67).

Access to Health Services

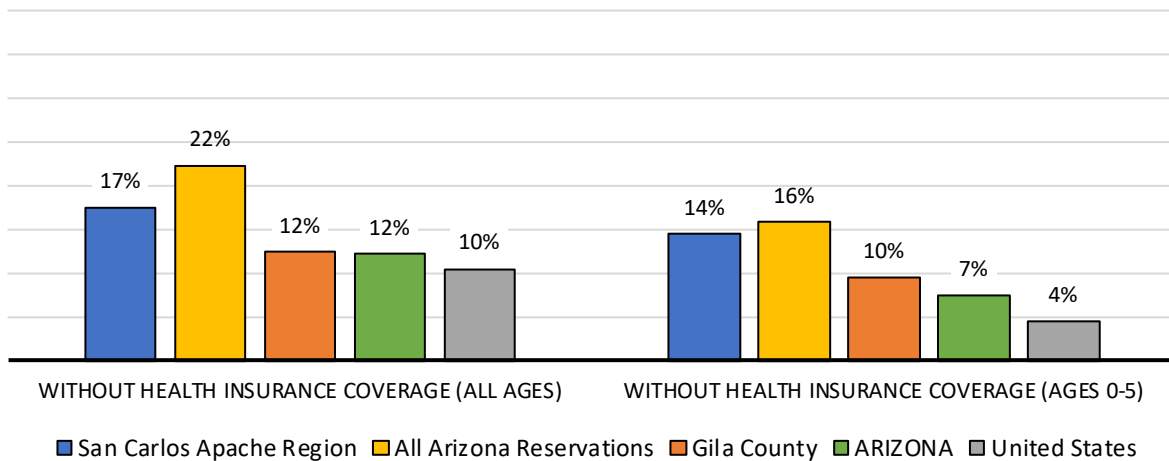
Table 53. Health insurance coverage

GEOGRAPHY	POPULATION (ALL AGES)	PERCENT WITHOUT HEALTH INSURANCE COVERAGE (ALL AGES)	POPULATION OF YOUNG CHILDREN (AGES 0-5)	PERCENT WITHOUT HEALTH INSURANCE COVERAGE (AGES 0-5)
San Carlos Apache Region	10,611	17%	1,633	14%
All Arizona Reservations	186,018	22%	18,649	16%
Gila County	52,401	12%	3,667	10%
Arizona	6,701,990	12%	520,741	7%
United States	316,027,641	10%	23,832,080	4%

Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B27001

Note: This table excludes persons in the military and persons living in institutions such as college dormitories. People whose only health coverage is the Indian Health Service (IHS) are considered “uninsured” according to the U.S. Census Bureau.

Figure 10. Health insurance coverage for the population (all ages) and for young children (ages 0 to 5)



Source: U.S. Census Bureau (2018). American Community Survey five-year estimates 2013-2017, Table B27001

Note: This table excludes persons in the military and persons living in institutions such as college dormitories. People whose only health coverage is the Indian Health Service (IHS) are considered ‘uninsured’ according to the U.S. Census Bureau.

Table 54. Payors for births during calendar year 2017

GEOGRAPHY	TOTAL NUMBER OF BIRTHS IN 2017	BIRTHS PAID BY AHCCCS	BIRTHS PAID BY IHS	BIRTHS SELF-PAY
San Carlos Apache Region	255	40%	53%	DS
Gila County	541	59%	14%	3%
Arizona	81,664	53%	1%	5%

Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Maternal, Infant, and Child Health

Table 55. Prenatal care for mothers giving birth during calendar year 2017

GEOGRAPHY	TOTAL NUMBER OF BIRTHS IN 2017	MOTHERS WHO HAD NO PRENATAL CARE	MOTHERS WHO HAD NO PRENATAL CARE IN FIRST TRIMESTER	MOTHERS WHO HAD FEWER THAN FIVE PRENATAL VISITS
San Carlos Apache Region	255	9%	58.0%	35%
Gila County	541	3%	38.3%	12%
Arizona	81,664	3%	26.4%	8%
Healthy People 2020 target			22.1%	

Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Table 56. Various risk factors for births during calendar year 2017

GEOGRAPHY	TOTAL NUMBER OF BIRTHS IN 2017	LOW BIRTH-WEIGHT	PRETERM (LESS THAN 37 WEEKS)	NICU ADMISSIONS	MOTHER USED TOBACCO	MOTHER YOUNGER THAN 18	MOTHER YOUNGER THAN 20
San Carlos Apache Region	255	7.8%	13.7%	7%	5.9%	4%	13%
Gila County	541	10.9%	10.9%	7%	14.6%	2%	10%
Arizona	81,664	7.5%	9.3%	7%	4.7%	2%	6%
Healthy People 2020 targets		7.8%	9.4%		1.4%		

Source: ADHS Office of Disease Prevention and Health Promotion. (2019). Arizona Health Status and Vital Statistics.

Table 57. Neonatal abstinence syndrome (NAS), calendar years 2016 and 2017

GEOGRAPHY	NAS CASE COUNT	NAS RATE PER 1,000 LIVE BIRTHS
Gila County	21	18.5
Arizona	1,228	7.4

Source: ADHS Arizona Health Status and Vital Statistics. Office of Disease Prevention and Health Promotion (2019), and Kyle Gardner. Office of Injury Prevention

Oral Health

Table 58. First Things First oral health strategy data, State Fiscal Year 2019

GEOGRAPHY	CHILDREN (AGES 0-5) RECEIVING DENTAL SCREENINGS	CHILDREN (AGES 0-5) RECEIVING FLUORIDE VARNISHES
San Carlos Apache Region	37	34
Arizona	24,664	16,837

Source: First Things First (2019). Oral Health Strategy Data. Unpublished data received by request

Child Immunizations

Table 59. Cases of infectious diseases among young children (ages 0-5), 2015-2018 cumulative

GEOGRAPHY	INFLUENZA	RESPIRATORY SYNCYTIAL VIRUS (RSV)	VARICELLA	PERTUSSIS	HAEMOPHILUS INFLUENZAE	MUMPS
Gila County	57	27	<6	<6	<6	<6
Arizona	5,449	4,201	70	51	31	<6

Source: Arizona Department of Health Services. (2019). 2015-2018 Child Infectious Disease Data. Custom data tabulation from requested data.

Note: These numbers include both confirmed and probable cases. There were zero reported cases of meningococcal meningitis or measles.

Table 60. Children enrolled in the preschool program at Rice Elementary with required immunizations, 2018-19

GEOGRAPHY	NUMBER OF CHILDREN ENROLLED IN CHILD CARE							
	CARE	DTAP	POLIO	MMR	HIB	HEPATITIS-A	HEPATITIS-B	VARICELLA
San Carlos Apache Region	28	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gila County	412	87.4%	89.6%	90.8%	88.1%	75.7%	91.3%	93.4%
Arizona	86,829	92.4%	94.2%	94.9%	94.2%	85.5%	93.3%	94.7%
Healthy People 2020 targets		90.0%	90.0%	90.0%	90.0%	85.0%	90.0%	90.0%

Source: Arizona Department of Health Services (2019). 2018-19 Child Care Immunization Data. Custom data tabulation from requested data; Arizona Department of Health Services (2019). Childcare Immunization Coverage by County, 2018-2019 School Years. Retrieved from <https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage>

Note: The hepatitis A vaccine series (2 doses) is only required in Maricopa County child care settings, but is recommended in all other Arizona counties.

Table 61. Kindergarteners with required immunizations, 2018-19

GEOGRAPHY	ENROLLED (2018-19)	DTAP (2018-19)	POLIO (2018-19)	MMR (2018-19)	HEPATITIS B (2018-19)	VARICELLA (2018-19)
San Carlos Apache Region	164	95.7%	96.3%	95.7%	99.4%	99.4%
Gila County	591	93.1%	92.6%	91.4%	95.1%	95.3%
Arizona	79,981	92.7%	93.3%	93.0%	94.4%	95.6%
Healthy People 2020 targets		95.0%	95.0%	95.0%	95.0%	95.0%

Source: Arizona Department of Health Services (2019). 2018-19 Kindergarten Immunization Data. Custom data tabulation from requested data; Arizona Department of Health Services (2019). Kindergarten Immunization Coverage by County, 2018-2019 School Years. Retrieved from <https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage>

Note: the data on this table reflect combined immunization rates for children in kindergarten at Rice Elementary, Mt. Turnbull Elementary and Peridot Lutheran School.

Table 62. Child care immunization exemption rates for children enrolled in the preschool program at Rice Elementary, 2016-17 to 2018-19

GEOGRAPHY	RELIGIOUS EXEMPTION (2016-17)	RELIGIOUS EXEMPTION (2017-18)	RELIGIOUS EXEMPTION (2018-19)	EXEMPT FROM EVERY REQUIRED VACCINE (2017-18)	EXEMPT FROM EVERY REQUIRED VACCINE (2018-19)
San Carlos Apache Region	0.0%	0.0%	0.0%	0.0%	0.0%
Gila County	2.7%	4.7%	6.6%	3.5%	5.6%
Arizona	3.9%	4.3%	4.5%	2.9%	3.0%

Source: Arizona Department of Health Services (2019). 2016-2017 to 2018-19 Child Care Immunization Data. Custom data tabulation from requested data; Arizona Department of Health Services (2019). Childcare Immunization Coverage by County, 2016-17 to 2018-2019 School Years. Retrieved from <https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage>

Table 63. Kindergarten immunization exemption rates, 2016-17 to 2018-19

GEOGRAPHY	PERSONAL BELIEF EXEMPTION (2016-17)	PERSONAL BELIEF EXEMPTION (2017-18)	PERSONAL BELIEF EXEMPTION (2018-19)	EXEMPT FROM EVERY REQUIRED VACCINE (2017-18)	EXEMPT FROM EVERY REQUIRED VACCINE (2018-19)
San Carlos Apache Region	0.0%	0.6%	0.0%	0.0%	0.0%
Gila County	3.2%	4.7%	5.9%	2.2%	3.6%
Arizona	4.9%	5.3%	5.9%	3.4%	3.8%

Source: Arizona Department of Health Services (2019). 2016-2017 to 2018-19 Kindergarten Immunization Data. Custom data tabulation from requested data; Arizona Department of Health Services (2019). Kindergarten Immunization Coverage by County, 2016-17 to 2018-2019 School Years. Retrieved from <https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage>

Note: the data on this table reflect combined immunization exemption rates for children in kindergarten at Rice Elementary, Mt. Turnbull Elementary and Peridot Lutheran School.

Illness and Injury

Table 64. Non-fatal hospitalizations of young children (ages 0-5) for unintentional injuries, 2015-2018 cumulative

GEOGRAPHY	NUMBER OF NON-FATAL INPATIENT HOSPITALIZATIONS FOR CHILDREN (AGES 0-5), 2015-2018 TOTALS	MOST COMMON REASON FOR HOSPITALIZATION	SECOND MOST COMMON REASON FOR HOSPITALIZATION
San Carlos Apache Region	32	Burns (44%)	DS
Gila County	27	DS	DS
Arizona	3,015	Falls (33%)	Poisoning (15%)

Source: Arizona Department of Health Services (2019). 2015-2018 Hospital Discharge Data. Unpublished data received by request.

Table 65. Asthma hospitalizations and emergency-room visits, 2015-2017 cumulative

GEOGRAPHY	NUMBER OF INPATIENT HOSPITALIZATIONS FOR ASTHMA (AGES 0 TO 5, EXCEPT NEWBORNS), 2015-2017 TOTALS	AVERAGE LENGTH OF STAY (DAYS) FOR ASTHMA HOSPITALIZATION (AGES 0-5 EXCEPT NEWBORNS), 2015-2017	NUMBER OF EMERGENCY ROOM VISITS FOR ASTHMA (AGES 0 TO 5, EXCEPT NEWBORNS), 2015-2017 TOTALS
San Carlos Apache Region	16	2.4	43
Gila County	17	1.7	58
Arizona	2,232	1.9	12,812

Source: Arizona Department of Health Services (2019). 2015-2017 Hospital Discharge Data. Unpublished data received by request.

Table 66. Non-fatal emergency-room visits by young children (ages 0-5) for unintentional injuries, 2015-2018 cumulative

GEOGRAPHY	NUMBER OF NON-FATAL EMERGENCY ROOM VISITS FOR CHILDREN (AGES 0-5), 2015-2018 TOTALS	MOST COMMON REASON FOR EMERGENCY ROOM VISIT	SECOND MOST COMMON REASON FOR EMERGENCY ROOM VISIT
San Carlos Apache Region	296	Falls (33%)	Natural or environment (24%)
Gila County	1,617	Falls (38%)	Struck by or against (16%)
Arizona	181,068	Falls (46%)	Struck by or against (14%)

Source: Arizona Department of Health Services (2019). 2015-2018 Hospital Discharge Data. Unpublished data received by request.

Note: "Struck" denotes being struck by or against an object or person, not including vehicles.

Table 67. Child mortality, 2015-2017 cumulative

GEOGRAPHY	TOTAL NUMBER OF CHILD DEATHS (AGES 0-4), 2015 TO 2017	TOTAL NUMBER OF CHILD DEATHS (AGES 0-17), 2015 TO 2017
San Carlos Apache Region	13	15
Gila County	15 to 20	28
Arizona	1,682	2,357

Source: Arizona Department of Health Services (2019). 2018 Child Mortality Data. Unpublished data received by request.

Family Support and Literacy

Why it Matters

Families and caregivers play a critical role as their child’s first and most important teacher. Positive and responsive early relationships and interactions support optimal brain development during a child’s earliest years and lead to better social, physical, academic, and economic outcomes later in life.^{220,221,222,223} Parental and family involvement is positively linked to academic skills and literacy in preschool, kindergarten, and elementary school.²²⁴ Children benefit when their families have the knowledge, resources, and support to use positive parenting practices, and support their child’s healthy development, nutrition, early learning, and language acquisition. Specifically, knowledge of positive parenting practices and child development has been identified as one of five key protective factors that improve child outcomes and reduce the incidence of child abuse and neglect.^{xi,225}

Early literacy. Parental and family involvement is positively linked to academic skills and literacy in preschool, kindergarten and elementary school.²²⁶ Early literacy promotion, through singing, telling stories, and reading together, is so central to a child’s development that the American Academy of Pediatrics has emphasized it as a key issue in primary pediatric care, aiming to make parents more aware of their important role in literacy.²²⁷ A child’s reading skills when entering elementary school have been shown to strongly predict academic performance in later grades, emphasizing the importance of early literacy for future academic success.^{228,229} Home-based literacy practices between parents and caregivers and young children, specifically, have been shown to improve children’s reading and comprehension, as well as children’s motivation to learn.^{230,231} However, low-income families may face additional barriers to home-based literacy practices, including limited free time with children, limited access to books at home, and a lack of knowledge of kindergarten readiness.²³² Communities may employ many resources to support families in engaging with their children, including through targeted programs like home visitation programs and “stay and play” programs, or participating in larger initiatives like Read On Arizona or the national “Reach Out and Read” program.²³³

Arizona children’s reading scores are below the national average. Of all the students in Arizona, Native American students face the biggest need for improved literacy.²³⁴ The Bureau of Indian

^{xi} The Center for the Study of Social Policy developed Strengthening Families: A Protective Factors Framework™ to define and promote quality practice for families. The research-based, evidence-informed Protective Factors are characteristics that have been shown to make positive outcomes more likely for young children and their families, and to reduce the likelihood of child abuse and neglect. Protective factors include: parental resilience, social connections, concrete supports, knowledge of parenting and child development, and social and emotional competence of children.

Education (BIE)'s Family and Child Education (FACE) program was developed to address some of the unique early literacy needs of American Indian children. The program includes training for staff at child care centers, parenting education and support, Native American language and cultural learning, and reading and learning practices for the family and child.²³⁵

Adverse childhood experiences. Unfortunately, not all children are able to begin their lives in positive, stable environments. Experiences early in life can have lasting impacts on an individual's mental and physical health. Adverse Childhood Experiences (ACEs) have been linked to future risky health behaviors (such as smoking, drug use, and alcoholism), chronic health conditions (including diabetes, depression, and obesity), poorer life outcomes (such as lower educational achievement and increased lost work time), and early death.²³⁶ Alternatively, Positive Childhood Experiences (PCEs), including positive parent-child relationships and feelings of safety and support, have been shown to have similarly cumulative, though positive, long-term impacts on mental and relational health.²³⁷ Nationally and in Arizona, very young children are most at risk for child abuse, neglect, and fatalities from abuse and neglect. In 2017, children five years old and younger made up more than half (55%) of child maltreatment victims in Arizona.²³⁸ Future poor health outcomes are also more likely as an individual's ACE score increases.²³⁹ Children in Arizona are considerably more likely to have experienced two or more ACEs (27.3%), compared to children across the country (8.3%).²⁴⁰ These children and their families may require specific, targeted resources and interventions in order to reduce harm and prevent future risk.²⁴¹ In Native American communities, where historical trauma compounds the effects of ACEs, healing may take place through an integration of healthcare-based interventions (physical, behavioral, and mental health), and interventions that build on the strength of culture and community.^{242,243,244}

Mental and behavioral health. Behavioral health supports, both for children and caregivers, are often needed to address exposure to adverse childhood events. Infant and toddler mental health development involves the young child's developing capacity to "experience, regulate and express emotions; form close interpersonal relationships; and explore the environment and learn."²⁴⁵ When young children experience stress and trauma they often suffer physical, psychological, and behavioral consequences and have limited responses available to react to those experiences. Understanding the behavioral health of mothers is also important for the well-being of Arizona's young children. Mothers dealing with behavioral health issues such as depression may not be able to perform daily caregiving activities, form positive bonds with their children, or maintain relationships that serve as family supports.²⁴⁶

Child removals and foster care. There are situations where the harm in remaining with their family is determined to be too great to a child and they are removed from their home, either temporarily or permanently. Children involved in foster care systems often have physical and

behavioral health issues, in addition to the social-emotional needs brought on by being removed from a parent’s care.²⁴⁷ Foster parents often need education, support and resources to ensure they are able to successfully care for foster children who may have these added health needs. According to a 2015 Arizona Department of Child Safety Independent Review, focusing on evidence-based targeted interventions for families at risk of child removal—including home visitation, positive parenting programs, and family-based therapy—may help lower this risk, thus reducing placements in the foster care system.²⁴⁸ In accordance with the Indian Child Welfare Act of 1978 (ICWA), many tribal governments manage their own child welfare systems and state systems must work cooperatively with them.²⁴⁹ ICWA established federal guidelines that are to be followed when an Indian child enters the welfare system in all state custody proceedings. Under ICWA, an Indian child’s family and tribe are able and encouraged to be actively involved in the decision-making that takes place regarding the child, and may petition for tribal jurisdiction over the custody case. ICWA also mandates that states make every effort to preserve Indian family units by providing family services before an Indian child is removed from his or her family, and after an Indian child is removed through family reunification efforts.²⁵⁰

What the Data Tell Us

Family Involvement

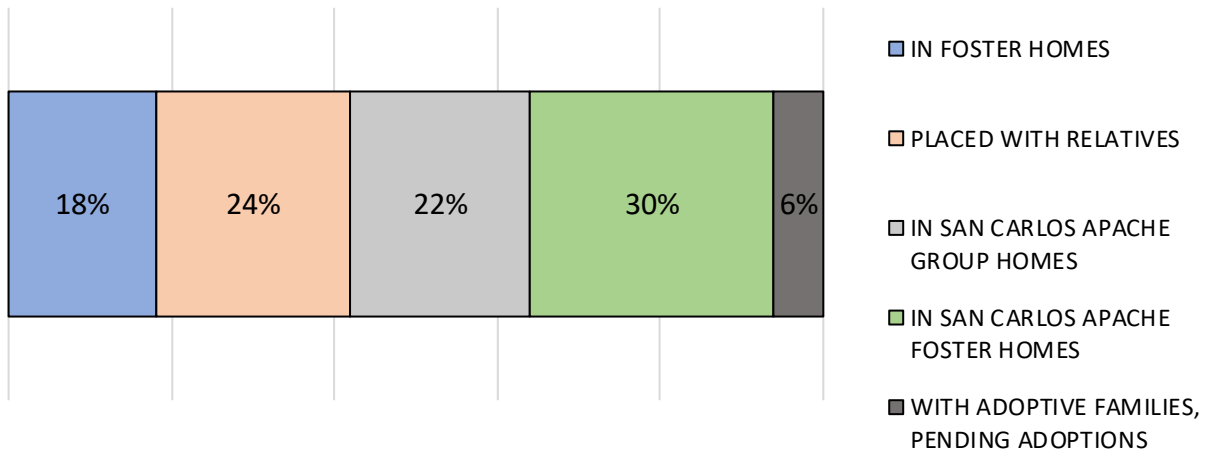
- According to the San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report, more awareness is needed among parents and caregivers regarding the importance of positive adult-child interactions, including positive discipline, daily structure and reading books. The report also points out that there is a need to increase parent involvement and to support early literacy in the region.²⁵¹
- Access to books for young children is a challenge in the San Carlos Apache Region. In order to address this need, the San Carlos Apache Regional Partnership Council funds a Parenting Outreach and Awareness strategy contracted to the Gila County Library District. This program promotes early literacy development among young children in the region and increases families' awareness of positive parenting. The program also provides information on child development including health, nutrition, early learning and language acquisition. Staff with the program deliver presentations to parents and caregivers throughout the community and participants can be enrolled in "The Dolly Parton Imagination Library" program and receive age-appropriate selected children's books by mail each month.²⁵²
- An important initiative that promotes early literacy in the region is Read On. Read On San Carlos Apache Tribe became the first tribal Read On community in Arizona in 2015.²⁵³

Child Removals and Foster Care

- Child welfare services in the San Carlos Apache Region are overseen by the San Carlos Apache Social Services Department. According to the San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report, in 2015, a total of 159 cases of child abuse or neglect were substantiated, down from 208 in 2014. In 2015, there were 25 foster care homes available to care for children in out-of-home placement, an increase from the 18 homes available in 2013. Twenty of those were on the reservation, while the remaining were located off-reservation boundaries. These homes provided a total of 30 foster care beds.²⁵⁴
- In 2015, the majority of children were placed in foster homes licensed by the San Carlos Apache Social Services Department (30%), with relatives (24%) and in San Carlos Apache group homes (22%) (Figure 11).²⁵⁵

Child Removals and Foster Care

Figure 11. Placement of Wards (ages 0-17), 2015 Monthly Averages



Source: Source: First Things First. (2018). San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report.

Systems Coordination among Early Childhood Programs and Services

Why it Matters

From November 2016 to June 2017, First Things First convened the second Arizona Early Childhood Task Force, comprised of diverse leaders from across the state. The goal of the task force was to create an ambitious, yet attainable, statewide five-year plan for First Things First and Arizona’s early childhood system. Building from the model early-childhood system developed in 2010, the task force identified six desired outcomes, one of which is “when the early childhood system is successful, everyone will benefit from living in communities where the early childhood system is high-quality, centered on children and families, coordinated, integrated and comprehensive.” First Things First’s role in building this system is to foster cross-system collaboration among local, state, federal, and tribal organizations to improve the coordination and integration of programs, services, and resources for young children and their families.

Through system building, First Things First connects various components of the early childhood system to create a more holistic system that promotes shared results for children and families. Agencies that work together are often easier for families to access, and the services they provide are more responsive to those families’ needs. Coordination efforts may also increase agencies’ capacity to deliver services by identifying and addressing gaps in the service delivery continuum. By supporting a variety of coordination efforts, First Things First aims to create a high quality, interconnected, and comprehensive system of early-childhood service delivery that enhances children’s overall development and that is timely, culturally responsive, family driven, and community based. Determining how these efforts are affecting each of the 28 regions and their families can help inform services, programs, and policy decisions to benefit families and young children throughout the state.

What the Data Tell Us

The First Things First San Carlos Apache Regional Partnership Council support coordination efforts in the region through its San Carlos Apache Early Childhood Development and Health Collaborative. The Collaborative brings together representatives from tribal, state and federal programs serving families in the region. Members meet every other month to exchange information about their programs, network and strengthen collaborative relationships among them.

The long-term objective of the Collaborative is to build stronger collaborative relationships among providers and to achieve high level of coordination that result in increased availability and access to services for families and children.

Another important effort undergoing in the region is the Read on San Carlos Apache Tribe initiative, a collaborative literacy project facilitated by the San Carlos Apache Early Childhood Development and Health Collaborative and First Things First. This approach provides a coordinated effort for literacy opportunities and collaboration among the different organizations that provide literacy services in the region.

In the health area, coordination and communication among various programs providing health care services has greatly improved with the co-location of these programs in the campus of the new San Carlos Healthcare Corporation. To focus on system building aimed at building the network of service providers that exist in the region, the regional council set out to build a stronger relationship between the San Carlos Apache Tribe's Department of Health and Human Services (SCAT DHHS) and the San Carlos Apache Healthcare Corporation (SCAHC). Bringing two organizations together to collaborate on public health issues and health services is no small feat. The challenge has been to increase understanding of the system of services and to exchange information for mutual benefit. Although meetings with the SCAT DHHS executive director and the DHHS executive team have taken place on multiple occasions, there remains a need for reaching out to SCAHC to learn more about their entity and further build relationships.

The San Carlos Apache Tribe's Education Department oversee the Early Childhood Program that consists of all tribal child care centers, Early Head Start and Head Start. While physically building the early childhood system has allowed for much needed growth in the number of early childhood providers in the region the executive director of the Tribal Education Department recognizes the need for and the importance of strengthening the collaboration between her programs and the Tribe's Department of Health and Human Services (SCAT DHHS). Recent meetings between the Tribe's Education Department and the Tribe's Wellness Center (behavioral health services) took place. In these first of its kind meetings much needed

conversations and discussion have taken place regarding the needs for the Early Childhood Programs.

Communication, Public Information and Awareness

Why it Matters

Public awareness of the importance of early childhood development and health is critical in building a comprehensive, effective early childhood system in Arizona. Building public awareness and support for early childhood impacts individual behaviors 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 age five. This could include a range of actions—from influencing their personal networks by sharing early childhood information to actively encouraging community leaders to support programs and services for young children. For parents and other caregivers, awareness is the first step to engaging in programs or behaviors that will better support their child’s health and development.

There is no 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 paid media advertising to grassroots, community-based tactics such as community outreach—ensures that diverse audiences are reached more effectively across multiple media platforms. A thoughtful and disciplined combination of methods of delivering information is required to ensure multiple messaging touch-points for diverse audiences: families, civic organizations, faith communities, businesses, local leaders, and others.

What the Data Tell Us

Since State Fiscal Year 2011, First Things First (FTF) has led a collaborative, concerted effort to build public awareness and support across Arizona employing integrated communications strategies that now include:

- strategic messaging and branding
- community outreach
- community awareness
- social media
- digital content marketing
- earned media
- paid media advertising

Progress toward building support for children birth to age five can be measured by changes in awareness, attitudes and behaviors, as demonstrated through key results of a periodic statewide survey and through tactical impact measures. The most recent statewide survey was conducted in September 2018 and included a general phone survey as well as an online survey of parents of young children. Key results include the following:

- Those who agree that the state should ensure all children have access to early childhood services increased from 80 percent in 2012 to 84 percent in 2018.
 - Among parents, this measure increased from 81 percent in 2016 (the first available parent survey results) to 87 percent in 2018.
- Those who agree that a child who received early education and healthcare services before age 5 is more likely to succeed in school and beyond increased from 82 percent in 2012 to 88 percent in 2018.
 - Among parents, agreement increased from 85 percent in 2016 to 87 percent in 2018.
- Those who agree that the state should put the same priority on early education as it does on K-12 education increased from 62 percent in 2012 to 72 percent in 2018.
 - Among parents, agreement increased from 69 percent in 2016 to 74 percent in 2018.

While understanding and supporting early childhood in general is critical, it's also important that Arizonans have a trustworthy source of early childhood resources and know about the availability of early childhood resources, programs and tools. For this reason, building awareness of FTF as a credible source is critical. Results of the most recent statewide survey show that, while some progress has been made, there is still more to be done to increase awareness about FTF.

- In the 2018 general survey, 87 percent of respondents had never heard of FTF, compared to 89 percent in 2012.
 - Among parents specifically, more had heard of FTF, with 66 percent stating they had never heard of FTF, compared to 69 percent in 2016.

While this statewide survey offers a measure of broad changes in attitudes and awareness, specific tactical measures of awareness and support-building strategies employed by FTF offer another point of information. These include:

- FTF implemented three annual statewide awareness campaigns since the last regional needs and assets reporting period. The SFY17-SFY18 campaign - *Help Them Get There* - shared messaging about the importance of the early years for future school and life success and that parents’ everyday positive interactions with babies, toddlers and preschoolers promote healthy development. The SFY19 campaign – *Givers of Care* – focused specifically on the important role of caregivers and quality early learning environments.
- These paid campaigns reached a large number of Arizonans, measured through the total number of traditional and digital media impressions. Traditional media impressions refer to television, radio, cinema, and billboard ads, while digital media impressions refer to online ads which appear on both desktop and smartphone devices. These statewide impressions – which measure the estimated number of views of FTF ads – are detailed below.

Table 68. First Things First media awareness campaign impressions, SFY17-SFY19

	SFY17	SFY18	SFY19
Traditional media impressions	10 million	17 million	11 million
Digital media impressions	66 million	100 million	76 million

Source: *First Things First (2019). Communications Strategy Data. Unpublished data received by request*

- In addition, targeted digital advertising allows geographically-based targeting of audiences within regions with the ability to measure the number of click-throughs that digital ads garnered. The click-throughs delivered viewers to the FTF website. In SFY19, in the San Carlos Apache Region, digital advertising led to a total of 4,228 click-throughs to the FTF website where families could access more information and resources.

- In the area of social media, engagement with FTF early childhood online platforms has grown over the years. Particular success has been seen in the growth of Facebook Page Likes for FTF, which grew from just 3,000 in 2012 to 142,600 in 2019. Content is also distributed through Twitter, LinkedIn and Instagram.
- Since inception in SFY17, FTF’s digital content marketing strategy which targets parents and families with engaging and informative video and blog posts via website, social media, and email has expanded its reach. In SFY19, 40 original, high-quality content pieces were published.
- In SFY19, an online searchable database of early childhood programs funded by FTF in all the regions launched. In the first six months, over 24,187 visits were logged.

In addition, FTF began a community engagement effort in SFY14 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 FTF Community Outreach strategy. This effort focuses on engaging individuals across sectors—including business, faith, K-12 educators, and civic organizations—in the work of spreading the word about the importance of early childhood as trusted, credible messengers in their communities.

Focused efforts to engage parents’ most trusted messengers—which include pediatricians— included creating and distributing a toolkit for health providers to help them better understand and share information on the statewide free Birth to 5 Helpline. This toolkit was also distributed to attendees of the annual conference of the Arizona Chapter of the American Academy of Pediatrics. Other statewide awareness partnerships included creation and distribution of a grocery list tip pad for parents and caregivers sharing Read On Arizona’s Smart Talk tips, a digital content sharing partnership with Expect More Arizona and partnering with the Arizona Association for the Education of Young Children on a social media campaign promoting Week of the Young Child.

Because Arizona is so vast—with more than 500,000 children under age six and nearly 400,000 households with kids under age six—engaging others in spreading the word about early childhood is critical to reaching across diverse geographic areas and expanding our reach. Supporters and Champions—who are trained in early childhood messaging and effective ways to share early childhood information —reported a total of 940 positive actions taken on behalf of young children throughout Arizona in SFY19. These actions range from leading presentations in support of early childhood to sharing FTF’s early childhood resources with parents at community events. The table below shows total recruitment of Supporters and Champions through SFY19 and actions taken in SFY19.

Table 69. FTF Engagement of Early Childhood Supporters and Champions, SFY19

GEOGRAPHY	NUMBER OF SUPPORTERS	NUMBER OF CHAMPIONS	NUMBER OF SUPPORTER AND CHAMPION ACTIONS DURING FY2019
San Carlos Apache Region	128	30	160
Arizona	6,258	1,170	940

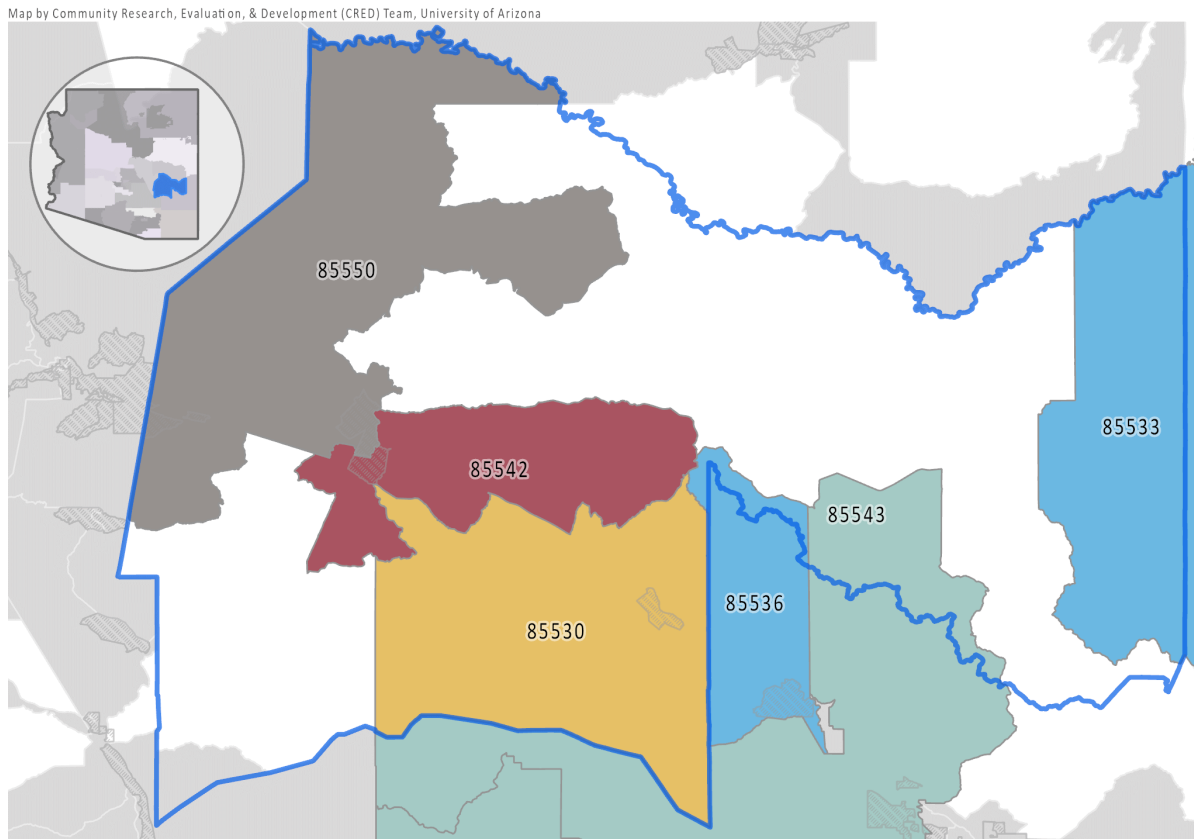
Source: First Things First. (2019). Communications data. Unpublished data received by request

First Things First has also led a concerted effort to build awareness among policymakers at all levels (federal, tribal, state, and municipal) of the importance of early childhood. This includes: in-office meetings with elected leaders to provide general information on early childhood, as well as discuss the impact of proposed legislation; regular communication to policymakers with updates on early childhood research and the work of FTF (such as a quarterly email newsletter for policymakers and their staff); and site tours of FTF-funded programs to allow policymakers to see the impact of early childhood investments in their area. In SFY19, FTF also launched ACT4KIDS, a text-based system that alerts participants to timely developments in early childhood policy and opportunities to engage with policymakers. In its first nine months of implementation, more than 700 Arizonans had signed up to participate in ACT4KIDS.

In addition, FTF actively participates in the Arizona Early Childhood Alliance, comprised of more than 50 early childhood system leaders like United Way, the state affiliates of the National Association for the Education of Young Children, Southwest Human Development, Children’s Action Alliance, Read On Arizona, Stand for Children, Expect More Arizona, and the Helios Foundation, which represents a united voice of the early childhood community in advocating for early childhood programs and services. For the past three years, the Alliance has also led an annual Early Childhood Day at the legislature, which draws hundreds of Arizonans to the state Capitol to engage with policymakers and show their support for early childhood development and health.

Appendix 1: Map of Zip Codes of the San Carlos Apache Region

Figure 12. Map of the ZIP codes in the San Carlos Apache Region



Custom map by the Community Research, Evaluation, and Development (CRED) Team using shapefiles obtained from First Things First and the U.S. Census Bureau 2019 TIGER/Line Shapefiles (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php>).

Appendix 2: Zip Codes of the San Carlos Apache Region

Table 70. Zip Code Tabulation Areas (ZCTAs) of the San Carlos Apache Region

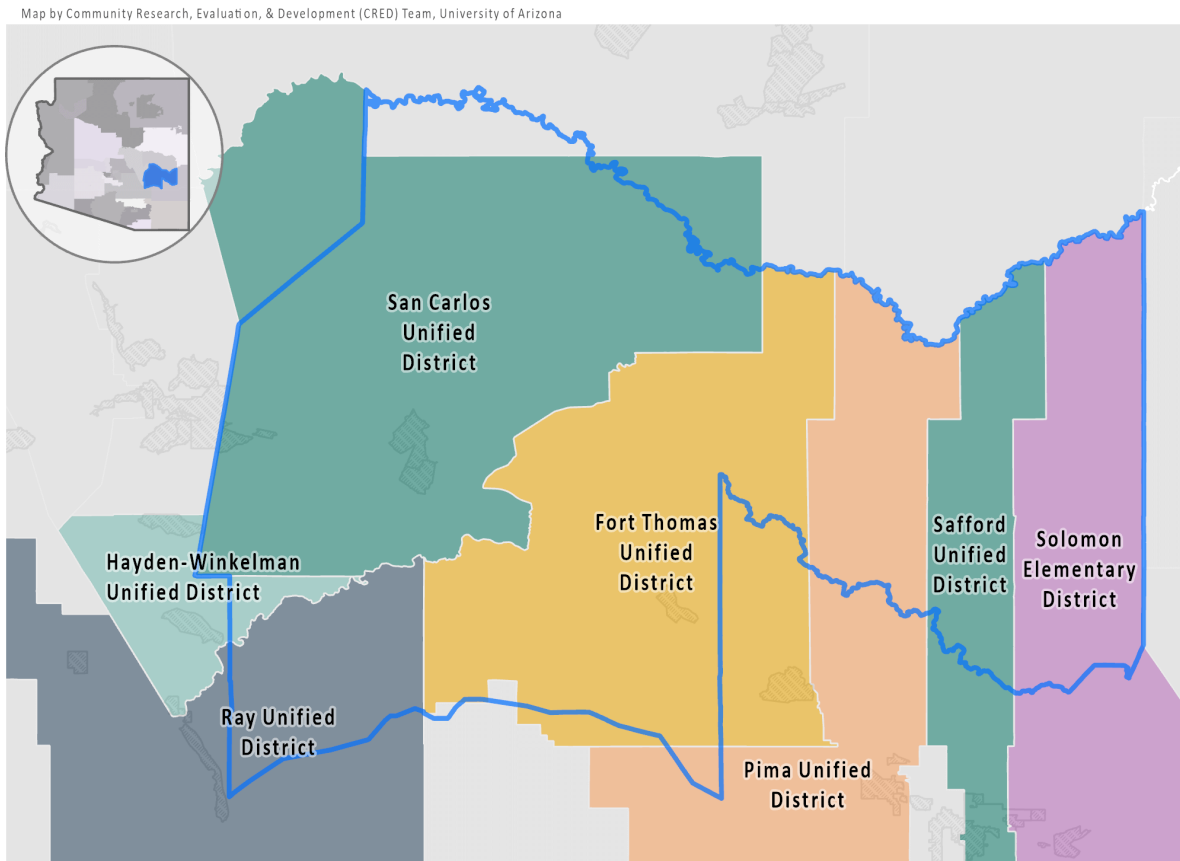
ZIP CODE TABULATION AREA (ZCTA)	TOTAL POPULATION	POPULATION (AGES 0-5)	TOTAL NUMBER OF HOUSEHOLDS	HOUSEHOLDS WITH ONE OR MORE CHILDREN (AGES 0-5)	PERCENT OF ZCTA'S TOTAL POPULATION LIVING IN THE SAN CARLOS APACHE REGION	THIS ZCTA IS SHARED WITH
San Carlos Apache Region	10,068	1,435	2,320	844		
85530	2,069	274	476	175	100%	
85533	9	3	3	1	0%	Graham/ Greenlee
85542	3,196	497	721	273	100%	
85543	1	0	1	0	0%	Graham/ Greenlee
85550	4,790	661	1,118	395	100%	
Other	3	0	1	0		

U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P4, & P20

Note: Zip Code Tabulation Areas with no population living in the San Carlos Apache Region include 85536. This Zip Code is shared with the Graham/Greenlee Region.

Appendix 3: Map of School Districts in the San Carlos Apache Region

Figure 13. Map of the school districts in the San Carlos Apache Region



Custom map by the Community Research, Evaluation, and Development (CRED) Team using shapefiles obtained from First Things First and the U.S. Census Bureau 2019 TIGER/Line Shapefiles (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php>).

Table 71. School Districts in the San Carlos Apache Region

ZIP CODE TABULATION AREA (ZCTA)	SCHOOLS IN DISTRICT	K-3RD GRADE STUDENTS IN DISTRICT	PERCENT OF K-3RD GRADES STUDENTS IN REGION	THIS DISTRICT IS SHARED WITH
San Carlos Apache Region	9	740		
Fort Thomas Unified District	4	203	33%	Graham/Greenlee
San Carlos Unified District	4	537	100%	

Source: Arizona Department of Education (2019). FY 2018 and FY 2019 Enrollment Data. Custom tabulation facilitated by agency staff.

Note: This table only contains Districts/LEAs with enrolled K-3rd grade students physically located within regional boundaries. It does not reflect the residence of students that attend these schools. It does not include high school districts. These are the districts and charter operators from which data on preschool to 3rd grade students were drawn for the tables and figures presented in this report. The percentage shown in the "Percent of K-3rd grade students in the region" column was used to apportion district-level enrollment counts to the region. All other data were aggregated at the school level. The "Schools in district/LEA" and "K-3rd grade students in district/LEA" columns reflect totals for the district, not only the portion within the region. Hayden-Winkelman Unified, Ray Unified, Pima Unified, Safford Unified, and Solomon Elementary all overlap the lands of the San Carlos Apache but do not have any schools within regional boundaries.

Appendix 4: Data Sources

- Arizona Department of Administration, Office of Employment and Population Statistics. (2019). Local area unemployment statistics (LAUS). Retrieved from <https://laborstats.az.gov/local-area-unemployment-statistics>
- Arizona Department of Economic Security (2019). 2018 Child Care Market Rate Survey. Unpublished data received by request.
- Arizona Department of Economic Security. (2019). 2018 Child Care Market Rate Survey Report. Retrieved from <https://des.az.gov/file/14277/download>
- Arizona Department of Economic Security (2019). Child Care Assistance Dataset. Unpublished data received by request.
- Arizona Department of Economic Security. (2019). Child Care Market Rate Survey 2018. Data received from the First Things First State Agency Data Request
- Arizona Department of Economic Security. (2019). [AzEIP Data]. Unpublished raw data received through the First Things First State Agency Data Request
- Arizona Department of Economic Security. (2019). [Child Care Assistance Data]. Unpublished raw data received through the First Things First State Agency Data Request
- Arizona Department of Economic Security. (2019). [DDD Data]. Unpublished raw data received through the First Things First State Agency Data Request
- Arizona Department of Economic Security. (2015). [SNAP data set]. Unpublished raw data received from the First Things First State Agency Data Request
- Arizona Department of Economic Security. (2015). [TANF data set]. Unpublished raw data received from the First Things First State Agency Data Request
- Arizona Department of Education (2019). 2015-16 to 2018-19 Special Education Enrollments. Unpublished data received by request.
- Arizona Department of Education (2019). AzMERIT Results, 2015-2018. Retrieved from <https://www.azed.gov/accountability-research/data/>; Arizona Department of Education (2019). AzMERIT Results, 2015-2018. Custom tabulation of unpublished data.
- Arizona Department of Education. (2019). [Chronic Absence data set]. Custom tabulation of unpublished data.
- Arizona Department of Education. (2019). [Graduation and Dropout data set]. Custom tabulation of unpublished data.

Arizona Department of Education. (2019). Percentage of children approved for free or reduced-price lunches, July 2015. Unpublished raw data received from the First Things First State Agency Data Request

Arizona Department of Health Services. (2019). [Immunizations Dataset]. Unpublished raw data received from the First Things First State Agency Data Request

Arizona Department of Health Services, Bureau of Public Health Statistics. (2019). [Vital Statistics Dataset]. Unpublished raw data received from the First Things First State Agency Data Request

Arizona Department of Health Services, Office of Injury Prevention. (2019). [Injuries Dataset]. Data received from the First Things First State Agency Data Request

First Things First (2019). Communications Strategy Data. Unpublished data received by request

First Things First. (2019). Home Visitation Program Data. Unpublished data received by request

First Things First (2019). Oral Health Strategy Data. Unpublished data received by request

First Things First (2019). Quality First, a Signature Program of First Thing First. Unpublished data received by request

First Things First. (2018). San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report.

Office of Infectious Disease Services, Division of Public Health Preparedness, AZ Department of Health Services

U.S. Census Bureau. (2010). 2010 Decennial Census, Tables P1, P4, P11, P12A, P12B, P12C, P12D, P12E, P12F, P12G, P12H, P14, P20, P32, P41. Retrieved from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

U.S. Census Bureau. (2018). American Community Survey 5-Year Estimates, 2013-2017, Table B05009, B09001, B10002, B14003, B15002, B16001, B16002, B16005, B17001, B17002, B17006, B17022, B19126, B23008, B23025, B25002, B25106, B27001, B28005, B28008, B28010. Retrieved from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

U.S. Census Bureau. (2019). 2019, 2017, and 2010 Tiger/Line Shapefiles prepared by the U.S. Census. Retrieved from <http://www.census.gov/geo/maps-data/data/tiger-line.html>

References

- ¹ U.S. Census Bureau. (May, 2000). Factfinder for the Nation. Retrieved from <http://www.census.gov/history/pdf/cff4.pdf>
- ² U.S. Census Bureau. (April, 2013). American Community Survey Information Guide. Retrieved from http://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf
- ³ “Estimates of Undercount and Overcount in the 2010 Census” (May 22, 2012). www.census.gov/newsroom/releases/archives/2010_census/cb12-95.html
- ⁴ Inter Tribal Council of Arizona, Inc., ASU Office of the President on American Indian Initiatives, ASU Office of Public Affairs (2013). *The State of Indian Country Arizona. Volume 1*. Retrieved from http://outreach.asu.edu/sites/default/files/SICAZ_report_20130828.pdf
- ⁵ U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. (2014). *Child Health USA 2014: Population characteristics*. Retrieved from <https://mchb.hrsa.gov/chusa14/population-characteristics.html>
- ⁶ National Academies of Sciences, Engineering, and Medicine. (2016). *Parenting Matters: Supporting Parents of Children Ages 0-8*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21868>
- ⁷ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>
- ⁸ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>
- ⁹ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>
- ¹⁰ U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *The benefits of bilingualism*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/docs/benefits-of-being-bilingual.pdf>
- ¹¹ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>
- ¹² U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *The benefits of bilingualism*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/docs/benefits-of-being-bilingual.pdf>
- ¹³ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>

¹⁴ U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *The benefits of bilingualism*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/docs/benefits-of-being-bilingual.pdf>

¹⁵ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>

¹⁶ U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *The benefits of bilingualism*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/docs/benefits-of-being-bilingual.pdf>

¹⁷ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>

¹⁸ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24677>.

¹⁹ National Center for Children in Poverty. (2012, October). *Young children at risk*. Retrieved from http://www.nccp.org/publications/pub_1073.html

²⁰ McCarty, T.L., & Nicholas, S.E. (2014). Reclaiming Indigenous Languages: A Reconsideration of the Roles and Responsibilities of Schools. *Review of Research in Education*, 38(1), 106-136.

²¹ U.S. Department of Health & Human Services, Administration for Native Americans. (n.d.) *Native Languages*. For more information, visit <http://www.acf.hhs.gov/programs/ana/programs/native-language-preservation-maintenance>

²² National Academies of Sciences, Engineering, and Medicine 2016. *Parenting Matters: Supporting Parents of Children Ages 0-8*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21868>.

²³ Pew Research Center. (2018). *The changing profile of unmarried parents*. Retrieved from <https://www.pewsocialtrends.org/2018/04/25/the-changing-profile-of-unmarried-parents/>

²⁴ Vandivere, S., Yrausquin, A., Allen, T., Malm, K., & McKlindon, A. (2012). *Children in nonparental care: A review of the literature and analysis of data gaps*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Retrieved from <http://aspe.hhs.gov/basic-report/children-nonparental-care-review-literature-and-analysis-data-gaps>

²⁵ Cohn, D., & Passel, J.S. (2018). *A record 64 Million Americans live in multigeneration households*. Fact Tank: News in the Numbers, 5 April 2018. Pew Research Center. Retrieved from: <https://www.pewresearch.org/fact-tank/2018/04/05/a-record-64-million-americans-live-in-multigenerational-households/>

²⁶ Halgunseth, L. (2009). Family engagement, diverse families and early childhood education programs: An integrated review of the literature. *Young Children*, 64(5), pp. 56-68.

²⁷ Barnett, M. A., Yancura, L., Wilmoth, J., Sano, Y. (2016). Wellbeing Among Rural Grandfamilies in Two Multigenerational Household Structures. *GrandFamilies: The Contemporary Journal of Research, Practice and Policy*, 3(1). Retrieved from: <http://scholarworks.wmich.edu/grandfamilies/vol3/iss1/4>

²⁸ First Things First. (2018). *Navajo Nation Regional Partnership Council 2018 Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20Navajo%20Nation.pdf>

²⁹ Vandivere, S., Yrausquin, A., Allen, T., Malm, K., & McKlindon, A. (2012). *Children in nonparental care: A review of the literature and analysis of data gaps*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Retrieved from <http://aspe.hhs.gov/basic-report/children-nonparental-care-review-literature-and-analysis-data-gaps>

³⁰ Department of Health and Human Services, Administration for Children and Families, and Children's Bureau. (2016). *Site visit report: Arizona Kinship Navigator Project*. Retrieved from <https://www.childwelfare.gov/pubPDFs/azkinship.pdf>

³¹ Ellis, R., & Simmons, T. (2014). *Coresident Grandparents and Their Grandchildren: 2012*. Current Population Reports, P20-576, U.S. Census Bureau: Washington, DC.

³² American Association for Marriage and Family Therapy. (2015). *Grandparents raising grandchildren*. Retrieved from http://www.aamft.org/jimis15/AAMFT/Content/Consumer_Updates/Grandparents_Raising_Grandchildren.aspx

³³ Harrison, A.O., Wilson, M.N., Pine, C.J., Chan, S.Q., & Buriel, R. (1990). Family ecologies of ethnic minority children. *Child Development*, 61(2), 347-362; Robbins R., Robbins S., Stenner B. (2013). Native American Family Resilience. In: Becvar D. (eds) *Handbook of Family Resilience*. Springer, New York, NY.

³⁴ Red Horse, J. (1997). Traditional American Indian family systems. *Families, Systems, & Health*, 15(3), 243.

³⁵ Hoffman, F. (Ed.). (1981). *The American Indian Family: Strengths and Stresses*. Isleta, NM: American Indian Social Research and Development Associates.

³⁶ Mutchler, J.E., Baker, L.A., Lee, S. (2007). Grandparents Responsible for Grandchildren in Native-American Families. *Social Science Quarterly*, 88(4), 990.

³⁷ Byers, L. (2010). Native American grandmothers: Cultural tradition and contemporary necessity. *Journal of Ethnic & Cultural Diversity in Social Work*, 19(4), 305-316.

³⁸ Healthy People 2020. (n.d.). *Social determinants of health*. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

³⁹ Ibid.

⁴⁰ Cornell, S., and Kalt, J.P. (2010). American Indian Self-Determination. The Political Economy of a Successful Policy. *JOPNA Working Papers*. Native Nations Institute and Harvard Project on American Indian Economic Development.

⁴¹ Ibid.

⁴² Child Trends. (2014, January 8). *5 Ways Poverty Harms Children*. Retrieved from <https://www.childtrends.org/child-trends-5/5-ways-poverty-harms-children>

⁴³ Brooks-Gunn, J., & Duncan, G. (1997). The effects of poverty on children. *Children and Poverty*, 7(2), 55-71.

- ⁴⁴ McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204. doi: [10.1037/0003-066X.53.2.185](https://doi.org/10.1037/0003-066X.53.2.185)
- ⁴⁵ Ratcliffe, C., & McKernan, S. (2012). Child poverty and its lasting consequences. *Low-Income Working Families Series*, The Urban Institute. Retrieved from http://www.urban.org/research/publication/child-poverty-and-its-lasting-consequence/view/full_report
- ⁴⁶ Duncan, G., Ziol-Guest, K., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, 81(1), 306-325. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2009.01396.x/full>
- ⁴⁷ Gupta, R., de Wit, M., & McKeown, D. (2007). The impact of poverty on the current and future health status of children. *Pediatrics & Child Health*, 12(8), 667-672.
- ⁴⁸ Wagmiller, R., & Adelman, R. (2009). *Children and intergenerational poverty: The long-term consequences of growing up poor*. New York, NY: National Center for Children in Poverty. Retrieved from http://www.nccp.org/publications/pub_909.html
- ⁴⁹ Duncan, G., Ziol-Guest, K., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, 81(1), 306-325. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2009.01396.x/full>
- ⁵⁰ U.S. Department of Health & Human Services Office of the Assistant Secretary for Planning and Evaluation. (2019). *2019 Poverty Guidelines*. Retrieved from <https://aspe.hhs.gov/2019-poverty-guidelines>
- ⁵¹ U.S. Department of Health, Education, and Welfare, (1976). *The Measure of Poverty: A Report to Congress as Mandated by the Education Amendments of 1974*.
- ⁵² Pearce, D.M. (2019). *The Self-Sufficiency Standard*. Retrieved from <http://www.selfsufficiencystandard.org/the-standard>
- ⁵³ Ibid.
- ⁵⁴ Pearce, D.M. (2019). *The Self-Sufficiency Standard for Arizona 2018*. Available online at: https://www.womengiving.org/wp-content/uploads/2019/08/AZ18_SSS_Update-1.pdf
- ⁵⁵ Hahn, H., Healy, O., Hillbrant, W., & Narducci, C. (2013). *A Descriptive Study of Tribal Temporary Assistance for Needy Families (TANF) Programs*. OPRE Report # 2013-34, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- ⁵⁶ Rose-Jacobs, R., Black, M., Casey, P., Cook, J., Cutts, D., Chilton, M., Heeren, T., Levenson, S., Meyers, A., & Frank, D. (2008). Household food insecurity: Associations with at-risk infant and toddler development. *Pediatrics*, 121(1), 65-72. Retrieved from <http://pediatrics.aappublications.org/content/121/1/65.full.pdf>
- ⁵⁷ Ryan-Ibarra, S., Sanchez-Vaznaugh, E., Leung, C., & Induni, M. (2016). The relationship between food insecurity and overweight/obesity differs by birthplace and length of residence. *Public Health Nutrition*, 1-7. Retrieved from <https://www.cambridge.org/core/journals/public-health-nutrition/article/div-classtitlethe-relationship-between-food-insecurity-and-overweightobesity-differs-by-birthplace-and-length-of-us-residencediv/4BEE4D6C09F9FFCABEE404F9E313BE7C>

⁵⁸ Economic Research Service (ERS), U.S. Department of Agriculture (USDA). *Food Access Research Atlas*. Retrieved from <https://www.ers.usda.gov/data-products/food-access-research-atlas/>

⁵⁹ U.S. Census Bureau (2016). *2015 American Indian Area Geography & Census Tracts [shapefiles]*. Retrieved from <https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2015.html>; U.S. Department of Agriculture (2016). *Food Access Research Atlas [dataset]*. Retrieved from <https://www.ers.usda.gov/data-products/food-access-research-atlas/>; Custom analysis run by Kara Haberstock Tanoue, Community Research, Evaluation, & Development (CRED) Team, University of Arizona.

⁶⁰ Food and Nutrition Service, U.S. Department of Agriculture. (n.d.). *Supplemental Nutrition Assistance Program (SNAP)*. Retrieved from <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program>

⁶¹ Food and Nutrition Service, U.S. Department of Agriculture. (n.d.). *Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)*. Retrieved from <https://www.fns.usda.gov/wic>

⁶² Food and Nutrition Service, U.S. Department of Agriculture. (n.d.). *National School Lunch Program*. Retrieved from <https://www.fns.usda.gov/nslp>

⁶³ Food and Nutrition Service, U.S. Department of Agriculture. (n.d.). *School Breakfast Program*. Retrieved from <https://www.fns.usda.gov/sbp/school-breakfast-program>

⁶⁴ Food and Nutrition Service, U.S. Department of Agriculture. (n.d.). *Summer Food Service Program*. Retrieved from <https://www.fns.usda.gov/sfsp/summer-food-service-program>

⁶⁵ Food and Nutrition Service, U.S. Department of Agriculture. (n.d.) *Child and Adult Care Food Program*. Retrieved from <https://www.fns.usda.gov/cacfp/child-and-adult-care-food-program>

⁶⁶ Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., & Singh, A. (2018). *Household food security in the United States in 2017, ERR-256*. U.S. Department of Agriculture, Economic Research Service.

⁶⁷ Finegold, K., Pindus, N., Levy, D., Tannehill, T., and Hillabrant, W. (2009). *Tribal Food Assistance: A Comparison of the Food Distribution Program on Indian Reservations and the Supplemental Nutrition Assistance Program*. The Urban Institute.

⁶⁸ Ibid.

⁶⁹ Food Research and Action Center. (2013). *SNAP and Public Health: The role of the Supplemental Nutrition Assistance Program in improving the health and well-being of Americans*. Retrieved from http://frac.org/pdf/snap_and_public_health_2013.pdf

⁷⁰ Ibid.

⁷¹ For more information on the Arizona WIC Program, visit <http://azdhs.gov/prevention/azwic/>

⁷² Carlson, S., & Neuberger, Z. (2015). *WIC Works: Addressing the nutrition and health needs of low-income families for 40 years*. Washington, DC: Center on Budget and Policy Priorities. Retrieved from <http://www.cbpp.org/research/food-assistance/wic-works-addressing-the-nutrition-and-health-needs-of-low-income-families>

⁷³ National Center for Children in Poverty. (2014). *Arizona demographics for low-income children*. Retrieved from http://www.nccp.org/profiles/AZ_profile_6.html

- ⁷⁴ Isaacs, J. (2013). Unemployment from a child's perspective. Retrieved from <http://www.urban.org/UploadedPDF/1001671-Unemployment-from-a-Childs-Perspective.pdf>
- ⁷⁵ For a discussion of current trends in labor force participation versus employment, see Uchitelle, L. (July 11, 2019). "Unemployment Is Low, but That's Only Part of the Story." Retrieved from <https://www.nytimes.com/2019/07/11/business/low-unemployment-not-seeking-work.html>
- ⁷⁶ Cornell, S., and Kalt, J.P. (2010). American Indian Self-Determination. The Political Economy of a Successful Policy. *JOPNA Working Papers*. Native Nations Institute and Harvard Project on American Indian Economic Development.
- ⁷⁷ McCoy-Roth, M., Mackintosh, B., & Murphey, D. (2012). When the bough breaks: The effects of homelessness on young children. *Child Health*, 3(1). Retrieved from: <http://www.childtrends.org/wp-content/uploads/2012/02/2012-08EffectHomelessnessChildren.pdf>
- ⁷⁸ Herbert, C., Hermann, A., & McCue, D. (2018). *Measuring Housing Affordability: Assessing the 30 Percent of Income Standard*. Cambridge, MA: Joint Center for Housing Studies of Harvard University. Retrieved from: https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Herbert_Hermann_McCue_measuring_housing_affordability.pdf
- ⁷⁹ Gabriel, S., & Painter, G. (2017). "Why Affordability Matters," 4-23. Presentation at Housing Affordability: Why Does It Matter, How Should It Be Measured, and Why Is There an Affordability Problem? American Enterprise Institute, 5-6 April 2017. Retrieved from: <https://www.aei.org/wp-content/uploads/2017/04/CHA-Panel-1.pdf>
- ⁸⁰ Federal Interagency Forum on Child and Family Statistics. (2015). *America's children: Key national indicators for well-being, 2015*. Washington, DC: U.S. Government Printing Office. Retrieved from https://www.childstats.gov/pdf/ac2015/ac_15.pdf
- ⁸¹ Housing Assistance Council (2013). *Housing on Native American Lands*. Retrieved from http://www.ruralhome.org/storage/documents/rpts_pubs/ts10_native_lands.pdf
- ⁸² Kinsner, K., Parlakian, R., Sanchez, G., Manzano, S., & Baretto, M. (2018). Millennial Connections: Findings from ZERO TO THREE's 2018 Parent Survey Executive Summary. *ZERO TO THREE*. Retrieved from <https://www.zerotothree.org/resources/2475-millennial-connections-executive-summary>
- ⁸³ OECD. (2001). *Understanding the digital divide*. Paris, France: OECD Publications.
- ⁸⁴ Ibid.
- ⁸⁵ Gonzales, A. (2016). The contemporary US digital divide: from initial access to technology maintenance, Information. *Communication & Society*, 19(2), pp. 234-248.
- ⁸⁶ Pew Research Center. (2019, June 12). *Internet/Broadband Fact Sheet*. Retrieved from <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/>
- ⁸⁷ Prieger, J.E. (2013). The broadband digital divide and the economic benefits of mobile broadband for rural areas. *Telecommunications Policy*, 37(6-7), 483-502
- ⁸⁸ Sallet, J. (2017). *Better together: Broadband deployment and broadband competition*. Retrieved from <https://www.brookings.edu/blog/techtank/2017/03/15/better-together-broadband-deployment-and-broadband-competition/>

- ⁸⁹ Federal Communications Commission. (2015). 2015 BROADBAND PROGRESS REPORT AND NOTICE OF INQUIRY ON IMMEDIATE ACTION TO ACCELERATE DEPLOYMENT. *Federal Communications Commission*. Retrieved from https://apps.fcc.gov/edocs_public/attachmatch/DOC-342358A1.pdf
- ⁹⁰ Jorgensen, M., Morris, T., & Feller, S. (2014). *Digital Inclusion in Native Communities: The Role of Tribal Libraries*. Oklahoma City, OK: Association of Tribal Archives, Libraries, and Museums.
- ⁹¹ Morris, T., & Meinrath, S. (2009). *New Media, Technology, and Internet Use in Indian Country: A Quantitative and Qualitative Analysis*. Washington, DC: New America Foundation.
- ⁹² For more information about Arizona Health Care Containment System (AHCCCS) eligibility visit <https://www.azahcccs.gov/Members/Downloads/EligibilityRequirements.pdf>
- ⁹³ Healthy People 2020. (n.d.). *Social determinants*. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Social-Determinants>
- ⁹⁴ Robert Wood Johnson Foundation. (2016, September). *The relationship between school attendance and health*. Retrieved from <https://www.rwjf.org/en/library/research/2016/09/the-relationship-between-school-attendance-and-health.html>
- ⁹⁵ Dahlin, M., & Squires, J. (2016). *Pre-K attendance: Why it's important and how to support it*. Center on Enhancing Early Learning Outcomes. Retrieved from http://nieer.org/wp-content/uploads/2016/09/ceelo_fastfact_state_ece_attendance_2016_02_01_final_for_web.pdf
- ⁹⁶ Ready, D.D. (2010). Socioeconomic disadvantage, school attendance, and early cognitive development: The differential effects of school exposure. *Sociology of Education*, 83(4), 271-286.
- ⁹⁷ Robert Wood Johnson Foundation. (2016, September). *The relationship between school attendance and health*. Retrieved from <https://www.rwjf.org/en/library/research/2016/09/the-relationship-between-school-attendance-and-health.html>
- ⁹⁸ Lesnick, J., Goerge, R., Smithgall, C., & Gwynne, J. (2010). *Reading on grade level in third grade: How is it related to high school performance and college enrollment?* Chicago, IL: Chapin Hall at the University of Chicago. Retrieved from https://www.chapinhall.org/sites/default/files/Reading_on_Grade_Level_111710.pdf
- ⁹⁹ Ibid.
- ¹⁰⁰ Hernandez, D. (2011). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. New York, NY: The Annie E. Casey Foundation. Retrieved from <http://files.eric.ed.gov/fulltext/ED518818.pdf>
- ¹⁰¹ Arizona Department of Education. (n.d.). *Assessment: AzMERIT*. Retrieved from <http://www.azed.gov/assessment/azmerit/>
- ¹⁰² For more information on Move on When Reading, visit <http://www.azed.gov/mowr/>
- ¹⁰³ National Research Council. 2012. *Key National Education Indicators: Workshop Summary*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13453>.

¹⁰⁴ Healthy People 2020. (n.d.). *Adolescent health*. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/Adolescent-Health>

¹⁰⁵ Child Trends Data Bank. (2015). *Parental education: Indicators on children and youth*. Retrieved from http://www.childtrends.org/wp-content/uploads/2012/04/67-Parental_Education.pdf

¹⁰⁶ Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>

¹⁰⁷ Kuhl, P. K. (2011). Early language learning and literacy: Neuroscience implications for education. *Mind, Brain, and Education*, 5(3), 128-142.

¹⁰⁸ Fernald, A., Marchman, V., & Weisleder, A. (2013). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science*, 16(2), 234-248. Retrieved from: <http://onlinelibrary.wiley.com/doi/10.1111/desc.12019/pdf>

¹⁰⁹ Lee, V., & Burkam, D. (2002). *Inequality at the Starting Gate: Social background Differences in Achievement as Children Begin School*. Washington, DC: Economic Policy Institute.

¹¹⁰ Malik, R., Hamm, K., Adamu, M., & Morrissey, T. (2016). Child care deserts: An analysis of child care centers by ZIP code in 8 states. *Center for American Progress*. Retrieved from <https://www.americanprogress.org/issues/early-childhood/reports/2016/10/27/225703/child-care-deserts/>

¹¹¹ Tanoue, K.H., DeBlois, M., Daws, J., & Walsh, M. (2017). *Child Care and Early Education Accessibility in Tucson (White Paper No. 5)*. Retrieval from Making Action Possible in Southern Arizona (MAP Dashboard) website: <https://mapazdashboard.arizona.edu/article/child-care-and-early-education-accessibility-tucson>

¹¹² Child Care Aware® of America. (2018). *Mapping the gap: Exploring the child care supply & demand in Arizona*. Arlington, VA: Child Care Aware of America. Retrieved from <http://usa.childcareaware.org/wp-content/uploads/2017/10/Arizona-Infant-Toddler-Brief1.pdf>

¹¹³ Ibid.

¹¹⁴ U.S. Department of Education. (2015). *A matter of equity: Preschool in America*. Retrieved from <https://www2.ed.gov/documents/early-learning/matter-equity-preschool-america.pdf>

¹¹⁵ Child Care Aware® of America. (2017). *The US and the High Cost of Child Care: Arizona*. Arlington, VA: Child Care Aware of America. Retrieved from <https://usa.childcareaware.org/advocacy-public-policy/resources/research/costofcare/>

¹¹⁶ Child Care Aware® of America. (2018). *Arizona Cost of Child Care*. Retrieved from <https://usa.childcareaware.org/wp-content/uploads/2018/10/Arizona2018.pdf>

¹¹⁷ For more information on child care subsidies see <https://www.azdes.gov/child-care/>

¹¹⁸ Arizona Department of Economic Security. (n.d.) *Child Care Waiting List*. Retrieved on 7/28/19 from <https://des.az.gov/services/child-and-family/child-care/child-care-waiting-list>

¹¹⁹ Machelor, P. (2019, June 17). Arizona suspends child-care waiting list, increases provider reimbursements. *Arizona Daily Star*. Retrieved from https://tucson.com/news/local/arizona-suspends-child-care-waiting-list-increases-provider-reimbursements/article_a91a641f-5817-5e0d-a8c5-caaf530551ce.html

¹²⁰ NICHD Early Child Care Research Network. (2002). Early child care and children's development prior to school entry: Results from the NICHD study of early child care. *American Educational Research Journal*, 39(1), 133-164. Retrieved from <http://www.jstor.org/stable/3202474>

¹²¹ Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M., Espinosa, L., Gormley, W., ... Zaslow, M. (2013). *Investing in our future: The evidence base on preschool education*. Ann Arbor, MI: Society for Research in Child Development. Retrieved from <https://www.fcd-us.org/assets/2013/10/Evidence20Base20on20Preschool20Education20FINAL.pdf>

¹²² U.S. Department of Education. (2015). *A matter of equity: Preschool in America*. Retrieved from <https://www2.ed.gov/documents/early-learning/matter-equity-preschool-america.pdf>

¹²³ The Annie E. Casey Foundation. (2013). *The first eight years: Giving kids a foundation for lifetime success*. Retrieved from <http://www.aecf.org/m/resourcedoc/AECF-TheFirstEightYearsKCPolicyReport-2013.pdf>

¹²⁴ White House Council of Economic Advisors. (2014). *The economics of early childhood investments*. Retrieved from https://obamawhitehouse.archives.gov/sites/default/files/docs/early_childhood_report_update_final_non-embargo.pdf

¹²⁵ Campbell, F., Conti, G., Heckman, J., Moon, S., Pinto, R., Pungello, L., & Pan, Y. (2014). Abecedarian & health: Improve adult health outcomes with quality early childhood programs that include health and nutrition. University of Chicago: The Heckman Equation. Retrieved from <http://heckmanequation.org/content/resource/research-summary-abecedarian-health>

¹²⁶ Montes, G., & Halterman, J.S. (2011). The impact of child care problems on employment: Findings from a national survey of US parents. *Academic Pediatrics*, 11(1):80-87.

¹²⁷ Fleming, C., Moorea, L., Sarchea, M., Charles, T., McNicholas, D., Rackliff, S., Redbird-Post, M., & Sprague, M. (2016). *Tribal Grantee Plans from the 2014-2015 Child Care Development Fund*. A Report by The Child Care Community of Learning. Tribal Early Childhood Research. Centers for American Indian and Alaska Native Health. Colorado School of Public Health. Retrieved from <http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/CAIANH/trc/trcresearch/communityesoflearning/tribalchildcaredevelopmentfundplanreportcol/Documents/An%20analysis%20of%20data%20from%20Tribal%20CCDF%20Grantee%20Plans.V2.pdf>

¹²⁸ National Research Council. (2012). *Key National Education Indicators: Workshop Summary*. Steering Committee on Workshop on Key National Education Indicators, A. Beatty and J.A. Koenig, Rapporteurs. Board on Testing and Assessment and Committee on National Statistics, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

¹²⁹ More information about Arizona's quality educational environments can be found in the DES CCDF State Plan FY2019-FY2021, available at <https://des.az.gov/documents-center>

¹³⁰ Wechsler, M., Melnick, H., Maier, A., & Bishop, J. (2016). *The Building Blocks of High-Quality Early Childhood Education Programs* (policy brief). Palo Alto, CA: Learning Policy Institute.

- ¹³¹ Gilliam, W.S., Maupin, A.N., & Reyes, C.R. (2016). Early childhood mental health consultation: Results of a statewide random-controlled evaluation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 55(9), 754-761.
- ¹³² U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *Understanding and eliminating expulsion in early childhood programs*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/publication/understanding-eliminating-expulsion-early-childhood-programs>
- ¹³³ Donoghue, E. (2017). Quality early education and child care from birth to kindergarten. *Pediatrics*, 140(2).
- ¹³⁴ Epstein, D., Hegseth, D., Friese, S., Miranda, B., Gebhart, T., Partika, A., & Tout, K. (2018). *Quality First: Arizona's early learning quality improvement and rating system implementation and validation study*. Retrieved from https://www.firstthingsfirst.org/wp-content/uploads/2018/02/AZ_QF_Exec-Summary.pdf
- ¹³⁵ Ibid.
- ¹³⁶ Arizona Early Childhood Development and Health Board (First Things First). (2018). *2018 Annual Report*. Phoenix, AZ: First Things First. Retrieved from http://www.azftf.gov/WhoWeAre/Board/Documents/FY2016_Annual_Report.pdf
- ¹³⁷ Gilliam, W.S., Maupin, A.N., & Reyes, C.R. (2016). Early childhood mental health consultation: Results of a statewide random-controlled evaluation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 55(9), 754-761.
- ¹³⁸ U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. (n.d.). *Understanding and eliminating expulsion in early childhood programs*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/publication/understanding-eliminating-expulsion-early-childhood-programs>
- ¹³⁹ U.S. Department of Health and Human Services and Education. (2015). *Policy statement on expulsion and suspension policies in early childhood settings*. Retrieved from <https://www2.ed.gov/policy/gen/guid/school-discipline/policy-statement-ece-expulsions-suspensions.pdf>
- ¹⁴⁰ U.S. Department of Education Office for Civil Rights. (2014). *Data Snapshot: Early Childhood Education*. Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/crdc-early-learning-snapshot.pdf>
- ¹⁴¹ Malik, R. (2017, November 6). *New Data Reveal 250 Preschoolers Are Suspended or Expelled Every Day*. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/early-childhood/news/2017/11/06/442280/new-data-reveal-250-preschoolers-suspended-expelled-every-day/>
- ¹⁴² U.S. Department of Education Office for Civil Rights. (2014). *CIVIL RIGHTS DATA COLLECTION Data Snapshot: Early Childhood Education*. Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/crdc-early-learning-snapshot.pdf>
- ¹⁴³ U.S. Department of Health and Human Services and Education (2015). *Policy statement on expulsion and suspension policies in early childhood settings*.
- ¹⁴⁴ Lamont, J.H., Devore, C.D., Allison, M., Ancona, R., Barnett, S.E., Gunther, R., ... Young, T. (2013). Out-of-school suspension and expulsion. *Pediatrics*, 131(3), e1000-e1007.
- ¹⁴⁵ Arizona Department of Economic Security (2019). 2016-2018 Child Care Assistance Data. Unpublished data received by request.

¹⁴⁶ U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. (2013). *The national survey of children with special health care needs: Chartbook 2009-2010*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from <https://mchb.hrsa.gov/cshcn0910/more/pdf/nscshcn0910.pdf>

¹⁴⁷ Ibid.

¹⁴⁸ Austin, A., Herrick, H., Proescholdbell, S., & Simmons, J. (2016). Disability and exposure to high levels of adverse childhood experiences: Effect on health and risk behavior. *North Carolina Medical Journal*, 77(1), 30-36. doi: [10.18043/ncm.77.1.30](https://doi.org/10.18043/ncm.77.1.30). Retrieved from <http://www.ncmedicaljournal.com/content/77/1/30.full.pdf+html>

¹⁴⁹ Kistin, C., Tompson, M., Cabral, H., Sege, R., Winter, M., & Silverstein, M. (2016). Subsequent maltreatment in children with disabilities after an unsubstantiated report for neglect. *JAMA* 2016, 315(1), 85-87. doi: [10.1001/jama.2015.12912](https://doi.org/10.1001/jama.2015.12912).

¹⁵⁰ Mortenson, J.A. & Barnett, M.A. (2016). The role of child care in supporting the emotion regulatory needs of maltreated infants and toddlers. *Children and Youth Services Review*, 64, 73-81.

¹⁵¹ Dinehart, L.H., Manfra, L., Katz, L.F., & Hartman, S.C. (2012). Associations between center-based care accreditation status and the early educational outcomes of children in the child welfare system. *Children and Youth Services Review*, 34, 1072-1080.

¹⁵² McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, S., Diliberti, M., Forrest Cataldi, E., Bullock Mann, F., and Barmer, A. (2019). *The Condition of Education 2019* (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144>

¹⁵³ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>

¹⁵⁴ The National Early Childhood Technical Assistance Center. (2011). *The importance of early intervention for infants and toddlers with disabilities and their families*. Office of Special Education Programs and U.S. Department of Education. Retrieved from <http://www.nectac.org/~pdfs/pubs/importanceofearlyintervention.pdf>

¹⁵⁵ Hebbeler, K., Spiker, D., Bailey, D., Scarborough, A., Mallik, S., Simeonsson, ... Nelson, L. (2007). *Early intervention for infants and toddlers with disabilities and their families: Participants, services, and outcomes*. Menlo Park, CA: SRI International. Retrieved from https://www.sri.com/sites/default/files/publications/neils_finalreport_200702.pdf

¹⁵⁶ Diefendorf, M., & Goode, S. (2005). *The long term economic benefits of high quality early childhood intervention programs*. Chapel Hill, NC: National Early Childhood Technical Assistance Center (NECTAC), and Early Intervention & Early Childhood Special Education. Retrieved from <http://ectacenter.org/~pdfs/pubs/econbene.pdf>

¹⁵⁷ For more information on AzEIP, visit <https://www.azdes.gov/azeip/>

¹⁵⁸ For more information on Arizona Department of Education's (ADE) Early Childhood Special Education program, visit <http://www.azed.gov/ece/early-childhood-special-education/> and <http://www.azed.gov/special-education/az-find/>

¹⁵⁹ For more information on DDD, visit https://www.azdes.gov/developmental_disabilities/

¹⁶⁰ First Things First. (2018). *San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report*. Retrieved from:

<https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20San%20Carlos%20Apache.pdf>

¹⁶¹ Ibid.

¹⁶² Ibid.

¹⁶³ Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>

¹⁶⁴ The Future of Children. (2015). Policies to promote child health. *Policies to Promote Child Health*, 25(1), Spring 2015. Woodrow Wilson School of Public and International Affairs at the Princeton University and the Brookings Institution. Retrieved from <http://futureofchildren.org/publications/docs/FOC-spring-2015.pdf>

¹⁶⁵ Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>

¹⁶⁶ Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services. (n.d.) *Prenatal services*. Retrieved from <http://mchb.hrsa.gov/programs/womeninfants/prenatal.html>

¹⁶⁷ Patrick, D.L., Lee, R.S., Nucci, M., Grembowski, D., Jolles, C.Z., & Milgrom, P. (2006). Reducing oral health disparities: A focus on social and cultural determinants. *BMC Oral Health*, 6(Suppl 1), S4. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2147600/>

¹⁶⁸ Council on Children with Disabilities, Section on Developmental Behavioral Pediatrics, Bright Futures Steering Committee, and Medical Home Initiatives for Children with Special Needs Project Advisory Committee. (2006). Identifying infants and young children with developmental disorders in the medical home: An algorithm for developmental surveillance and screening. *Pediatrics*, 118(1), 405-420. Doi: [10.1542/peds.2006-1231](https://doi.org/10.1542/peds.2006-1231). Retrieved from <http://pediatrics.aappublications.org/content/118/1/405.full>

¹⁶⁹ As a result of the Indian Self-Determination and Education Assistance Act (PL-93-638) (ISDEAA), federally recognized tribes have the option to receive the funds that the Indian Health Service (IHS) would have used to provide health care services to their members. The tribes can then utilize these funds to directly provide services to tribal members. This process is often known as 638 contracts or compacts. Rainie, S., Jorgensen, M., Cornell, S., & Arsenault, J. (2015). The Changing Landscape of Health Care Provision to American Indian Nations. *American Indian Culture and Research Journal*, 39(1), 1-24.

¹⁷⁰ Zuckerman, S., Haley, J., Roubideaux, Y., & Lillie-Blanton, M. (2004). Health Service Access, Use, and Insurance coverage Among American Indians/Alaska Natives and Whites: What Role does the Indian Health Service Play? *American Journal of Public Health*, 94(1), 53-59.

¹⁷¹ Centers for Disease Control and Prevention. (2006). Recommendations to improve preconception health and health care—United States: A report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. United States. *Morbidity and Mortality Weekly Report*, 55(RR-06):1-23.

¹⁷² U.S. Department of Health and Human Service. (2017). *What is prenatal care and why is it important?* Retrieved from <https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo/prenatal-care>

¹⁷³ Yeung, L., Coates, R., Seeff, L., Monroe, J., Lu, M., & Boyle, C. (2014). Conclusions and future directions for periodic reporting on the use of selected clinical preventive services to improve the health of infants, children, and adolescents—United States. *Morbidity and Mortality Weekly Report 2014*, 63(Suppl-2), 99-107. Retrieved from <http://www.cdc.gov/mmwr/pdf/other/su6302.pdf>

¹⁷⁴ Ibid.

¹⁷⁵ The Henry J. Kaiser Family Foundation. (2016). *Key facts about the uninsured population*. The Kaiser Commission on Medicaid and the Uninsured. Retrieved from <http://kff.org/uninsured/fact-sheet/key-facts-about-the-uninsured-population/>

¹⁷⁶ Child Trends Databank. (2016). Health care coverage: Indicators on children and youth. *Health Care Coverage, 2016*. Retrieved from http://www.childtrends.org/wp-content/uploads/2016/05/26_Health_Care_Coverage.pdf

¹⁷⁷ Zuckerman, S., Haley, J., Roubideaux, Y., & Lillie-Blanton, M. (2004). Health Service Access, Use, and Insurance coverage Among American Indians/Alaska Natives and Whites: What Role does the Indian Health Service Play? *American Journal of Public Health*, 94(1), 53-59.

¹⁷⁸ For more information about IHS visit <https://www.ihs.gov/aca/index.cfm/thingstoknow/>

¹⁷⁹ First Things First. (2018). *Navajo Nation Regional Partnership Council 2018 Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20Navajo%20Nation.pdf>

¹⁸⁰ Hoffman, S.D., & Maynard, R.A. (Eds.). (2008). *Kids having kids: Economic costs and social consequences of teen pregnancy (2nd ed.)*. Washington, DC: Urban Institute Press.

¹⁸¹ Centers for Disease control and Prevention. (n.d.). *Teen Pregnancy. About Teen Pregnancy*. Retrieved from <http://www.cdc.gov/teenpregnancy/aboutteenpreg.htm>

¹⁸² Diaz, C., & Fiel, J. (2016). The effect(s) of teen pregnancy: Reconciling theory, methods, and findings. *Demography*, 53(1), 85-116. doi: [10.1007/s13524-015-0446-6](https://doi.org/10.1007/s13524-015-0446-6). Retrieved from <http://link.springer.com/article/10.1007/s13524-015-0446-6>

¹⁸³ Youth.gov. (2016). *Pregnancy prevention: Adverse effects*. Retrieved from <http://youth.gov/youth-topics/teen-pregnancy-prevention/adverse-effects-teen-pregnancy>

¹⁸⁴ Declercq, E., MacDorman, M., Cabral, H., & Stotland, N. (2016). Prepregnancy body mass index and infant mortality in 38 U.S. States, 2012-2013. *Obstetrics and Gynecology*, 127(2), 279-287. doi: [10.1097/AOG.0000000000001241](https://doi.org/10.1097/AOG.0000000000001241). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/26942355>

¹⁸⁵ Tyrrell, J., Richmond, R., Palmer, T., Feenstra, B., Rangarajan, J., Metrustry, S., ... Freathy, R. (2016). Genetic evidence for causal relationships between maternal obesity-related traits and birth weight. *JAMA* 2016, 315(11), 1129-1140. doi:[10.1001/jama.2016.1975](https://doi.org/10.1001/jama.2016.1975). Retrieved from <http://jamanetwork.com/journals/jama/fullarticle/2503173>

- ¹⁸⁶ Mayo Clinic. (n.d.). In-depth: How could obesity affect my baby? *Healthy Lifestyle*, Pregnancy week by week. Retrieved from <http://www.mayoclinic.org/healthy-lifestyle/pregnancy-week-by-week/in-depth/pregnancy-and-obesity/art-20044409?pg=2>
- ¹⁸⁷ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>
- ¹⁸⁸ Healthy People 2020. (n.d.). *Maternal, infant, and child health: Life stages & determinants*. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Maternal-Infant-and-Child-Health/determinants>
- ¹⁸⁹ Center for Disease Control and Prevention. (2018). *Maternal and infant health: Pregnancy complications*. Retrieved from https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Freproductivehealth%2Fmaternalinfanthealth%2Fpregcomplications.htm
- ¹⁹⁰ Centers for Disease Control and Prevention. (2006). Recommendations to improve preconception health and health care—United States: A report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *Morbidity and Mortality Weekly Report*, 55(RR-06):1-23.
- ¹⁹¹ U.S. Department of Health and Human Service. (2010). *A Report of the Surgeon General: How Tobacco Smoke Causes Disease: What It Means to You*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK53017/>
- ¹⁹² Anderson, T.M., Lavista Ferres, J.M., You Ren, S., Moon, R.Y., Goldstein, R.D., Ramirez, J., Mitchell, E.A. (2019). Maternal smoking before and during pregnancy and the risk of sudden unexpected infant death. *Pediatrics*, 143(4). PMID: 30848347
- ¹⁹³ Arizona Department of Health Services. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>
- ¹⁹⁴ Gunn, J., Rosales, C., Center, K., Nunez, A., Gibson, S., Christ, C., & Ehiri, J. (2016). Prenatal exposure to cannabis and maternal and child health outcomes: A systematic review and meta-analysis. *BMJ Open*, 6(4). PMID: 27048634.
- ¹⁹⁵ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>
- ¹⁹⁶ Eidelman, A., Schanler, R., Johnston, M., Landers, S., Noble, L., Szucs, K., & Viehmann, L. (2012). Breastfeeding and the use of human milk. *Pediatrics*, 129(3), e827-e841.
- ¹⁹⁷ W.K. Kellogg Foundation. [n.d.] *Reclaiming Breastfeeding in Indian Country*. Retrieved from <https://www.wkkf.org/what-we-do/featured-work/bringing-breastfeeding-back-to-indian-country>

¹⁹⁸ Fryar, C., Carroll, M., & Ogden, C. (2018). *Prevalence of Overweight, Obesity, and Severe Obesity Among Children and Adolescents Aged 2-19 Years: United States, 1963-1965 Through 2015-2016*. National Center for Health Statistics: Health E-Stats. Retrieved from

https://www.cdc.gov/nchs/data/hestat/obesity_child_15_16/obesity_child_15_16.pdf

¹⁹⁹ Ibid.

²⁰⁰ Chaput, J.P., & Tremblay, A. (2012). *Obesity at an early age and its impact on child development*. Child Obesity: Encyclopedia on Early Childhood Development. Retrieved from <http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/789/obesity-at-an-early-age-and-its-impact-on-child-development.pdf>

²⁰¹ Robert Wood Johnson Foundation. (2016). The impact of the first 1,000 days on childhood obesity. *Healthy Eating Research: Building evidence to prevent childhood obesity*. Retrieved from

http://healthyeatingresearch.org/wp-content/uploads/2016/03/her_1000_days_final-1.pdf

²⁰² Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>

²⁰³ Çolak, H., Dülgergil, Ç. T., Dalli, M., & Hamidi, M. M. (2013). Early childhood caries update: A review of causes, diagnoses, and treatments. *Journal of Natural Science, Biology, and Medicine*, 4(1), 29–38.

²⁰⁴ Gupta, N., Vujicic, M., Yarbrough, C., & Harrison, B. (2018). Disparities in untreated caries among children and adults in the US, 2011-2014. *BMC Oral Health*, 18(1), 30.

²⁰⁵ First Things First. (2020). *Arizona State Needs and Assets Report*.

²⁰⁶ First Things First. (2016). *TAKING A BITE OUT OF SCHOOL ABSENCES Children's Oral Health Report 2016*. First Things First. Retrieved from http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf

²⁰⁷ Arizona Department of Health Services. (2015). *Healthy Smiles Healthy Bodies Survey 2015. The Oral Health of Arizona's Kindergarten and Third Grade Children*. Retrieved from

<https://www.azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/oral-health/healthy-smiles-healthy-bodies-data-brief-2015.pdf>

²⁰⁸ First Things First. (2019). *Impacting Young Lives Throughout Arizona—2019 Annual Report*. First Things First. Retrieved from https://www.firstthingsfirst.org/wp-content/uploads/2019/09/FY2019_Annual_Report.pdf

²⁰⁹ Arizona Department of Health Sciences. (2015). *Arizona Maternal Child Health Needs Assessment*. Retrieved from <http://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/title-v/needs-assessment2015.pdf>

²¹⁰ Miller, G., Coffield, E., Leroy, Z., & Wallin, R. (2016). Prevalence and costs of five chronic conditions in children. *The Journal of School Nursing*, 32(5):357-364. PMID: 27044668.

²¹¹ Zahran, H.S., Bailey, C.M., Damon, S.A., Garbe, P.L., & Breyse, P.N. (2018). Vital Signs: Asthma in Children—United States, 2001-2016. *Morbidity and Mortality Weekly Report*, 67(5): 149-155. PMID: 29420459

- ²¹² Brim, S.N., Rudd, R.A., Funk, R.H., & Callahan (2008). Asthma prevalence among US children in underrepresented minority populations: American Indian/Alaska Native, Chinese, Filipino, and Asian Indian. *Pediatrics*, 122(1):e217-222. PMID: 18595967.
- ²¹³ Perry, R., Braileanu, G., Pasmer, T. & Stevens, P. (2019). The economic burden of pediatric asthma in the United States: Literature review of current evidence. *PharmacoEconomics*, 37(2): 155-167.
- ²¹⁴ Arizona Department of Health Services (2018). *Arizona Injury Data Report 2016*. Retrieved from <https://www.azdhs.gov/prevention/womens-childrens-health/reports-fact-sheets/index.php#injury-prevention>
- ²¹⁵ Centers for Disease Control and Prevention, National Center for Injury Prevention and Control (2018). *10 Leading causes of death by age group, United States – 2017*. Retrieved from <https://www.cdc.gov/injury/wisqars/LeadingCauses.html>
- ²¹⁶ Rimsza, M.E., Shackner, R.A., Bowen, K.A., & Marshall, W. (2002). Can child deaths be prevented? The Arizona Child Fatality Review Program experience. *Pediatrics*, 110(1 Pt 1): e11. PMID: 12093992
- ²¹⁷ Danseco, E.R., Miller, T.R., & Spicer, R.S. (2000). Incidence and Cost of 1987-1994 Childhood Injuries: Demographic breakdowns. *Pediatrics*, 105(2): E27. PMID: 10654987.
- ²¹⁸ Möller, H., Falster, K., Ivers, R., & Jorm, L. (2015). Inequalities in unintentional injuries between indigenous and non-indigenous children: a systematic review. *Injury Prevention*, 21:e144-e152. PMID: 24871959.
- ²¹⁹ Arizona Department of Health Services. (2013). *Arizona Health Status and Vital Statistics 2013 Annual Report. Table 6A: Monitoring Progress Toward Arizona and Selected Healthy People 2020 Objectives: Statewide Trends*. Retrieved from: http://www.azdhs.gov/plan/report/ahs/ahs2013/pdf/6a1_10.pdf
- ²²⁰ Evans, G., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43-48. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/cdep.12013/abstract>
- ²²¹ Shonkoff, J.P., & Fisher, P.A. (2013). Rethinking evidence-based practice and two-generation programs to create the future of early childhood policy. *Development and Psychopathology*, 25, 1635-1653. Retrieved from http://journals.cambridge.org/download.php?file=%2FDPP%2FDPP25_4pt2%2FS0954579413000813a.pdf&code=ae62de3e0ea8214329e7a33e0a9df0e
- ²²² Magnuson, K., & Duncan, G. (2013). Parents in poverty. In Bornstein, M., *Handbook of parenting: Biology and ecology of parenting vol. 4: Social conditions and applied parenting*. New Jersey: Lawrence Erlbaum.
- ²²³ Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>
- ²²⁴ Van Voorhis, F., Maier, M., Epstein, J., & Lloyd, C. (2013). *The impact of family involvement on the education of children ages 3 to 8: A focus on the literacy and math achievement outcomes and social-emotional skills*. MDRC: Building Knowledge to Improve Social Policy. Retrieved from http://www.p2presources.com/uploads/3/2/0/2/32023713/family_outcomes.pdf
- ²²⁵ Browne, C. (2014). The Strengthening Families Approach and Protective Factors Framework: Branching Out and Reaching Deeper. *Center for the Study of Social Policy*. Retrieved from <https://cssp.org/wp-content/uploads/2018/11/Branching-Out-and-Reaching-Deeper.pdf>

- ²²⁶ Van Voorhis, F., Maier, M., Epstein, J., & Lloyd, C. (2013). *The impact of family involvement on the education of children ages 3 to 8: A focus on the literacy and math achievement outcomes and social-emotional skills*. MDRC: Building Knowledge to Improve Social Policy. Retrieved from http://www.p2presources.com/uploads/3/2/0/2/32023713/family_outcomes.pdf
- ²²⁷ American Academy of Pediatrics. (n.d.). *Pediatric Professional Resource: Evidence Supporting Early Literacy and Early Learning*. Retrieved from https://www.aap.org/enus/Documents/booksbuildconnections_evidencesupportingearlyliteracyandearlylearning.pdf
- ²²⁸ Duncan, G.J., Dowsett, C.J., Claessens, A., Magnuson, K., Huston, A.C., Klebanov, P., ... Sexton, H. (2007). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428.
- ²²⁹ Bernstein, S., West, J., Newsham, R., & Reid, M. (2014). *Kindergartners' skills at school entry: An analysis of the ECLS-K*. Mathematica Policy Research.
- ²³⁰ Hood, M., Conlon, E., & Andrews, G. (2008). Preschool home literacy practices and children's literacy development: A longitudinal analysis. *Journal of Educational Psychology*, 100, 252-271.
- ²³¹ Fantuzzo, J., McWayne, C., Perry, M. A., & Childs, S. (2004). Multiple dimensions of family involvement and their relations to behavioral and learning competencies for urban, low-income children. *School Psychology Review*, 33, 467-480.
- ²³² Peterson, J., Bruce, J., Patel, N., & Chamberlain, L. (2018). Parental attitudes, behaviors, and barriers to school readiness among parents of low-income Latino children. *International Journal of Environmental Research and Public Health*, 15(2), 188.
- ²³³ Reach Out and Read. (n.d.). *Programs Near You*. Retrieved from <http://www.reachoutandread.org/resource-center/find-a-program/>
- ²³⁴ U.S. Department of Education. (2017). *2017 Reading State Snapshot Report, Arizona*. <https://nces.ed.gov/nationsreportcard/subject/publications/stt2017/pdf/2018039AZ4.pdf>
- ²³⁵ Yarnell, V., Lambson, T., & Pfannenstiel, J. (2018). *BIE Family and Child Education Program 2017 Report*. Retrieved from <https://www.bie.edu/cs/groups/xbie/documents/document/idc2-084604.pdf>
- ²³⁶ Centers for Disease Control and Prevention. (n.d.). *Division of Violence Prevention: About adverse childhood experiences*. Retrieved from https://www.cdc.gov/violenceprevention/acestudy/about_ace.html
- ²³⁷ Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive childhood experiences and adult mental and relational health in a statewide sample: Associations across adverse childhood experience levels. *JAMA pediatrics*, 173(11), e193007-e193007.
- ²³⁸ U.S. Department of Health & Human Services, Administration for Children & Families, Children's Bureau (2019). *Child Welfare Outcomes Report Data for Arizona*. Retrieved from <https://cwoutcomes.acf.hhs.gov/cwodatasite/childrenReports/index>
- ²³⁹ Hughes, K., Bellis, M.A., Hardcastle, K.A., Sethi, D., Butchart, A., Mikton, C., ... Dunne, M.P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, 2(8), e356-e366

²⁴⁰ Keating, K., Daily, S., Cole, P., Murphey, D., Pina, G., Ryberg, R., Moron, L., & Laurore, J. (2019). *State of Babies Yearbook: 2019*. Washington, DC: ZERO TO THREE and Bethesda MD: Child Trends.

²⁴¹ Centers for Disease Control and Prevention. (n.d.). *Preventing child abuse & neglect*. Retrieved from <https://www.cdc.gov/violenceprevention/childabuseandneglect/fastfact.html>

²⁴² Anderson, K.M., & Olsen, S. (2013). *Leveraging Culture to address Health Inequalities. Examples from Native Communities. Workshop Summary of Roundtable on the Promotion of Health Equity and the elimination of Health Disparities*. Washington, DC: The National Academies Press.

²⁴³ Brown-Rice, K. (2013). Examining the Theory of Historical Trauma Among Native Americans. *The Professional Counselor*, 3(3), 117-130.

²⁴⁴ Tift, Neil. (2018). Addressing Adverse Childhood Experiences in Native American Communities. *Understanding Impacts and Implementing Strategies*. Retrieved from <https://www.pcaaz.org/wp-content/uploads/2018/07/B13-ACEs-in-Native-American-Families.pdf>

²⁴⁵ Zero to Three Infant Mental Health Task Force Steering Committee, 2001.

²⁴⁶ Healthy People 2020. (n.d.). *Maternal, infant, and child health: Life stages and determinants*. Retrieved from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Maternal-Infant-and-Child-Health/determinants>

²⁴⁷ Turney, K., & Wildeman, C. (2016). Mental and physical health of children in foster care. *Pediatrics*, 138(5), e20161118.

²⁴⁸ Ibid.

²⁴⁹ Starks, R.R., Smith, A.T., Jäger, M.B., Jorgensen, M., & Cornell, S. (2016). *Tribal Child Welfare Codes as Sovereignty in Action: A Guide for Tribal Leaders*. Prepared for 2016 NICWA Annual Conference. Tucson, AZ: Native Nations Institute, and Portland, OR: National Indian Child Welfare Association. Retrieved 28 Aug. 2019 from http://nni.arizona.edu/application/files/9214/7042/9035/2016_child_welfare_nicwa_conference_paper_final.pdf

²⁵⁰ Frichner, T.G. (2010). *The Indian Child Welfare Act: A National Law Controlling the Welfare of Indigenous Children*. American Indian Law Alliance.

²⁵¹ First Things First. (2018). *San Carlos Apache Regional Partnership Council 2018 Needs and Assets Report*. Retrieved from: <https://files.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report%20-%202018%20-%20San%20Carlos%20Apache.pdf>

²⁵² Ibid.

²⁵³ Ibid.

²⁵⁴ Ibid.

²⁵⁵ Ibid.