2024
NEEDS AND ASSETS REPORT

FIRST THINGS FIRST

San Carlos Apache Region

SAN CARLOS APACHE REGIONAL PARTNERSHIP COUNCIL 2024 NEEDS AND ASSETS REPORT

Funded by the

First Things First San Carlos Apache Regional Partnership Council

Prepared by

Community Research, Evaluation & Development (CRED)

John & Doris Norton School of Human Ecology

College of Agricultural, Life and Environmental Sciences

The University of Arizona

PO Box 210078

Tucson, AZ 85721-0462

Phone: (520) 621-2983

https://norton.arizona.edu/cred

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 start 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 well-being in our communities and our state.

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

The report is organized by topic areas pertinent to young children in the region, such as 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 and education of young children in their care. It is our sincere hope that this information will help guide community conversations about how we can best support school readiness for all children in the San Carlos Apache Region. To that end, this information may be useful to local stakeholders 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 age 5 in communities throughout the region.

ACKNOWLEDGEMENTS

The San Carlos Apache Regional Partnership Council wishes to thank all of the federal, state and local partners whose contributions of data, ongoing support and partnership with FTF made this report possible. These partners included the Arizona Departments of Administration (Employment and Population Statistics), Child Safety, Economic Security, Education and Health Services; Child Care Resource and Referral; and the U.S. Census Bureau. We are especially grateful for the spirit of collaboration exhibited by all our partners as we, as a state, continue to recover from the COVID-19 pandemic.

We also want to thank parents and caregivers, local service providers and members of the public who attended regional council meetings and voiced their opinions, as well as all the organizations working to transform the vision of the regional council into concrete programs and services for children and families in the San Carlos Apache Region.

Lastly, we want to acknowledge the current and past members of the FTF San Carlos Apache Regional Partnership Council whose vision, dedication and passion have been instrumental in improving outcomes for young children and families within the region. As we build upon those successes, we move ever closer to our ultimate goal of creating a comprehensive early childhood system that ensures children throughout Arizona are ready for school and set for life.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

The San Carlos Apache Region. 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 (FTF) designated region or elect to be designated as a separate region. The San Carlos Apache were one of 10 tribes that chose to be designated as its own region. This decision must be ratified every two years, and the San Carlos Apache Tribe has opted to continue to be designated as its own region.

The boundaries of the FTF San Carlos Apache Region are defined to be those of the San Carlos Apache Indian Reservation. 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.

Population Characteristics. According to the 2020 U.S. Census, the total population of the San Carlos Apache Region was 10,251, of whom 1,192 were young children (birth to age 5). More than one-third of the 2,387 households in the region (31%) had one or more young children. This proportion of households with young children in the region (31%) was substantially higher than the proportion across all Arizona reservations (20%) and in Arizona overall (13%). Census data indicate that the overall population of the San Carlos Apache Region grew by 2% between 2010 and 2020. This runs counter to the decrease seen across all Arizona reservations (-3%). However, the population of young children (birth to age 5) decreased by 17%. This was a smaller decrease than the -26% seen across all Arizona reservations but larger than the -12% statewide.

Given that American Indians living on reservations and young children (birth to age 4) were specifically found to be substantially undercounted[i] in the 2020 Census (5.6% and 3-5% nationally), tribal enrollment data are important for determining population counts in Native communities. Based on data from the San Carlos Enrollment Office included in the 2022 FTF San Carlos Apache Regional Needs and Assets Report, there were 16,760 enrolled San Carlos Apache members in 2021. This included 11,142 members residing within the San Carlos Apache Region, including 533 young children (birth to age 5). The overall number of young children enrolled in 2021 (n=724) was markedly lower than enrollment in 2020 (n=958). According to the 2022 Regional Needs and Assets Report, the community was closed during substantial parts of 2020 and 2021 due to the COVID-19 pandemic, which affected services offered in-person and may have affected enrollment.

Another way to understand potential undercounting of young children in the San Carlos Apache Region is to compare 2020 Census data on the population birth to 5 to Arizona Department of Health Services

[i] *See the 2020 Census data and its limitations section near the beginning of the Population Characteristics section of this report.*

(ADHS) data on births from 2015 to 2020. Birth counts are substantially higher than Census estimates (+15%), with 1,406 total births in the region between 2015 and 2020 compared to an estimated population of 1,192 young children in the Census. Statewide, birth counts are only +1% higher than Census counts. This suggests that young children in the region were likely undercounted in the 2020 Census.

Almost all of the population (99%) in the San Carlos Apache Region identified as American Indian, even higher than the proportion seen across all Arizona reservations (93%). Much smaller proportions of the total population in the region identified as Hispanic or Latino (2%), non-Hispanic White (1%), Multiracial (1%), Black or African American (0.3%) or Asian or Pacific Islander (0.4%) in 2020. These breakdowns were similar for young children, with nearly all identified as American Indian (99%), and slightly higher proportions identified as Multiracial (2%) or Hispanic or Latino (3%) when compared to the overall population.

About one-third of individuals ages 5 and older (67%) in the San Carlos Apache Region speak a language other than English or Spanish at home (most likely a Native North American language), a lower proportion than seen across all Arizona reservations (50%) but substantially higher than in Arizona overall (6%). Very few individuals report speaking Spanish at home (0.3%), and about two-thirds report using only English at home (32%).

Of those individuals speaking a language other than English at home, most also speak English "very well," with nearly a third of the region proficiently bilingual or multilingual (29%). A smaller proportion of individuals (6%) report speaking another language at home and not speaking English "very well" (18%) than in all Arizona reservations (12%) and Arizona overall (8%). A small proportion of households in the San Carlos Apache Region (3%) are considered limited-English-speaking, meaning no one over the age of 13 in the household speaks English very well. This is a smaller proportion than seen across all Arizona reservations (12%).

During the 2021-22 school year, 16 preschool to 12th grade students (<2%) enrolled in public and charter schools in the San Carlos Apache Region were considered English Language Learners, a decrease from 31 students in 2020-21 (2%). In off-reservations schools that San Carlos Apache Region students attend, 33 students were identified as English Language Learners in 2020-21 and 37 in 2021-22. English Language Learners are identified through the Arizona Department of Education (ADE) Home Language Survey, which asks families about the student's first language and what language is spoken at home most of the time. Statewide, 108 students reported Apache language use at home in 2020-21, decreasing slightly to 104 students in 2021-22. However, fewer than 11 students attending schools in the San Carlos Apache Region and fewer than 11 students in off-reservation schools had reported Apache language use at home in either 2020-21 or 2021-22.

According to the 2022 Regional Needs and Assets Report, there are multiple efforts underway to preserve and revitalize the Apache language, including the San Carlos Apache Tribe's Apache Language Preservation Department. The San Carlos Apache Head Start program and Apache Kid Child Care center offer Apache language instruction for young children using curriculum developed through the One People ~ One Nation Project. San Carlos Unified School District offers Apache language

instruction for all grade levels, including pre-kindergarten, and specifically offers Apache language immersion classrooms at Rice Elementary School. San Carlos Apache College offers both Apache language and Apache history courses.

Nearly two out of every three young children (birth to age 5) in the San Carlos Apache Region live in a household with one unmarried parent (65%), which is a larger proportion than across Arizona (37%). About one in five young children live with two married parents (21%), while more than one in 10 (12%) live with relatives other than parents (such as grandparents, aunts and uncles) and very few live with non-relatives (2%). Young children in the region are substantially more likely to live with non-parental relatives (12%) than young children in all Arizona reservations (8%) or statewide (3%).

Almost half of young children (43%) in the region live in a grandparent's household, which is the same as that seen across all Arizona reservations (43%). Note that this includes all multigenerational households; the grandparent in these households may or may not be responsible for raising the child, and the child's parent(s) may or may not also be living in the household. In contrast, 4% of grandparents in the region are living with grandchildren (birth to age 17) without a parent also present in the household. This suggests that many of the grandchildren residing with their grandparents are in multigenerational households, where grandparents, parents and children all live together.

The American Community Survey (ACS) considers a grandparent to be responsible for their grandchildren if they are "currently responsible for most of the basic needs of any grandchildren under the age of 18" who live in the grandparent's household. Based on this definition, an estimated 132 grandparents in the San Carlos Apache Region are responsible for their grandchildren under 18 years old. A parent is also present in most of these households (only 22% without the child's parent). Nearly all of these grandparents are female (92%), and 58% are in the labor force, meaning that they may need child care for their grandchildren while they are working. Nearly half (42%) have an income below the poverty level, which is slightly higher than the percentage across all Arizona reservations (36%) and substantially higher than the proportion statewide (21%).

Economic Circumstances. Across all household types for which data are available, the median family income for all families with children (birth to age 17) in the San Carlos Apache Region is substantially less than that in Arizona overall. For example, married couple families with children in the region have the highest median annual income ($57,200) of all family types, but this is substantially lower that seen statewide ($100,000). The notably lower median annual income of single-female-headed families with children ($12,800) in the region points to the additional financial stress experienced by the single-parent-led households in the region. This median income for single-female-headed households is well below the 2021 federal poverty threshold of $18,677 for a single parent with one child, suggesting that the majority of single-female-headed households in the region have incomes below the poverty threshold.

Nearly half (45%) of the overall population and two-thirds (64%) of young children (birth to age 5) in the San Carlos Apache Region live in poverty, which is more than triple the poverty rates for Arizona as a whole (13% and 20%, respectively) and substantially higher than rates seen in all Arizona reservations

(37% and 48%, respectively). According to ACS five-year estimates, rates of poverty among young children in the San Carlos Apache Region have increased (+11%) in recent years, from 53% in 2012-2016 to 64% in 2017-2021. In contrast, poverty rates declined in all Arizona reservations (-6%), Arizona (-8%) and the U.S. (-6%) during the same time period.

The majority (79%) of young children in the San Carlos Apache Region live in households with incomes under 185% of the federal poverty level (FPL), a commonly used threshold for social safety net benefits such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and reduced-price school meals. In 2021, the 185% FPL threshold for a family of two adults and two children was $50,836; for a single parent with one child, it was $34,552.

Over a third (38%) of young children in the region that live in "deep poverty" (defined as below 50% FPL), quadruple the proportion in the state as a whole (9%). This suggests that substantially more families may have cash incomes that are not sufficient to meet their needs. However, while income is one important way to measure whether families can meet their basic needs, in Native communities, subsistence-based activities such as hunting, gathering, farming and ranching are important cultural practices that can also meet families' basic needs and are not captured in standard poverty measures.

The San Carlos Apache Tribe is one of six tribes in Arizona that operate a Tribal Temporary Assistance for Needy Families (TANF) program, known as Nnee Bich'o Nii ("Helping the People"). According to the 2022 Regional Needs and Assets Report, the Nnee Bich'o Nii has strict eligibility requirements, with a focus on job training and work participation. Nnee Bich'o Nii has an in-house maintenance training program and provides many participants with training in the construction trades. For families with young children, Nnee Bich'o Nii conducts home visits, tracks school attendance and immunizations, provides resources such as school supplies, partners with FTF to provide books to young children and manages the Motherhood is Sacred and Fatherhood is Sacred parenting education programs. Between 2018 and 2020, the number of children birth to age 5 served by Nnee Bich'o Nii fell from 148 to 113, a 24% decline. By contrast, TANF enrollment for young children increased in Gila and Graham Counties in the same period. According to local key informants consulted in the 2022 Regional Needs and Assets Report, the number of families participating in the program has been declining since 2008 due to the program's strict eligibility requirements, including home visits and substance use testing.

Since state fiscal year (SFY) 2018, Supplemental Nutrition Assistance Program (SNAP) participation among young children (birth to age 5) in the San Carlos Apache Region has declined steadily from 1,549 in SFY 2018 to 1,002 in SFY 2022, a 30% decrease. This parallels the downward trend seen statewide for SNAP participation among young children.

The San Carlos Apache WIC program is administered by the Inter Tribal Council of Arizona. In 2020, a total of 1,544 individuals in the region were enrolled in the program, including 299 women (19%), 340 infants (22%) and 905 children (ages 1-4; 58%). Children make up a larger proportion of participants in the San Carlos Apache WIC program compared to all Inter Tribal Council of Arizona (ITCA) WIC programs, where children make up about half of those enrolled (6,247; 51%). From 2017 to 2020, the number of children (birth to age 4) enrolled in WIC in the region showed similar declines to those seen across all ITCA WIC programs, falling from 1,581 children enrolled in 2017 to 1,245 in 2020. WIC

participation rates were high in the region in 2020, with 97% of women, 100% of infants and 97% of children enrolled in the program receiving benefits that year. Overall participation rates for the San Carlos Apache WIC program increased from 93% in 2017 to 98% in 2020 and were consistently higher than participation rates in all ITCA WIC programs.

From 2019-20 to 2021-22, the total number of school lunches served through school nutrition programs in the San Carlos Apache Region varied by program due to the effects of the COVID-19 pandemic. Due to U.S. Department of Agriculture (USDA) waivers that allowed for greater flexibility in meal service through the Summer Food Service Program (SFSP) year-round, the number of lunches served through SFSP more than doubled between 2019-20 and 2020-21, peaking at nearly 400,000 lunches served. Conversely, lunch service through National School Lunch Program (NSLP) fell to historic lows. In 2021-22, both programs began to return to baseline, with fewer lunches served through SFSP and more through NSLP, but neither program has yet returned to pre-pandemic numbers. Lunches served through Child and Adult Care Food Program (CACFP) in the region increased from nearly 19,000 in 2019-20 to over 27,000 in 2020-21 before declining slightly to about 25,500 in 2021-22. Overall, these trends point to rapid adaptation to changing needs for children's meals and alternative delivery modes during the most intense years of the COVID-19 pandemic. According to the 2022 Regional Needs and Assets Report, there were no early care and education programs participating in CACFP prior to the 2019-20 school year. However, from 2019-20 onward, all San Carlos Apache Head Start and Early Head Start centers as well as Apache Kid Child Care center have served lunches through CACFP.

The unemployment rate is the proportion of the total number of people in the civilian labor force who are unemployed and looking for work. The ACS estimates that the average unemployment rate for the San Carlos Region between 2017 to 2022 was 20%. This is more than triple the unemployment rate for Arizona as a whole (6%) and higher than the rate in all Arizona reservations (14%). The labor force participation rate in the region (49%) is higher than that seen across all Arizona reservations (45%) but substantially lower than the Arizona labor force participation rate (61%). This means that about half of working-age teens and adults in the San Carlos Apache Region are working (39%) or actively looking for work (10%), while the remaining 58% are not (which includes students, retirees, stay-at-home parents and others). More than two-thirds (69%) of young children (birth to age 5) in the San Carlos Apache Region live in a household where at least one parent is in the labor force, compared to 90% of young children statewide. More than half of young children in the region (58%) live in households where all their parents are in the workforce, indicating they likely require some form of child care.

Housing is considered to be affordable for families if it costs less than 30% of annual household income. According to recent ACS estimates, only 14% of households in the San Carlos Apache Region spent more than 30% of their income on housing, disproportionately impacting renters (18%) over homeowners (10%) in the region. Housing cost burden is notably lower in the region compared to the state (29%) and very similar to that seen in all Arizona reservations (13%). According to the 2022 Regional Needs and Assets Report, the San Carlos Apache Housing Authority, established in 1961, provides affordable housing in the San Carlos Apache Region. The Housing Authority offers subsidized rental housing for low-income families under the Native American Housing Assistance and Self-

Determination Act income guidelines as well as a homebuyer program. The goals of the Housing Authority are to remedy unsafe and unsanitary housing, address the shortage of affordable housing in the community and provide employment opportunities in the construction and maintenance trades.

The McKinney-Vento Act definition of homelessness includes children living in shelters, transitional housing, campgrounds, motels, trailer parks and cars, as well as children whose families are temporarily living within another family's household. The number of students experiencing homelessness in public schools in the region nearly doubled from 54 in 2019-20 to 107 in 2021-22, with a drop in the 2020-21 school year when schools were operating through remote learning. The number of students experiencing homelessness in off-reservation public schools that serve San Carlos Apache students declined over the same period, from 15 in 2019-20 to fewer than 11 in 2021-22. The McKinney-Vento Act definition of homelessness includes children living in shelters, transitional housing, campgrounds, motels, trailer parks and cars, as well as children whose families are temporarily living within another family's household (living "doubled up"). According to key informants consulted in the 2022 Regional Needs and Assets Report, there is a severe shortage of safe and adequate housing in the region that has led to many families living in overcrowded housing or living in often unstable "doubled up" arrangements with other families. These unstable housing arrangements can make it challenging for families to consistently access services.

Over half (58%) of households in the San Carlos Apache Region have both a computer (i.e., a desktop, laptop, tablet or smartphone) and broadband internet connectivity. This proportion is higher than that in all Arizona reservations (44%) but substantially lower than the proportion of households in Arizona overall (88%). At the individual level, about two in every three (67%) individuals in the San Carlos Apache Region have access to both a computer and internet in their household. Access is the same for children birth to age 17 (67%), which is substantially higher than the 55% of children with access in all Arizona reservations but far below the 92% seen in Arizona statewide.

Educational Indicators. Children in the San Carlos Apache Region attend school at public schools in the San Carlos Unified School District and the Fort Thomas Unified School District, private schools such as Peridot- Our Savior's Lutheran School and St. Charles Apache Mission School and off-reservation schools including Globe Unified School District schools, Miami Unified School District #40 schools and Destiny Charter School in Globe. In the 2021-22 school year, 458 students were enrolled in preschool through 3rd grade in public schools within the San Carlos Apache Region, and an additional 181 American Indian students were enrolled in off-reservation public and charter schools known to serve San Carlos Apache Region students. Overall, about 100 students were enrolled in each grade between kindergarten and 3rd grade, and 19 students were enrolled in preschool (including students enrolled in special education) in the region.

Between 2019-20 and 2021-22, kindergarten through 3rd grade chronic absence rates increased dramatically across all schools in Arizona, more than quadrupling statewide from 8% in 2019-20 and 34% in 2021-22. However, the chronic absence rate was already higher in schools in the San Carlos Apache Region, at 34% in 2019-20, and like in statewide schools, chronic absence rates have risen

sharply, climbing to 75% in 2021-22. Rates also increased in off-reservation schools, rising from 13% in 2019-20 to 38% in 2021-22.

In the 2021-22 school year, only 3% of students in San Carlos Apache Region schools achieved a passing score on the 3rd grade English Language Arts (ELA) assessment. This is lower than the passing rates for American Indian students in all Arizona schools (16%) and considerably lower than the passing rates for American Indian students in off-reservation schools (28%) and for students of all races and ethnicities in Arizona (41%). In regional schools, ELA passing rates increased slightly between 2020-21 and 2021-22, going from less than 2% to 3%. Passing rates for American Indian students in off-reservation schools increased substantially, from 8% to 28% in the same period. Across the state, ELA passing rates for American Indian students remain exceptionally low, less than half that of students of all races and ethnicities in any year. Passing rates on ELA assessment have yet to reach the rates seen pre-pandemic at schools in the region and statewide in Arizona.

Compared to ELA passing rates, a similar proportion of students in San Carlos Apache Region schools passed the 3rd grade Math assessment in 2021-22 (3%). This is again lower than the passing rates for American Indian students in all Arizona schools (16%) and substantially lower than the passing rates for American Indian students in off-reservation schools serving San Carlos Apache Region students. Similar to patterns seen for ELA passing rates, passing rates for the 3rd grade Math assessment increased slightly in the region from less than 2% in 2020-21 to 3% in 2021-22. Passing rates improved more dramatically for American Indian students in off-reservation schools, more than quadrupling from 8% in 2020-21 to 34% in 2021-22. However, even with these improvements, passing rates for students in the region (3%), American Indian students in off-reservation schools (34%) and American Indian students across Arizona (16%) remain below statewide passing rates for Math for all students (40%).

Both four- and five-year graduation rates for schools in the San Carlos Apache Region have been similar to graduation rates for American Indian students statewide. In 2022, 67% of San Carlos Apache Region students graduated in four years, compared to 65% statewide, and in 2021, 68% of students graduated within five years compared to 70% statewide. Graduation rates for American Indian students enrolled in off-reservation schools that serve San Carlos Apache Region students followed similar patterns. In 2022, 63% of American Indian student in these off-reservation schools graduated in four years, and 80% graduated within five years in 2021.

In 2021-22, the 7th-12th grade dropout rate (12%) was higher in San Carlos Apache Region schools than for American Indian students throughout Arizona (9%). Dropout rates for American Indian students in off-reservation schools were substantially lower that year (3%). Dropout rates for students in San Carlos Apache Region schools (13%), for American Indian students in off-reservation schools (5%) and for American Indian students statewide (10%) peaked in 2020-21.

Among adults in the San Carlos Apache Region, 75% have at least a high school education. This is a slightly lower proportion than seen across all Arizona reservations (77%) and much lower than seen statewide (89%). While educational attainment generally looks similar between the San Carlos Apache Region and all Arizona reservations, 4% of adults in the region have a bachelor's degree or higher, compared to 9% in all Arizona reservations. A higher proportion of mothers giving birth between 2019

and 2022 in the San Carlos Apache Region had less than a high school education (31% compared to 25% of all residents). This rate is higher than for mothers in all Arizona reservations (27% in 2020) and Arizona overall (12% in 2021).

Early Learning. According to the 2022 Regional Needs and Assets Report, early childhood care and education opportunities in the San Carlos Apache Region include Apache Kid Child Care Center, the San Carlos Apache Head Start program, the San Carlos Apache Early Head Start program and the school-based preschool at Rice Elementary, a local public school in the San Carlos Unified School District.

Apache Kid Child Care Center is a tribally operated child care program that offers child care for children birth to age 12 Monday to Friday at two sites located in San Carlos and Bylas (the program is co-located with the Bylas Head Start and Early Head Start programs). Families eligible to enroll children in Apache Kid Child Care Center include low-income families, teen parents enrolled in high school, Tribal TANF clients, and families with parents in the workforce. Before the onset of the COVID-19 pandemic in March 2020, Apache Kid Child Care Center had the capacity to serve 64 children at the San Carlos location and 12 children in Bylas, for a total capacity of 84. As of early 2022, the program was operating at about half capacity due to staffing challenges and space constraints.

San Carlos Apache Head Start offers comprehensive early childhood education for preschool-aged children in families that meet income eligibility criteria. The program operates four facilities, one in each district of the reservation: Gilson Wash, Peridot, Seven Mile and Bylas. Overall, San Carlos Apache Head Start has a funded enrollment of 233 children ages 3 to 5. Prior to the onset of the pandemic, there were 252 children cumulatively enrolled throughout the year in fiscal year (FY) 2019 (as children may exit the program and new children are enrolled in their place). In FY 2023, 200 children were cumulatively enrolled in the program, indicating a slight decline in participation compared to 2019.

The San Carlos Apache Education Department received funding to open the San Carlos Apache Early Head Start program in 2017. The Early Head Start program is co-located with Apache Kid Child Care Center in Bylas and has a funded enrollment of 75 children. However, local key informants consulted in the 2022 Regional Needs and Assets Report noted that Early Head Start has had difficulties reaching full enrollment, with enrollment growing slowly from 40 children in FY 2018 to finally reaching full enrollment just before the onset of the COVID-19 pandemic. In FY 2019, the program had a cumulative enrollment of 68 infants and toddlers, and in FY 2023 cumulative enrollment was lower (n=53). As of spring 2022, both Early Head Start and Head Start, like Apache Kid Child Care, were facing challenges related to lack of qualified staff, high staff turnover and space constraints.

The San Carlos Unified School District opened an inclusive preschool at Rice Elementary School in the 2021-22 school year. According to the 2022 Regional Needs and Assets Report, the goal of the inclusive preschool is to expand early education opportunities for preschool-aged children who Head Start may not be able to serve due to space constraints and income eligibility requirements. Under the inclusive preschool model, both typically-developing children as well as children with speech and language delays

attend the same preschool classroom with a general preschool teacher, and those children with delays are supported by a speech and language pathologist. Special needs preschool teachers still teach those children who need more wraparound support. The inclusive preschool has a capacity to serve 20 children and had 14 children enrolled in 2020-21. In 2021-22, 19 children were enrolled in the inclusive preschool at Rice Elementary.

Pre-pandemic, early care and education programs had the capacity to serve 412 children birth to age 5 in the region; however, the current capacity of these programs is likely lower due to staffing challenges and space constraints affecting many programs. According to the 2020 Census, there were 1,192 children birth to age 5 in the region, indicating that there is likely capacity to serve about one-third of young children in the region.

Very few children in the region receive assistance from the Arizona Department of Economic Security (DES). The numbers of children ages birth to five that were eligible for and receiving child care assistance though DES has decreased sharply, dropping from 32 children receiving assistance in 2019 to fewer than 10 in 2022.

As of SFY 2023, there were 8 child care providers participating in Quality First in the San Carlos Apache Region. This included all of the San Carlos Apache Head Start centers, both Apache Kid Child Care Center locations, Rice Inclusive Preschool and the San Carlos Youth Home. The majority of child care providers in the region (88%) have a 3- to 5-star Quality First rating, indicating a quality-level child care setting. This is much higher than the share seen statewide (68%). More than half of children who are enrolled in a Quality First center (54%) are enrolled in a provider with a 3- to 5-star rating. Overall, 134 children were enrolled in Quality First providers in 2023. This again shows lower enrollments in recent years compared to pre-pandemic enrollments. In 2018-19, more than 400 children were enrolled in these programs.

In federal fiscal years (FFY) 2021 and 2022 combined, the largest share (36%) of children birth to age 2 in the San Carlos Apache Region were referred to the Arizona Early Intervention Program (AzEIP) through physicians' offices, followed by other sources (28%), public health or social service agencies (18%) and parents or families (18%). Compared to the state, there were fewer referrals in the region through health care providers such as physician offices (36% region; 57% state) or hospitals (0% region; 6% state) and more through public health or social service agencies (18% region; 6% state) and other sources (28% region; 9% state). The difference in referral sources in the region may be due to the developmental and sensory screenings conducted by the University of Arizona Cooperative Extension as part of a funded strategy from the FTF San Carlos Apache Regional Partnership Council.

In the region, 42% of children (birth to age 2) who were referred to AzEIP in FFY 2022 were found eligible and received services, double that seen in Arizona overall (21%). There were no children referred in the region whose family chose not to proceed with screening for eligibility, compared to 14% of referrals statewide. Overall half of children referred to AzEIP were found eligible in the region compared to 37% statewide. However, despite higher rates of referred children being found eligible, the total number of children served by AzEIP in the region remains very small; fewer than 10 children were served by AzEIP as of October 1 in all years except in 2019, when 10 children were served. In 2021 and

2022 combined, 10 children were served in the region. Similarly, fewer than 10 children birth to age 5 received services from the Department of Developmental Disabilities (DDD) in any year between SFY 2019 and 2022.

Qualifying children may receive services from either AzEIP and/or DDD, a number which can be used to estimate the total number of young children receiving early intervention services in a region. The number of children receiving AzEIP and/or DDD services fell from 12 in SFY 2019 to fewer than 10 in SFY 2020 and every year that followed. Based on the population of children birth to age 2 in the region per the 2020 Census, this suggests that 1.7% of children or fewer in the region may be receiving early intervention services, a substantially lower proportion than the 2.6% of children statewide.

In 2018 through 2022, a total of 522 students in preschool through 3rd grade in San Carlos Apache Region schools were enrolled in special education. This included 78 preschoolers, 91 kindergarteners, 108 1st graders, 119 2nd graders and 126 3rd graders. Similar numbers of students (of all races and ethnicities) were enrolled in special education in off-reservation schools that serve San Carlos Apache Region students.

Similar to trends seen in early intervention, the number of preschoolers with disabilities served by a local educational agency (LEA) has declined substantially in recent years, falling from 36 in SFY 2018 to fewer than 11 in SFY 2021 and 2022. Of the preschoolers with disabilities receiving services through LEAs in 2022, more than half (58%) were diagnosed with a developmental delay, 23% with a speech or language impairment and 19% with a preschool severe delay. The proportion of preschoolers with a developmental delay is much higher than that seen statewide (43%), and speech or language impairment much lower (34% statewide). Patterns of primary disability in off-reservation schools were much closer to those seen statewide.

The number of kindergarten through 3rd grade students enrolled in special education peaked in SFY 2019 at 109 then declined steadily to 57 in SFY 2022. In 2022, nearly half of these students were diagnosed with a developmental delay (49%), 26% a speech or language impairment, 12% a specific learning disability, 9% autism and 5% another disability. The proportion of children diagnosed with a developmental delay was again much higher for students in the region (49%) than Arizona overall (27%). In off-reservation ADE schools, most children enrolled in special education had a speech or language impairment (37%) or developmental disability (36%).

Child Health. According to the 2022 Regional Needs and Assets Report, families in the San Carlos Apache Region primarily access health care through Izee Baa' Gowąh San Carlos Apache Healthcare Corporation, a tribally operated 638 contract facility. Under the Indian Self-Determination and Education Assistance Act (PL-93-638), federally recognized tribes have the option to receive the funds that IHS would have used to provide health care services in order to directly provide services for tribal members through 638 contracts. The Izee Baa' Gowąh health care campus in Peridot co-locates emergency services, public health nursing and behavioral health services with the hospital. Health care services offered through Izee Baa' Gowąh include internal medicine, obstetrics and gynecology, pediatrics, surgery, emergency medicine, radiology, podiatry, specialty health services, nutrition and

dietetics, physical therapy and dental care. Izee Baa' Gowah, a level IV trauma center, is one of only two tribally-operated trauma centers in the entire state of Arizona. Izee Baa' Gowąh also operates the Clarence Wesley Health Center (CWHC) in Bylas, which houses outpatient clinics for women's health, pediatrics, podiatry, diabetes, nutrition and dietetics, dental care, optometry, physical therapy and wound care.

For young children birth to age 5, pediatric care is available both at the Izee Baa' Gowąh hospital and through the Maternal and Child Health Clinic, part of the San Carlos Apache Department of Health and Human Services (DHHS). The Maternal and Child Health Clinic offers routine care, well child visits and immunization appointments. The Public Health Nurses program, also under DHHS, provides health screenings for children enrolled in San Carlos Apache Head Start and Early Head Start and children enrolled in school in the region.

Between January 2018 and April 2021, there were 17,053 active users who received services through Izee Baa' Gowąh, according to data provided by the Healthcare Corporation for the 2022 Regional Needs and Assets Report. This included 1,595 children birth to age 5. When compared to population estimates from the 2020 Census and tribal enrollment data, this suggests that nearly all community members receive care at Izee Baa' Gowąh.

Health insurance plays a key role in facilitating access to health care. According to data from the ACS, the proportion of young children without health insurance has decreased in recent years, falling from 20% in 2012-2016 ACS estimates to only 7% in 2017-2021 estimates, the same as seen in Arizona statewide. However, it is important to note that the U.S. Census Bureau does not consider coverage by the Indian Health Services (IHS), including care at 638 or other Urban Indian health care facilities, to be insurance coverage. This means that, unlike uninsured children statewide, children considered "uninsured" in the San Carlos Apache Region still have access to health care services at Izee Baa' Gowąh and through programs like the Maternal and Child Health Clinic. The decrease in children without health insurance in the region also runs counter to the trend seen across all Arizona reservations, where the percentage of young children without health insurance increased from 17% to 20% between 2012-2016 and 2017-2021 estimates.

Health insurance coverage data from the ACS are generally consistent with data on insurance coverage provided by Izee Baa' Gowąh for the 2022 Regional Needs and Assets Report. Between January 2018 and April 2021, 78% of young children birth to age 5 seen at Izee Baa' Gowąh were covered by Medicaid (Arizona Health Care Cost Containment System , AHCCCS,in Arizona), 11% had private or 3rd party insurance, and 11% were only covered through IHS funding (these children would count as "uninsured" in the ACS estimates). Facilitating enrollment in AHCCCS can have positive outcomes for both individuals and communities by increasing access to health care services and increasing funds available for health care provision to all community members.

However, despite high rates of health insurance coverage among young children, most births in the San Carlos Apache Region were covered by IHS funding in 2020 (69%) and 2021 (75%), which is much higher than IHS coverage across all Arizona reservations in 2020 (16%). Only 17% of births in 2020 and 16% in 2021 were covered by AHCCCS, compared to 71% in all Arizona reservations and nearly half in

Arizona (2020: 48%; 2021:46%). Between 2018 and 2022, the proportion of births in the San Carlos Apache Region paid for by AHCCCS were consistently between 16-17% until 2022, when the percent covered by AHCCCS jumped to 21%. The proportion of births paid for by IHS hit a five-year low in 2022 at 64% compared to a high of 76% in 2018.

In 2021, less than half (43.3%) of the 187 births in the San Carlos Apache Region were to mothers who began prenatal care in the first trimester, while more than one in four births (28%) were to mothers who had fewer than five prenatal visits, and another 8% were to mothers who had no prenatal care. In all Arizona reservations in 2020, 5% of births were to mothers with no prenatal care, 14% to mothers with fewer than five visits and 55.8% to mothers who began care in the first trimester, meaning that births in the San Carlos Apache Region much more likely to have inadequate or late prenatal care than those in all reservations in the state. The region also substantially lagged behind the state in terms of timely and adequate prenatal care.

The proportion of births to mothers with fewer than five prenatal care visits has remained consistently about 28-29% from 2018 to 2022, more than five times the statewide rate of 4.7-5.6% in the same period. The share of births with no prenatal care rose to a five-year high of 10.7% in 2022, again, more than five times statewide rate of 2.3%. Both of these trends indicate that access to adequate prenatal care is a concern in the region. Between 2018 and 2022, the proportion of births in the San Carlos Apache Region to mothers who began prenatal care in the first trimester decreased from a high of 51% in 2019 to 42% in 2022, lower than the statewide rate of 71%. This indicates an ongoing need for timely prenatal care in the region. According to the 2022 Regional Needs and Assets Report, the Community Health Representatives, part of DHHS, work with young mothers in the region to provide education on prenatal health through both phone and home visits.

In 2020 and 2021, 13-14% of births in the San Carlos Apache Region were to mothers younger than age 20 and 5-7% were to mothers younger than 18. Both of these percentages were higher than the 9% of births to mothers younger than 20 in all Arizona reservations and 4% to mothers younger than 18, suggesting that births to teenaged mothers are more prevalent in the region compared to reservations statewide. Looking at trends in births to teenaged mothers between 2018 and 2022, the proportion of births to mothers younger than 20 has been consistently higher in the region (16.1-7.7%) than in the state (4.6%-5.8%). However, in an encouraging trend, the percentage of births to mothers younger than 20 and younger than 18 fell to five-year lows of only 7.7% and 3.6%, respectively, in 2022. The share of births to teenaged mothers in 2022 was approximately half that seen in 2018.

The share of mothers giving birth who smoked cigarettes during pregnancy was much smaller in the region in 2020 (4.8%) than in all Arizona reservations (11.1%) but higher than Arizona overall (3.6%). The San Carlos Apache Region met the Healthy People 2030 target of no more than 4.3% of women using tobacco during pregnancy for the first time in five years in 2022, with rates declining from 6.5% in 2018 to 3.6% in 2022. Between 2018 and 2022, 111 newborns were hospitalized because of maternal drug use during pregnancy in the San Carlos Apache Region. Based on the total number of births, this equates to 12.1 newborns hospitalized per 100 births, much higher than the 3.3 newborns hospitalized per 100 live births in the state, indicating that substance use during pregnancy may be more prevalent in

the region than statewide. The average length of hospital stay for these newborns was shorter in the region (3.9 days) than in Arizona as a whole (9.5 days).

Between 2018 and 2022, rates of pre-pregnancy obesity in the San Carlos Apache Region steadily increased while rates of gestational diabetes varied. Births to mothers with pre-pregnancy obesity increased from about one in four births in 2018 (28.1%) to more than half of all births in 2022 (51.2%). Births with gestational diabetes varied between a high of 15.0% in 2021 and a low of 8.2% in 2019, with 11.3% of births to mothers diagnosed with gestational diabetes in 2022. In 2021, the latest year that can be compared with the state, the San Carlos Apache Region had substantially higher rates of both pre-pregnancy obesity (47.1% compared with 27.1%) and gestational diabetes (15.0% compared with 9.9%).

Statewide, about 1 in 7 mothers (13.7%) of all race and ethnicities reported experiencing postpartum depressive symptoms in 2020, nearly the same rate as that seen nationwide (13.4%). National data show that more than one in five (22%) American Indian and Alaska Native mothers in the U.S. experienced postpartum depressive symptoms in 2018, suggesting that Native mothers may be at higher risk of postpartum depression.

In 2021, higher proportions of babies born were preterm (12.8%) in the San Carlos Apache Region than in Arizona overall (10.0%), but the proportion of low birthweight births (5.3%) and babies admitted to the Neonatal Intensive Care Unit (NICU) (7%) were lower in the region than in the state (9.6% and 8%, respectively). The proportion of births that were at a low birthweight (7.3%) in 2020 was also lower in the region than across all Arizona reservations (8.9%), but the rates of preterm births was notably higher in the region (15.2%) than in reservations statewide (12.6%). Between 2018 and 2022, the proportion of births at low birthweight in the San Carlos Apache Region was higher than that seen in the state for all but one year, when the region had a five-year low of only 5.8% of births at low birthweight. The proportion of low birthweight births in the region was most frequently between 9.0-12.1%, higher than the statewide range of 7.4-7.9%. The Healthy People 2030 target for the percentage of preterm births is 9.4% or lower. In 2021, the San Carlos Apache Region met this target, but in all other years, preterm birth rates were above 9.4%. In 2022, 9.5% of births were preterm, meaning the region did meet this target. Since 2019, the share of preterm births ranged from 8.7% to 10.5%, only slightly above the statewide range of 9.3-10.0% of births in this period.

From 2017 to 2020, about half of WIC-enrolled infants in the San Carlos Apache Region were breastfed at least once, with rates declining from 56% in 2017 and 2018 to 47% in 2020. The region had lower rates of breastfeeding than those seen across all ITCA WIC Programs, with around two-thirds of WIC-enrolled infants ever breastfed in three of four years. Trends in breastfeeding at 6 months also declined in the region during this time, from a high of 13% in 2018 to a low of 10% in 2020.

Childhood immunizations protect against many diseases, including diphtheria, tetanus and pertussis (DTaP); polio; and measles, mumps and rubella (MMR). According to data from the Izee Baa' Gowąh that was included in the 2022 Regional Needs and Assets Report, 40% of children ages 19 to 35 months were up to date on all early childhood immunizations, which did not meet the national IHS target of 45.6% or more. Immunization data for children enrolled in child care were not available through ADHS in the region, but immunization data in the fiscal year (FY) 2023 Head Start Program Information

Report for the San Carlos Apache Head Start program show that 97% of children birth to age 2 enrolled in Early Head Start and 99% of children age 3 to 5 enrolled in Head Start were up-to-date on all immunizations appropriate for their age by the end of the year. This indicates that immunization rates are high among children enrolled in Head Start, the largest early education program in the region.

However, kindergarten immunization rates in select schools in the region (DTaP 64.0%; Polio 64.0%; MMR 64.0%) were substantially lower than statewide rates (DTaP 89.6%; Polio 90.3%; MMR 89.9%) in the 2022-23 school year. Immunization rates in regional schools did not meet the Healthy People 2030 kindergarten MMR immunization target of 95% or more. Personal belief exemption rates and rates of exemptions from all required vaccines (0.0% for both) were again lower than rates in Arizona overall (7.3% and 4.6%, respectively), indicating that there may be a number of kindergarteners with incomplete documentation or incomplete immunizations in the region who are still open to completing these immunizations. Rates of exemptions from immunizations among kindergarteners in the region have been consistently below 1%, with the exception of the 2020-21 school year when 2.9% of children had a medical exemption from at least one vaccine.

The pattern of confirmed and probable cases of Respiratory Syncytial Virus (RSV) and influenza in young children birth to age 5 changed substantially between 2019 and 2022. In 2021, influenza cases in young children fell to 0, and there were fewer than six RSV cases. However, in 2022, there were 17 cases of RSV in young children in the region, the highest number seen in four years, and influenza cases rebounded to 11. Similar increases were seen in cases statewide, though without the 2021 dip in RSV cases.

The types of unintentional injuries leading to non-fatal emergency department visits among young children (birth to age 4) were generally similar in the San Carlos Apache Region to the state as a whole. Between 2018 and 2022, the majority of emergency department visits among young children in the region were due to falls (n=58), with smaller numbers due to being struck by or against an object (n=26) or other causes (n=140). However emergency visits due to fire or hot objects (n=14; 9%), poisoning (n=13; 9%) or motor vehicle traffic (n=12; 7%) were much more prevalent in the region than in the state (fire/hot objects 3%; poisoning 6%; MV traffic 3%). In this period, 23 of these non-fatal injuries led to in-patient hospitalizations for young children, most often due to falls (n=8; 35%).

There were fewer than six death of infants (under age 1) in the San Carlos Apache Region between 2019 and 2021, meaning that an infant mortality rate cannot be shown to protect individual privacy. Arizona's infant mortality rate (5.4) failed to meet the Healthy People 2030 target of 5.0 or fewer. There were 16 deaths of children birth to age 17 in the San Carlos Apache Region between 2019 and 2021. No single cause of death contributed to more than 6 deaths in this period, so data on leading causes of child mortality cannot be presented. Statewide, the leading causes of child death are accidents (20%), congenital malformations (birth defects) (15%), low birthweight (9%), intentional self-harm or suicide (6%) and cancer (5%).

Family Support and Literacy. According to the 2022 FTF San Carlos Apache Regional Needs and Assets Report, multiple parenting education, family support and early literacy programs are available for

families with young children in the region. The FTF San Carlos Apache Regional Partnership Council provides funding to The University of Arizona Cooperative Extension Gila for Gowa: Teachable Moments for Apache Children promotes early literacy in the region through drop-in events for families, online materials for at-home activities and professional development for early care and education staff. Read On San Carlos Apache Tribe promotes awareness of the importance early literacy for young children's brain development and supports literacy and reading programs in the San Carlos Apache Region. Nnee Bich'o Nii operates two parenting programs in the region, Fatherhood is Sacred and Motherhood is Sacred. These programs aim to teach the values of parenting and encourage affectionate and supportive parent-child relationships. Nnee Bich'o Nii also distributes books and materials through their building's reading corner and on daily bus services to Globe and Safford. The San Carlos Apache Social Services Department also provides parenting classes for families involved with Tribal Child Protective Services.

Behavioral and mental health services for residents of all ages are available in the San Carlos Apache Region through the San Carlos Apache Wellness Center, a tribally-operated outpatient mental health and substance abuse program. The Wellness Center offers preventative mental health services and education, individual and group therapy, traditional healing, telepsychiatry services, crisis stabilization services and a sober living program. Specifically for children and youth, the Wellness Center offers before- and after school programs, in-school mentoring and support and individual and family therapy.

Local key informants consulted in the 2022 Regional Needs and Assets Report noted that substance abuse is an ongoing challenge in the region. The Wellness Center's sober living program, called Nohwi'ihi'na' Bá Gózhǫǫ Doleeł, opened in March 2022 and provides a safe living space for individuals in recovery. San Carlos Apache College also offers a certificate in substance abuse and addiction studies to train local students to work as substance abuse counselors and professionals. Between 2018 and 2021, there were fewer than six deaths with opiates or opioids contributing in the San Carlos Apache Region. However, it is important to note that this only includes deaths occurring within the region and with address data that allowed the death to be properly assigned to a FTF region, meaning this may be an undercount.

Child welfare services in the San Carlos Apache Region are provided by the San Carlos Apache Social Services Department, which houses Tribal Child Protective Services (CPS). Tribal CPS takes reports of child abuse and neglect, investigates these reports and determines if a child needs to be removed from their family to keep them safe. According to the 2022 Regional Needs and Assets Report, Tribal CPS receives hundreds of referrals each year, mostly for neglect, where parents are providing inadequate care or supervision for their children.

There were 45 substantiated cases of child abuse or neglect in 2019 and 59 in 2020 according to data provided by the Social Services Department in the 2022 Regional Needs and Assets Report. The number of children removed also increased from 80 in 2019 to 95 in 2020, as did the number of children in Indian Child Welfare Act (ICWA) placements. In 2020, children birth to age 17 who had been removed from their parents' care were most often placed with relatives (69%), followed by San Carlos Apache group homes (14%) and contracted foster homes (8%). The share of children placed with relatives

increased between 2019 (59%) and 2020 (69%). The number of foster care homes in the region declined slightly from 23 in 2018 to 18 in 2019. According to information provided for the 2022 Regional Needs and Assets Report, most foster homes licensed by the San Carlos Apache Social Services Department are located in the Globe and Safford areas.

ABOUT THIS REPORT

There is growing acknowledgement of the role our physical, social, and economic environments play in our day-to-day health and wellbeing.[1] These factors, known as the social determinants of health, have an especially strong effect on the development of young children ages birth to 5 and accumulate over time.[2, 3] Measuring and addressing these conditions can significantly impact not only early health and education outcomes, but also health and economic circumstances later in life.[4, 5, 6] It is important to acknowledge that structural inequities in access to quality health care, schools, and education as well as living, working and leisure conditions lead to disparate outcomes within and between groups of people.[7] For example, the U.S.'s history of segregation, discriminatory policy and differential investment across communities has created generational disparities in outcomes for people of color.[8] Native communities have additionally experienced periods of genocide, forced relocation and assimilation leading to systemically poorer economics and health compared with other groups.[9, 10] This Needs and Assets Report covers many structural and social determinants of health including population characteristics, economic characteristics, early learning and educational indicators, child health, and family support and literacy for the First Things First San Carlos Apache Region.

The data in this report come from a variety of sources including federal and state agencies and local agencies or service providers. Federal government sources include publicly available data from the 2020 Census and the 2017-2021 American Community Survey (ACS) 5-Year Estimates. Data in this report from the ACS summarize the responses from samples of residents taken between 2017 and 2021. Because these estimates are based on samples rather than the entire population, ACS data should not be considered exact. Estimates for smaller geographies, such as regions, are less accurate than estimates for larger geographies, such as the state, because they are based on smaller sample sizes.

Data were provided to FTF by state agencies including the Arizona Department of Health Services, the Arizona Department of Education and the Arizona Department of Economic Security. In most cases, the data in this report were calculated specifically for the Needs and Assets process and are more detailed than the data that are published by these agencies for the general public. Whenever possible, this report will use data tailored to the region, but in some cases, there are only county-level or statewide data available to report. This report also includes publicly available data for the state and counties to supplement data received through specific requests, including from state agencies such as the Arizona Department of Commerce's Office of Economic Opportunity. When more recent data from public or state agency datasets were not available, this report also cites data from the 2022 FTF San Carlos Apache Regional Needs and Assets Report.

In most tables in this report, the top rows of data correspond to the FTF San Carlos Apache Region. Not all data are available at the FTF regional level because not all data sources analyze their data based on FTF regional boundaries. The other table rows present data that are useful for comparison purposes, including all Arizona reservations combined, the state of Arizona and national estimates or targets where available. Data tables and graphs are as complete as possible. Data which are not available for a particular geography are indicated by the abbreviation "N/A." State agencies have varying policies about

reporting small values. Entries such as "<11" are used when the count is too small to be reported and has been suppressed to protect privacy. In some cases, table entries will indicate a range of values such as "1 to 9" because the suppression policy prevented the vendor from knowing the exact value, but comparison of these ranges of possible values to other values in the table or figure may still be useful. Table entries of "DS" indicate that data have been suppressed and we are unable to provide a useful range of possible values. Additional data tables not included in the body of the report can be found in Appendix 1.

THE SAN CARLOS APACHE REGION

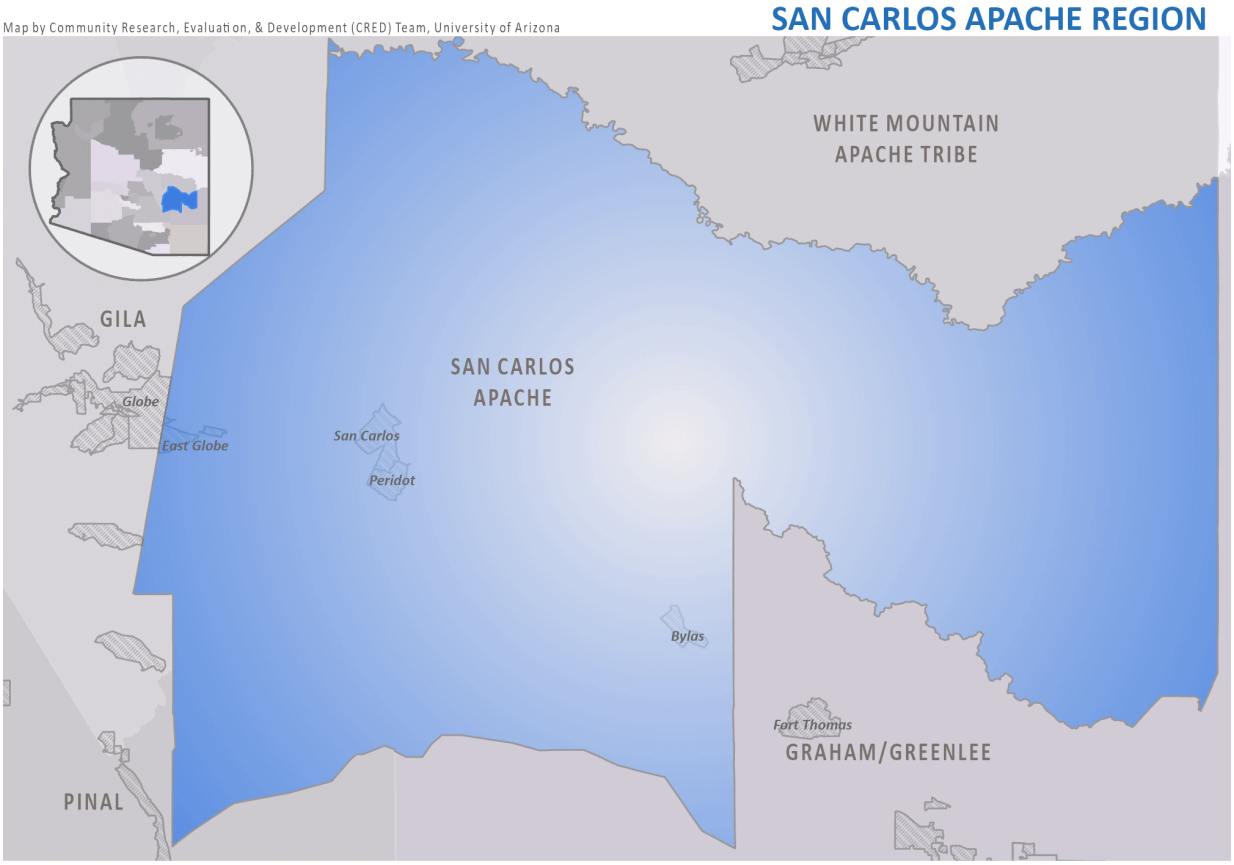
The First Things First regional boundaries were initially established in 2007, creating 31 regions which were designed to (a) reflect the view of families in terms of where they access services, (b) coincide with existing boundaries or service areas of organizations providing early childhood services, (c) maximize the ability to collaborate with service systems and local governments and facilitate the ability to convene a Regional Partnership Council and (d) allow for the collection of demographic and indicator data. The regional boundaries are reviewed every two years. In state fiscal year 2015, the boundaries were modified using census blocks, creating 28 regions.

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 were one of 10 tribes that chose to be designated as its own region. This decision must be ratified every two years, and the San Carlos Apache has opted to continue to be designated as its own region.

The boundaries of the First Things First San Carlos Apache Region are defined to be those of the San Carlos Apache Indian Reservation. 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 is available at the end of this report, including a map and table of the region's zip codes in Appendix 3 and a map and a list of Arizona public school districts in the region in Appendix 4.

Figure 1. The First Things First San Carlos Apache Region



Source: 2020 TIGER/Line Shapefiles prepared by the U.S. Census. Map produced by CRED.

POPULATION CHARACTERISTICS

POPULATION CHARACTERISTICS

Why It Matters

Accurate information about the number and characteristics of families allows policy makers and program providers to understand what resources are needed in their communities, including where services should be located and how to tailor offerings to the specific needs of those who are likely to use them.[11, 12, 13, 14] For example, identifying which communities have high numbers of families with young children can facilitate strategic investments in libraries, playgrounds, health care facilities, social services and educational systems, which can help families with young children thrive.[15, 16] Program and policy decisions that are informed by data on the composition of children's home and community environments help ensure more effective supports for families and have a greater chance to improve well-being, economic security and educational outcomes for children.

2020 Census data and its limitations

The release of 2020 Census data in 2023 provided updated information on the population of Arizona and the nation as a whole. However, the 2020 Census faced unprecedented challenges in conducting an accurate count of the population, the foremost of which included the COVID-19 pandemic and its related disruptions to institutions such as tribal and local governments, schools and health care facilities.[17, 18, 19, 20, 21] Overall, data quality reviews of the 2020 Census have concluded that the data are generally reliable and accurate for the overall population; however, specific groups that have been undercounted in the past were again undercounted, this time more severely.[22] Nationwide, American Indians living on reservations were estimated to be undercounted by 5.6% (compared to 4.9% in 2010), and Hispanic or Latino individuals were undercounted by an estimated 5.0% (compared with 1.5% in 2010). Young children birth to age 4 were also undercounted by 3-5% nationwide, meaning that as many as 1 in 20 young children birth to age 4 were missed by the Census.[23] These undercounts are important to keep in mind when using Census data, particularly data for young children and for communities with substantial American Indian and Hispanic or Latino populations. Undercounted communities risk receiving fewer resources for at least the next decade since the decennial census counts are the basis of many federal funding allocations.[24, 25]

What the Data Tell Us

Population, race and ethnicity

While young children make up a small proportion of the overall population, their well-being has wide-reaching impacts on families, social service systems and the state's future population. Continued investment in children's well-being and the well-being of their families was deemed by the National Academy of Sciences as "the most efficient strategy" for strengthening the future workforce and supporting a thriving community.[26, 27]

Knowing the racial-ethnic composition of communities can inform efforts to ensure equitable access to services and resources. Many racial and ethnic minority groups in the U.S. experience reduced access to health care services, more poverty and housing inequality, poorer living conditions and increased rates of homelessness in comparison to non-Hispanic White Americans.[28, 29, 30, 31] In Native communities, these disparities have been shaped by decades of inequitable federal policies and underinvestment.[32] These inequities result in disproportionately worse overall health as indicated by higher rates of disease and illness, untreated physical health conditions and lower life expectancies within these groups.[33] Understanding a community's racial-ethnic composition is also critical for identifying communities facing higher risks from environmental and public health hazards due to historic underinvestment and other factors—as the COVID-19 pandemic made woefully clear.[34]

How the San Carlos Apache Region is faring

- According to the 2020 U.S. Census, the total population of the San Carlos Apache Region was 10,251, of whom 1,192 were young children (birth to age 5). More than one-third of the 2,387 households in the region (31%) had one or more young children. This proportion of households with young children in the region (31%) was substantially higher than the proportion across all Arizona reservations (20%) and in Arizona overall (13%) (Table 1).
- According to the Census, the overall population of the San Carlos Apache Region grew by 2% between 2010 and 2020. This runs counter to the decrease seen across all Arizona reservations (-3%). However, the population of young children (birth to age 5) decreased by 17% .This was a smaller decrease than the -26% seen across all Arizona reservations but larger than the -12% statewide (Table 2; Figure 2).
- Given that, as previously mentioned in *2020 Census data and its limitations*, American Indians living on reservations and young children (birth to age 4) were specifically found to be substantially undercounted in the 2020 Census (5.6% and 3-5% nationally), tribal enrollment data are important for determining population counts in Native communities. Based on data from the San Carlos Enrollment Office included in the 2022 First Things First (FTF) San Carlos Apache Regional Needs and Assets Report, there were 16,760 enrolled San Carlos Apache members in 2021. This included 11,142 members residing within the San Carlos Apache Region, including 533 young children (birth to age 5). The overall number of young children enrolled in 2021 (n=724) was markedly lower than enrollment in 2020 (n=958) (Table 7). According to the

2022 Regional Needs and Assets Report, the community was closed during substantial parts of 2020 and 2021 due to the COVID-19 pandemic, which affected services offered in-person and may have affected enrollment.[35]

- Another way to understand potential undercounting of young children in the San Carlos Apache Region is to compare 2020 Census data on the population birth to 5 to Arizona Department of Health Services (ADHS) data on births from 2015 to 2020. Birth counts are substantially higher than Census estimates (+15%), with 1,406 total births in the region between 2015 and 2020 compared to an estimated population of 1,192 young children in the Census (Figure 3). Statewide, birth counts are only +1% higher than Census counts. This suggests that young children in the region were likely undercounted in the 2020 Census.
- Almost all of the population (99%) in the San Carlos Apache Region identified as American Indian, even higher than the proportion seen across all Arizona reservations (93%). Much smaller proportions of the total population in the region identified as Hispanic or Latino (2%), non-Hispanic White (1%), Multiracial (1%), Black or African American (0.3%) or Asian or Pacific Islander (0.4%) in 2020 (Figure 4).
- These breakdowns were similar for young children, with nearly all identified as American Indian (99%), and slightly higher proportions identified as Multiracial (2%) or Hispanic or Latino (3%) when compared to the overall population (Figure 5).

Table 1. Population and households in the 2020 U.S. Census

Geography	Total population	Population (ages 0-5)	Total number of households	Number and percent of households with one or more children (ages 0-5)	
San Carlos Apache Region	**10,251**	**1,192**	**2,387**	**737**	**31%**
All Arizona Reservations	173,499	15,140	50,362	10,167	20%
Gila County	53,272	3,022	22,312	2,214	10%
Graham County	38,533	3,404	12,150	2,339	19%
Arizona	7,151,502	480,744	2,705,878	345,601	13%
United States	331,449,281	22,401,565	126,817,580	16,429,111	13%

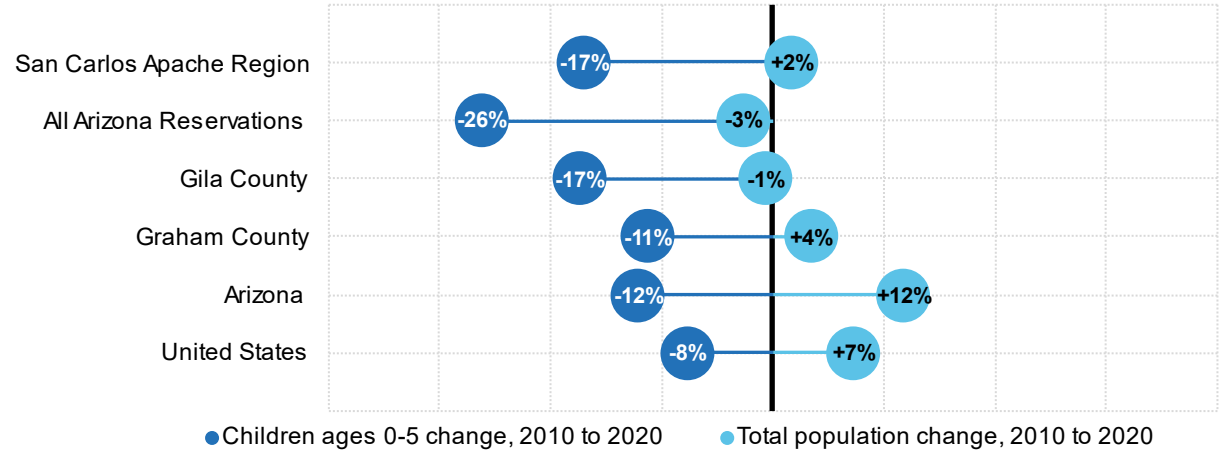
Source: U.S. Census Bureau. (2023). 2020 Decennial Census, Demographic & Housing Characteristics (DHC), Tables P1, P14, P20 & HCT3

Table 2. Change in the total population and population of children ages 0-5, 2010 to 2020 Census

Geography	Total population			Population (Ages 0-5)		
	2010	2020	% Change 2010 to 2020	2010	2020	% Change 2010 to 2020
San Carlos Apache Region	**10,251**	**10,251**	**+2%**	**1,435**	**1,192**	**-17%**
All Arizona Reservations	173,499	173,499	-3%	20,511	15,140	-26%
Gila County	53,597	53,272	-1%	3,657	3,022	-17%
Graham County	37,220	38,533	+4%	3,830	3,404	-11%
Arizona	7,151,502	7,151,502	+12%	546,609	480,744	-12%
United States	308,745,538	331,449,281	+7%	24,258,220	22,401,565	-8%

Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P1, P14, HCT3. U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P14, P20.

Figure 2. Change in the total population and population of children ages 0-5, 2010 to 2020 Census



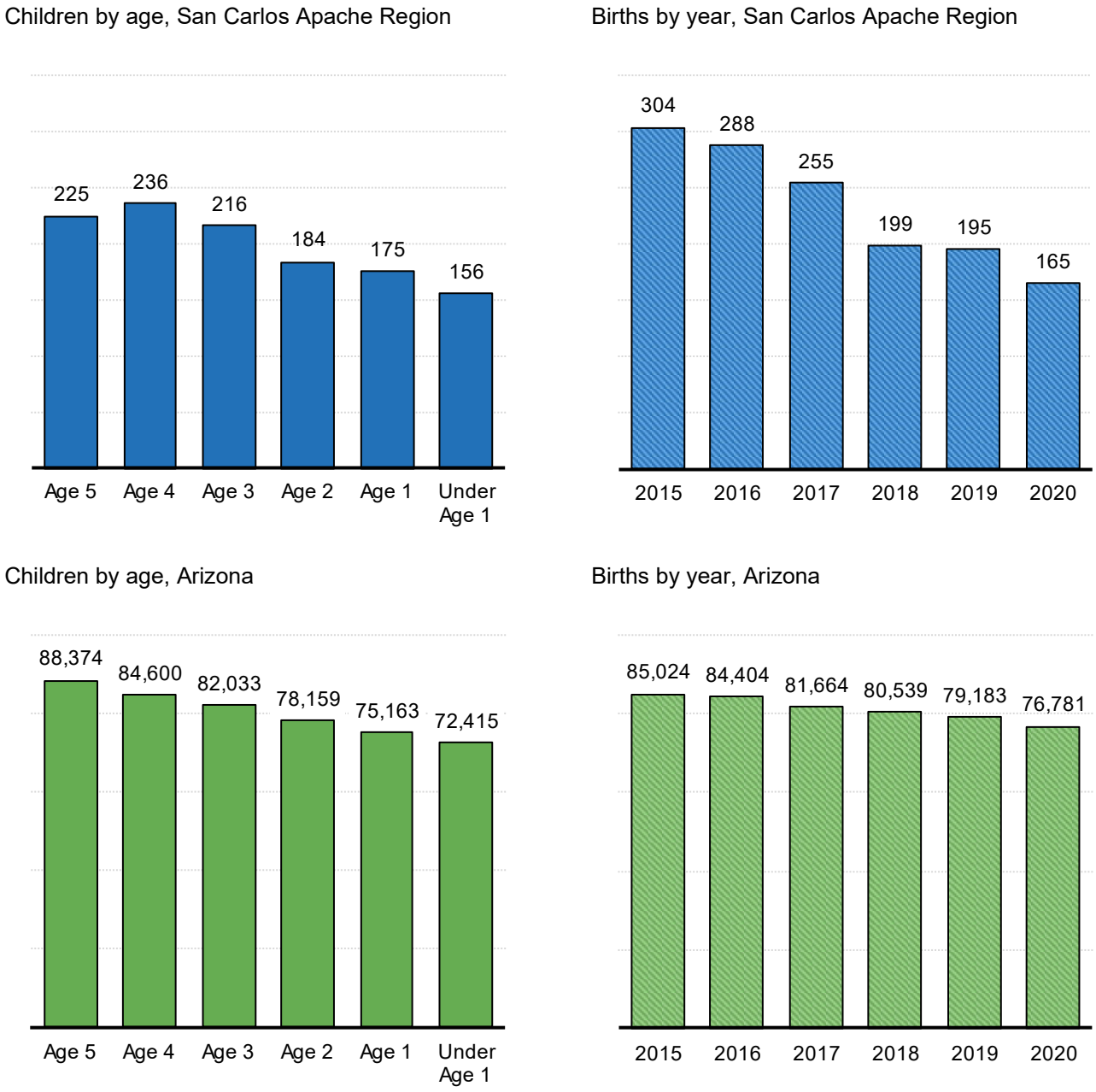
Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P1, P14, HCT3. U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P14, P20.

Table 3. San Carlos Apache Enrollment, 2020 and 2021

	On-reservation, 2020	Off-reservation, 2020	Total, 2020	On-reservation, 2021	Off-reservation, 2021	Total, 2021
Young children (ages 0-5)	**724**	**234**	**958**	**533**	**191**	**724**
Under 1 year	15	2	17	1	0	1
Age 1	51	28	79	32	7	39
Age 2	97	45	142	62	32	94
Age 3	141	51	192	101	46	147
Age 4	186	54	240	148	52	200
Age 5	234	54	288	189	54	243
School-age children (ages 6-17)	2,840	947	3,787	2,882	929	3,811
All children (ages 0-17)	3,564	1,181	4,745	3,415	1,120	4,535
Adults (ages 18 and older)	7,576	4,432	12,008	7,727	4,498	12,225
Elders (ages 55 and older)	1,879	888	2,767	1,958	941	2,899
Total Enrollment	11,140	5,613	16,753	11,142	5,618	16,760

Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

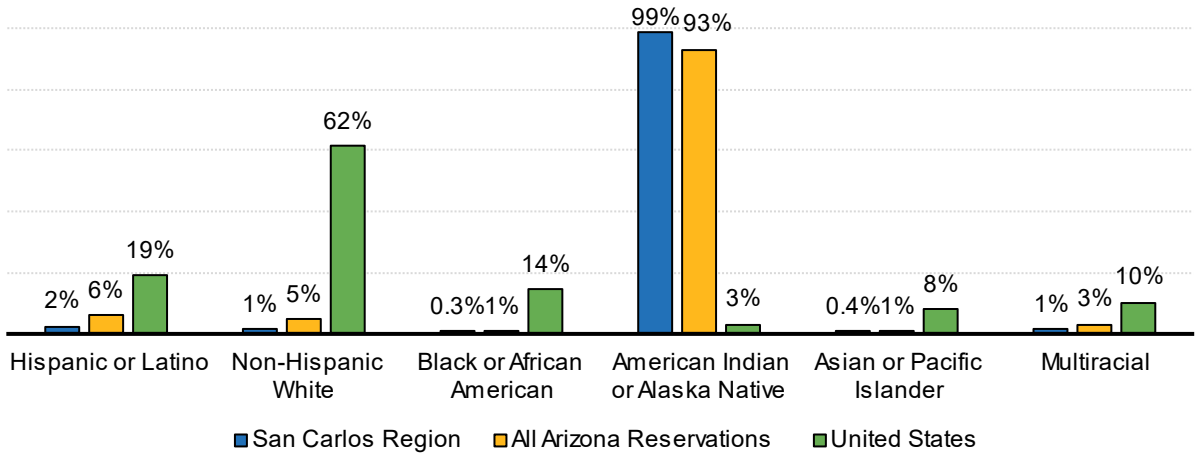
Figure 3. Children by single year of age in the 2020 Census compared to recent birth numbers in the region (2015 to 2020)



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data. U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P1, P14.

Note: Looking at these two figures allows a comparison of 2020 Census estimates (left) of the population size of young children by age with the count of births from their likely birth year (right) to try to understand further how much the Census may have undercounted young children.

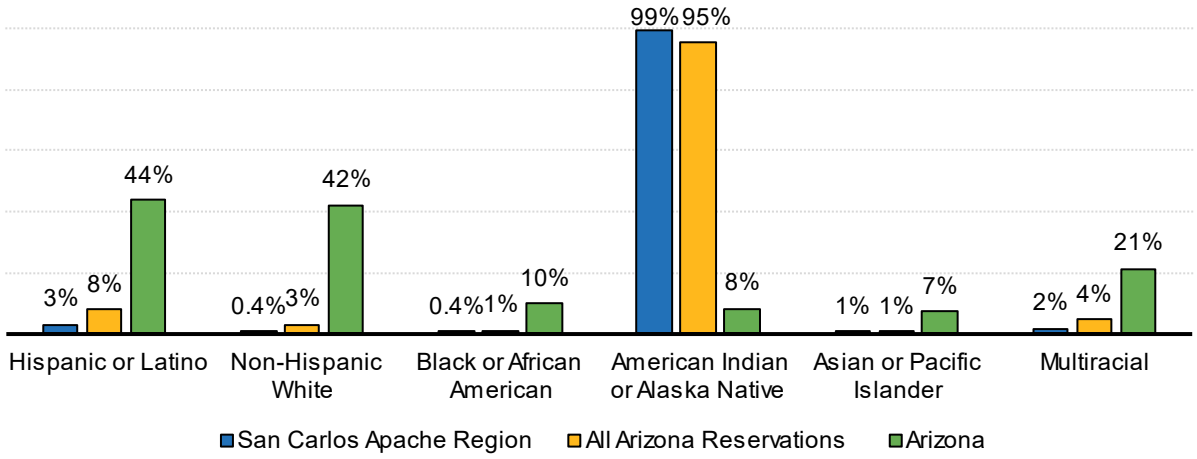
Figure 4. Race and ethnicity of the population of all ages, 2020 Census



Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), P6, P7, P8, P9, P12, P12A-W.

Note: The six percentages shown in this figure may sum to more or less than 100% because (a) persons reporting Hispanic ethnicity are counted twice if their race is Black, American Indian, Asian, Pacific Islander, or any combination of two or more races, (b) persons reporting any other race are not counted here unless they have Hispanic ethnicity, and (c) rounding.

Figure 5. Race and ethnicity for children birth to age 4, 2020 Census



Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), P6, P7, P8, P9, P12, P12A-W.

Note: The six percentages shown in this figure may sum to more or less than 100% because (a) persons reporting Hispanic ethnicity are counted twice if their race is Black, American Indian, Asian, Pacific Islander, or any combination of two or more races, (b) persons reporting any other race are not counted here unless they have Hispanic ethnicity, and (c) rounding.

Language use

Language provides an important connection to family, community and culture. Arizona is home to many sovereign tribal nations whose Native languages are a vital cultural strength. Language preservation and revitalization are critical to safeguarding traditional knowledge and promoting Indigenous self-determination, social unity and educational equity.[36, 37, 38] Unfortunately, the latest estimates for Native language use in Arizona from the American Community Survey point to a sharp decline in the number of speakers of native languages between 2019 and 2021. While the population of English-only speakers rose 0.3% between 2019 and 2021, the population of speakers of Native North American languages other than Navajo[ii] declined by an estimated 27% (from over 30,000 to about 22,500).[39] This decrease reflects the devastating losses that Native communities experienced during the COVID-19 pandemic.[40,41] These deaths, especially among Native elders, signify a loss of life and of traditional knowledge, cultural history and language.[42,43] Ongoing support for cultural preservation and language revitalization continues to be a critical need for Native communities in Arizona.

Mastery of more than one language is also an asset in school readiness and academic achievement and may offer cognitive and social-emotional benefits in early school experiences and across one's lifetime.[44, 45, 46, 47, 48] However, families with lower English proficiency may also face barriers to accessing information about health care and other services or engaging with their children's teachers. Children who do not yet have a full grasp of English may also experience difficulties in school, impeding their academic success and resulting in negative health outcomes.[49, 50] Knowing the languages spoken and level of English proficiency in a region can inform the development of resources and services in multiple languages, ensuring that they are accessible to all families.[51, 52]

How the San Carlos Apache Region is faring

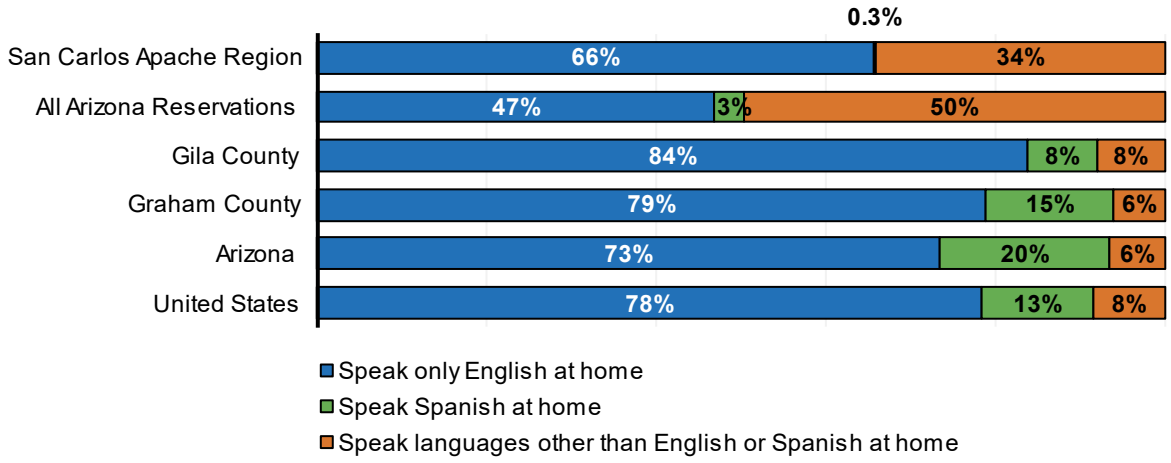
- About one-third of individuals ages 5 and older (67%) in the San Carlos Apache Region speak a language other than English or Spanish at home (most likely a Native North American language), a lower proportion than seen across all Arizona reservations (50%) but substantially higher than in Arizona overall (6%). Very few individuals report speaking Spanish at home (0.3%), and about two-thirds report using only English at home (32%) (Figure 6).
- Of those individuals speaking a language other than English at home, most also speak English "very well,"[iii] with nearly a third of the region proficiently bilingual or multilingual (29%). A smaller proportion of individuals (6%) report speaking another language at home and not speaking English "very well" (18%) than in all Arizona reservations (12%) and Arizona overall (8%) (Figure 7).

[ii] *The population of Navajo speakers declined by an estimated 13% (from over 90,000 to about 78,000) in Arizona between 2019 and 2021.*

[iii] *"Very well" refers to the self-rated ability to speak English in response to the American Community Survey question "How well does this person speak English?". Other response options include: "well," "not well" and "not at all." See https://www.census.gov/topics/population/language-use/about.html*

- A small proportion of households in the San Carlos Apache Region (3%) are considered limited-English-speaking, meaning no one over the age of 13 in the household speaks English very well (Figure 8). This is a smaller proportion than seen across all Arizona reservations (12%).
- During the 2021-22 school year, 16 preschool to 12th grade students (<2%) enrolled in public and charter schools in the San Carlos Apache Region were considered English Language Learners, a decrease from 31 students in 2020-21 (2%). In off-reservations schools that San Carlos Apache Region students attend, 33 students were identified as English Language Learners in 2020-21 and 37 in 2021-22 (Table 4).
- English Language Learners are identified through the Arizona Department of Education (ADE) Home Language Survey, which asks families about the student's first language and what language is spoken at home most of the time. Statewide, 108 students reported Apache language use at home in 2020-21, decreasing slightly to 104 students in 2021-22. However, fewer than 11 students attending schools in the San Carlos Apache Region and fewer than 11 students in off-reservation schools had reported Apache language use at home in either 2020-21 or 2021-22.[53]
- According to the 2022 Regional Needs and Assets Report, there are multiple efforts underway to preserve and revitalize the Apache language, including the San Carlos Apache Tribe's Apache Language Preservation Department. The San Carlos Apache Head Start program and Apache Kid Child Care center offer Apache language instruction for young children using curriculum developed through the One People ~ One Nation Project. San Carlos Unified School District offers Apache language instruction for all grade levels, including pre-kindergarten, and specifically offers Apache language immersion classrooms at Rice Elementary School. San Carlos Apache College offers both Apache language and Apache history courses.[54]

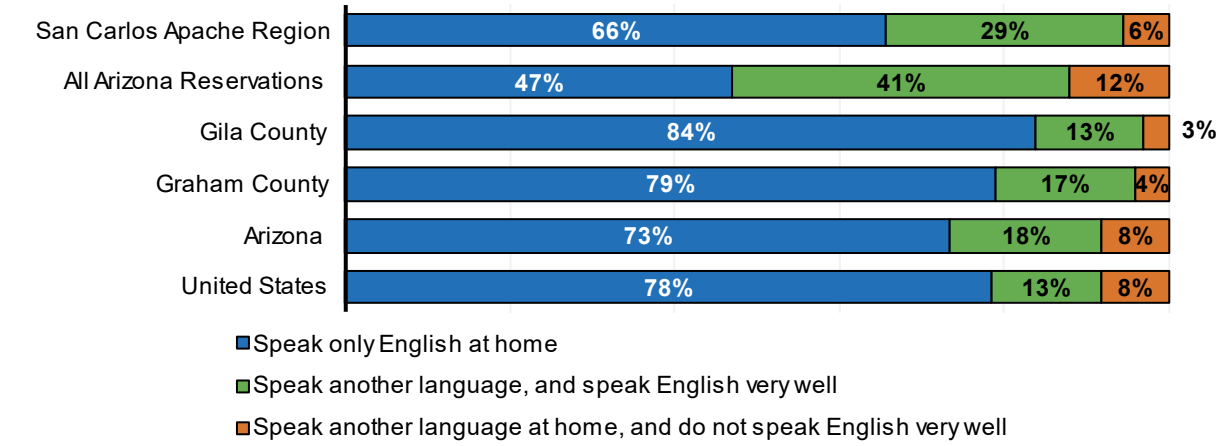
Figure 6. Language spoken at home (by persons ages 5 and older), 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16001

Note: The three percentages in each bar may not sum to 100% because of rounding. The American Community Survey (ACS) no longer specifies the proportion of the population who speak Native North American languages for geographies smaller than the state. In Arizona, Navajo and other Native American languages (including Apache, Hopi, and O'odham) are the most commonly spoken (2%), following English (73%) and Spanish (20%).

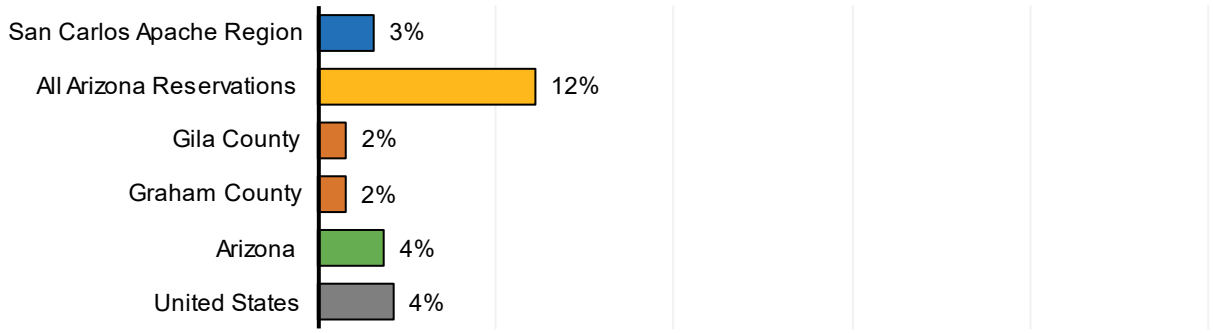
Figure 7. English-language proficiency (for persons ages 5 and older), 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16001

Note: The three percentages in the figure should sum to 100%, but may not because of rounding.

Figure 8. Share of households that are limited-English-speaking, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16002

Note: A "limited-English-speaking" household is one in which no one over the age of 13 speaks English very well.

Table 4. Number of English Language Learners enrolled in all grades, 2020-21 to 2021-22

Geography	Number of PS-12 students who were English Language Learners		Percent of PS-12 students who were English Language Learners	
	2020-21	2021-22	2020-21	2021-22
San Carlos Apache Region schools	**31**	**16**	**2%**	**<2%**
Off-Reservation schools serving San Carlos Apache Region Students	33	37	<2%	<2%
Gila County schools	150	173	2%	2%
Graham County schools	59	69	<2%	<2%
Arizona schools	86,405	91,881	8%	8%

Source: Arizona Department of Education (2023). [Oct 1 Enrollment Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Notes: The selected off-reservation schools serving San Carlos students include select schools in Globe Unified School District, Fort Thomas Unified School District and Destiny School (a charter school). See Appendix 4 for a full list. English Language Learners are students who do not score 'proficient' in the English language based on the Arizona English Language Learning Assessment (AZELLA) and thus are eligible for additional supportive services for English language acquisition. Legislation in Arizona requires children in Arizona public schools be taught in English, and English Language Learners to attend English immersion programs. Senate Bill 1014 passed in 2019, increased the flexibility districts have in structuring English Language Learners immersion programs, and lessened the duration required of this instruction. For more information see https://www.azed.gov/oelas/structured-english-immersion-models

Family and household composition

Young children in Arizona come from households with many potential compositions, each of which has possible implications for child development.[55, 56, 57] For example, families with two married parents tend to offer stability that promotes child well-being.[58, 59, 60] Single-parent households are common and can be linked to levels of poverty, access to health and education resources and the quality of a child's interactions with adult caregivers.[61, 62, 63, 64, 65, 66, 67] Multi-generational living, particularly arrangement where grandparents live in the home with children and parents, has long been practiced in some cultures and communities but is becoming increasingly common in U.S. families of all backgrounds.[68, 69, 70, 71] These living arrangements can offer financial and social benefits but also specific stressors, such as managing conflicts in parenting styles and family roles.[72, 73 ,74, 75, 76] It is also increasingly common for children to live in kinship care, defined as the care of children by someone other than their parents, such as relatives or close friends.[77, 78, 79] These kinship caregivers, especially grandparents who care for their grandchildren, can face unique challenges, including navigating the logistics of informal guardianship (e.g., difficulties in registering children for school), coping with parental absence and addressing the challenges of being an aging caregiver for a young child.[80, 81, 82, 83]

Though varying from one community to another, multigenerational households and kinship care are common in Native communities.[84, 85] The strengths associated with the extended family structure, including mutual help and respect, can provide family members with a network of support that can be valuable when dealing with socio-economic hardships.[86] Grandparents are often central to these households and care situations, in many cases sharing and strengthening Native language, history and culture.[87, 88]

How the San Carlos Apache Region is faring

- Nearly two out of every three young children (birth to age 5) in the San Carlos Apache Region live in a household with one unmarried parent[iv] (65%), which is a larger proportion than across Arizona (37%). About one in five young children live with two married parents (21%), while more than one in 10 (12%) live with relatives other than parents (such as grandparents, aunts and uncles) and very few live with non-relatives (2%). Young children in the region are substantially more likely to live with non-parental relatives (12%) than young children in all Arizona reservations (8%) or statewide (3%) (Table 5).

[iv] *Note that due to the way the ACS asks about family relationships, children living with two unmarried, cohabitating parents are not counted as living with two parents (these children are counted in the 'one parent' category). New data from the 2020 Census (table P20) for children ages 0-17 shows that in the San Carlos Apache Region, 33% of the children living in households with an unmarried parent are actually living in cohabitating couple families where there are two parents present but they are not married. This means that for children of all ages living with their parents in 2020, 47% were living in households led by married parents, 29% were living in households led by an unmarried (and not cohabitating) mother, 17% were living in households led by cohabitating parents and 7% were living in households led by an unmarried (and not cohabitating) father.*

- Almost half of young children (43%) in the region live in a grandparent's household, which is the same as that seen across all Arizona reservations (43%) (Figure 9). Note that this includes all multigenerational households; the grandparent in these households may or may not be responsible for raising the child, and the child's parent(s) may or may not also be living in the household.
- In contrast, 4% of grandparents in the region are living with grandchildren (birth to age 17) without a parent also present in the household (Figure 10). This suggests that many of the grandchildren residing with their grandparents are in multigenerational households, where grandparents, parents and children all live together.
- The ACS considers a grandparent to be responsible for their grandchildren if they are "currently responsible for most of the basic needs of any grandchildren under the age of 18" who live in the grandparent's household. Based on this definition, an estimated 132 grandparents in the San Carlos Apache Region are responsible for their grandchildren under 18 years old. A parent is also present in most of these households (only 22% without the child's parent). Nearly all of these grandparents are female (92%), and 58% are in the labor force, meaning that they may need child care for their grandchildren while they are working. Nearly half (42%) have an income below the poverty level, which is slightly higher than the percentage across all Arizona reservations (36%) and substantially higher than the proportion statewide (21%) (Table 6).

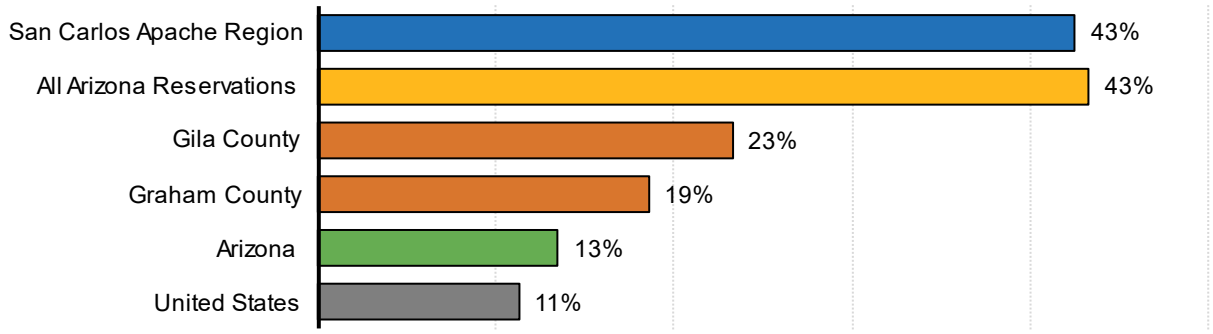
Table 5. Living arrangements for children birth to age 5, 2017-2021 ACS

Geography	Estimated number of children (birth to age 5) living in households	Living with two married parents	Living with one parent	Living not with parents but with other relatives	Living with non-relatives
San Carlos Apache Region	**1,275**	**21%**	**65%**	**12%**	**2%**
All Arizona Reservations	15,661	25%	65%	8%	2%
Gila County	3,290	46%	49%	4%	2%
Graham County	3,102	50%	34%	14%	1%
Arizona	496,219	59%	37%	3%	2%
United States	23,353,556	64%	32%	2%	2%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Tables B05009, B09001, & B17001

Note: The four percentages in each row should sum to 100%, but may not because of rounding. The term "parent" here includes stepparents. Please note that due to the way the ACS asks about family relationships, children living with two unmarried, cohabitating parents are not counted as living with two parents (these children are counted in the 'one parent' category).

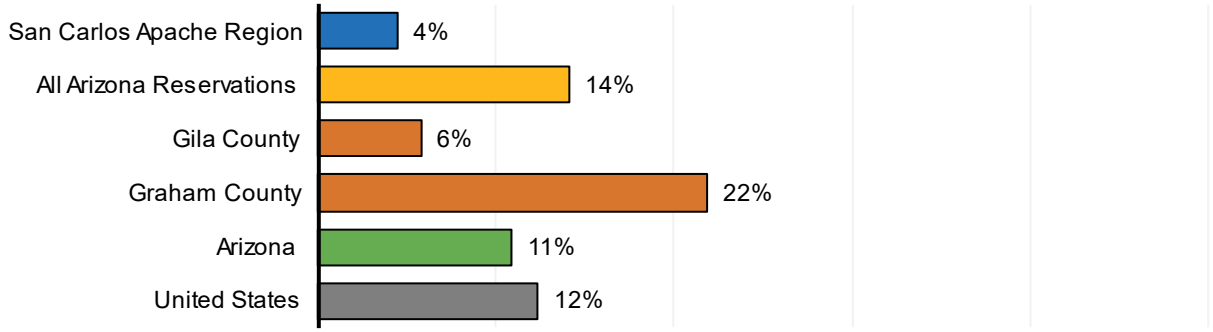
Figure 9. Grandchildren birth to age 5 living in a grandparent's household, 2020 Census



Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P14, PCT11.

Note: This table includes all children (under six years old) living in a household headed by a grandparent, regardless of whether the grandparent is responsible for them, or whether the child's parent lives in the same household.

Figure 10. Percent of grandparents living with their grandchildren birth to age 17 and no parent is present in the household, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Tables B10051, B10054, B10056, & B10059

Table 6. Selected characteristics of grandparents who are responsible for one or more grandchildren under 18 in their households, 2017-2021 ACS

Geography	Estimated number of grandparents who live with and are responsible for grandchildren under 18 years old	Percent of these grandparents who: Do not have the child's parents in the household	Are 60 years old or older	Are female	Do not speak English very well	In labor force	Have an income below the poverty level
San Carlos Apache Region	**132**	**22%**	**39%**	**92%**	**27%**	**58%**	**42%**
All Arizona Reservations	5,828	30%	49%	67%	18%	44%	36%
Gila County	542	15%	54%	75%	8%	38%	41%
Graham County	452	60%	37%	60%	0%	55%	19%
Arizona	56,079	33%	45%	62%	21%	57%	21%
United States	2,319,443	38%	47%	63%	14%	56%	18%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Tables B10051, B10054, B10056, B10058, & B10059

Note: Grandparents are considered responsible for their grandchild or grandchildren if they are "currently responsible for most of the basic needs of any grandchildren under the age of 18" who live in the grandparent's household.

Additional data tables related to *Population Characteristics* can be found in Appendix 1 of this report.

ECONOMIC CIRCUMSTANCES

ECONOMIC CIRCUMSTANCES

Why it Matters

A family's economic stability impacts children's well-being and predicts a variety of health outcomes.[89] Children who grow up in poverty and unstable economic conditions are more likely to face negative effects on their cognitive, behavioral, social and emotional development compared to those in stable economic environments.[90, 91, 92, 93, 94] The challenges they face may continue into adulthood, and such difficulties can be passed on to the next generation.[95, 96, 97] Poverty also affects children by straining parental well-being and parent-child interactions. Stressors related to poverty, like unemployment, food and housing insecurity and poor mental and physical health, make it difficult for caregivers to provide the necessary support for children's optimal development.[98] In light of these broad impacts, economic stability is a key social determinant of health and is included as a domain in the Healthy People 2030 Objectives.[v]

Economic circumstances in tribal communities have been shaped by a long history of inequitable policies and federal investment.[99, 100] The resulting economic disparity between Native and non-Native communities affects rates of employment, poverty, food security and housing stability. Especially since the passing of the Indian Self-Determination and Education Assistance Act in 1975, which gave tribes greater autonomy in administering federally-funded programs and services, tribal governments have invested in community and economic development opportunities such as health care, manufacturing, forestry, fisheries, gaming and resorts to strengthen the economic conditions of their people.[101]

What the Data Tell Us

Income and poverty

Poverty is associated with reduced access to nutrition, green space and health care and greater exposure to psychosocial stress and environmental toxins, factors that can both directly and indirectly hinder children's growth and brain development.[102, 103, 104] Children living in poverty are thus at a higher risk of negative impacts including being born at a low birth weight, lower school achievement and poor health.[105, 106, 107, 108, 109, 110, 111] Economic hardship is included in some definitions of adverse childhood experiences (ACEs) and children living in poverty experience other non-economic ACEs, such as parental divorce or separation, exposure to violence, parental incarceration and living with someone with mental illness or a substance use disorder, at higher rates than children in higher income households.[112, 113] Given the many negative effects of poverty on child development, programs that alleviate poverty through providing cash assistance or food, housing or health care assistance can improve child well-being.[114]

---

[v] *For more information on the Economic Stability Healthy People 2030 Objectives please see https://health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability*

The Temporary Assistance for Needy Families Cash Assistance Program (TANF)[vi] provides temporary cash benefits and supportive services to children and families. Eligibility is based on citizenship or qualified resident status, Arizona residency and limits on resources and monthly income.[115] In recognition of tribal sovereignty, federally recognized tribes have the option to administer their own TANF programs.

How the San Carlos Apache Region is faring

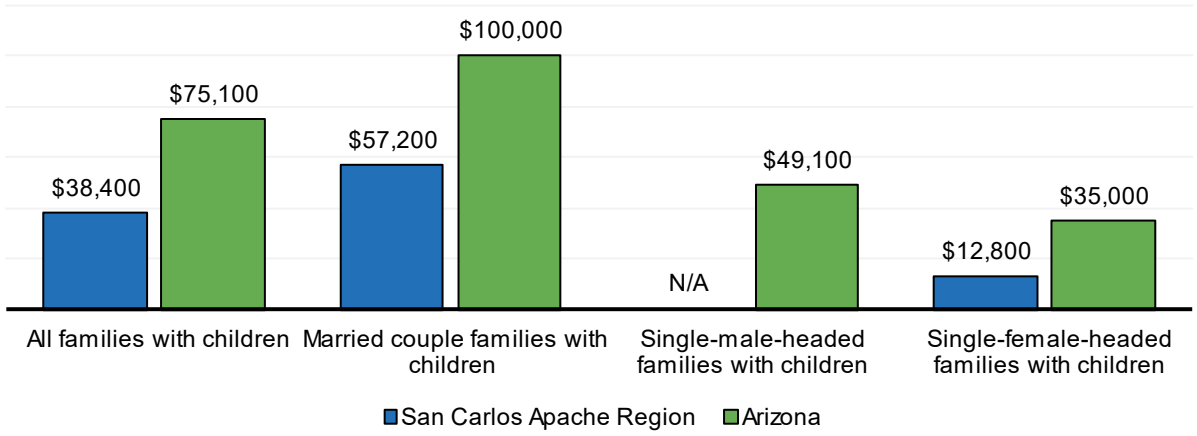
- Across all household types for which data are available, the median family income for all families with children (birth to age 17) in the San Carlos Apache Region is substantially less than that in Arizona overall. For example, married couple families with children in the region have the highest median annual income ($57,200) of all family types, but this is substantially lower that seen statewide ($100,000). The notably lower median annual income of single-female-headed families with children ($12,800) in the region points to the additional financial stress experienced by the single-parent-led households in the region (Figure 11). This median income for single-female-headed households is well below the 2021 federal poverty threshold of $18,677 for a single parent with one child, suggesting that the majority of single-female-headed households in the region have incomes below the poverty threshold.
- Nearly half (45%) of the overall population and two-thirds (64%) of young children (birth to age 5) in the San Carlos Apache Region live in poverty, which is more than triple the poverty rates for Arizona as a whole (13% and 20%, respectively) and substantially higher than rates seen in all Arizona reservations (37% and 48%, respectively) (Figure 12).
- According to American Community Survey five-year estimates, rates of poverty among young children in the San Carlos Apache Region have increased (+11%) in recent years, from 53% in 2012-2016 to 64% in 2017-2021. In contrast, poverty rates declined in all Arizona reservations (-6%), Arizona (-8%) and the U.S. (-6%) during the same time period (Figure 13).
- The majority (79%) of young children in the San Carlos Apache Region live in households with incomes under 185% of the federal poverty level (FPL), a commonly used threshold for social safety net benefits such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and reduced-price school meals. In 2021, the 185% FPL threshold for a family of two adults and two children was $50,836; for a single parent with one child, it was $34,552 (Figure 14).
- Over a third (38%) of young children in the region that live in "deep poverty" (defined as below 50% FPL), quadruple the proportion in the state as a whole (9%) (Figure 14). This suggests that substantially more families may have cash incomes that are not sufficient to meet their needs. However, while income is one important way to measure whether families can meet their basic needs, in Native communities, subsistence-based activities such as hunting, gathering, farming

[vi] *For more information see: https://www.acf.hhs.gov/ofa/programs/temporary-assistance-needy-families-tanf and https://des.az.gov/ca*

and ranching are important cultural practices that can also meet families' basic needs and are not captured in standard poverty measures.[116]

- The San Carlos Apache Tribe is one of six tribes in Arizona that operate a Tribal TANF program, known as Nnee Bich'o Nii ("Helping the People"). According to the 2022 FTF San Carlos Apache Regional Needs and Assets Report, the Nnee Bich'o Nii has strict eligibility requirements, with a focus on job training and work participation. Nnee Bich'o Nii has an in-house maintenance training program and provides many participants with training in the construction trades. For families with young children, Nnee Bich'o Nii conducts home visits, tracks school attendance and immunizations, provides resources such as school supplies, partners with First Things First to provide books to young children and manages the Motherhood is Sacred and Fatherhood is Sacred parenting education programs.[117]
- Between 2018 and 2020, the number of children birth to age 5 served by Nnee Bich'o Nii fell from 148 to 113, a 24% decline. By contrast, TANF enrollment for young children increased in Gila and Graham Counties in the same period (Figure 15). According to local key informants consulted in the 2022 Regional Needs and Assets Report, the number of families participating in the program has been declining since 2008 due to the program's strict eligibility requirements, including home visits and substance use testing.[118]

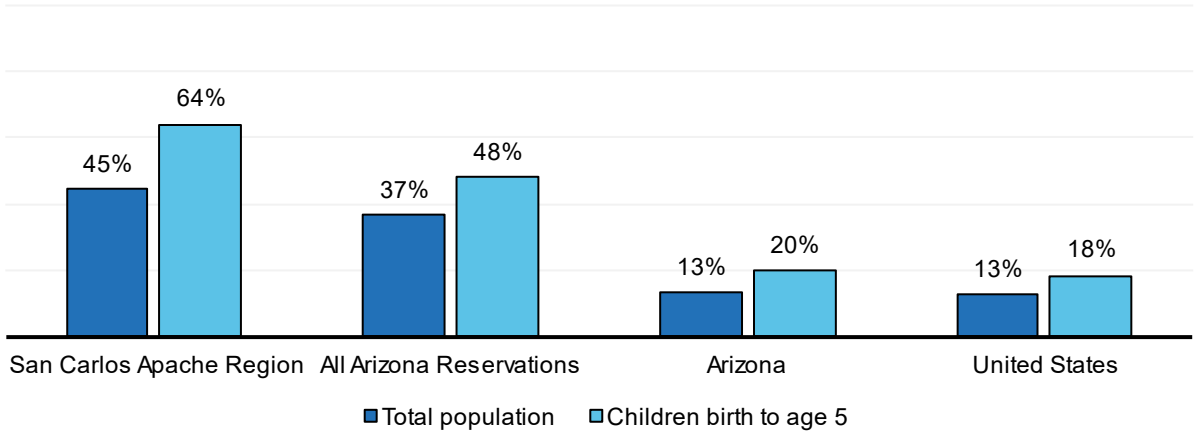
Figure 11. Median family income for families with children birth to age 17, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B19126

Note: Half of the families in the population are estimated to have annual incomes above the median value, and the other half have incomes below the median. The median family income for all families includes families without children birth to age 17. A reliable estimate of median income for single-female-headed households was not available from the ACS due to sample size limitations. Note that median income estimates are not available for All Arizona Reservations.

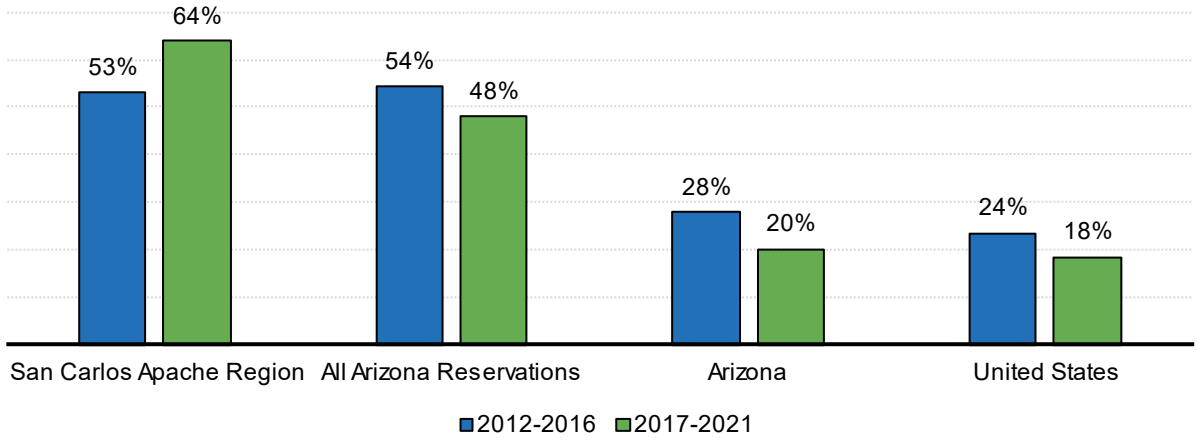
Figure 12. Rates of poverty for persons of all ages and for children birth to age 5, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B17001

Note: This graph includes only persons whose poverty status can be determined. Adults who live in group settings such as dormitories or institutions are not included. Children who live with unrelated persons are not included. In 2021, the poverty threshold for a family of two adults and two children was $27,479; for a single parent with one child, it was $18,677.

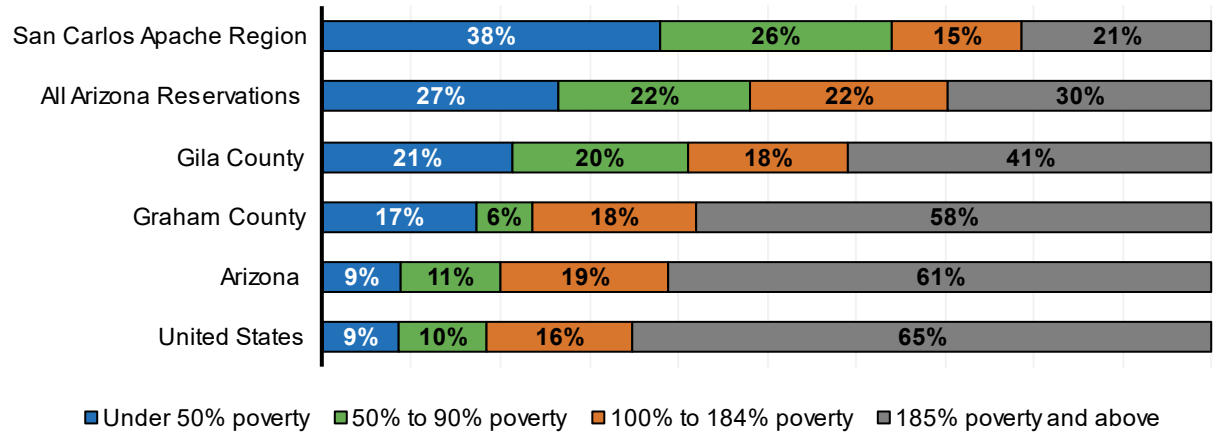
Figure 13. Rates of poverty for children birth to age 5, 2012-2016 and 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B17001. U.S. Census Bureau. (2017). American Community Survey five-year estimates 2012-2016, Table B17001.

Note: This graph includes only persons whose poverty status can be determined. Adults who live in group settings such as dormitories or institutions are not included. Children who live with unrelated persons are not included. In 2021, the poverty threshold for a family of two adults and two children was $27,479; for a single parent with one child, it was $18,677.

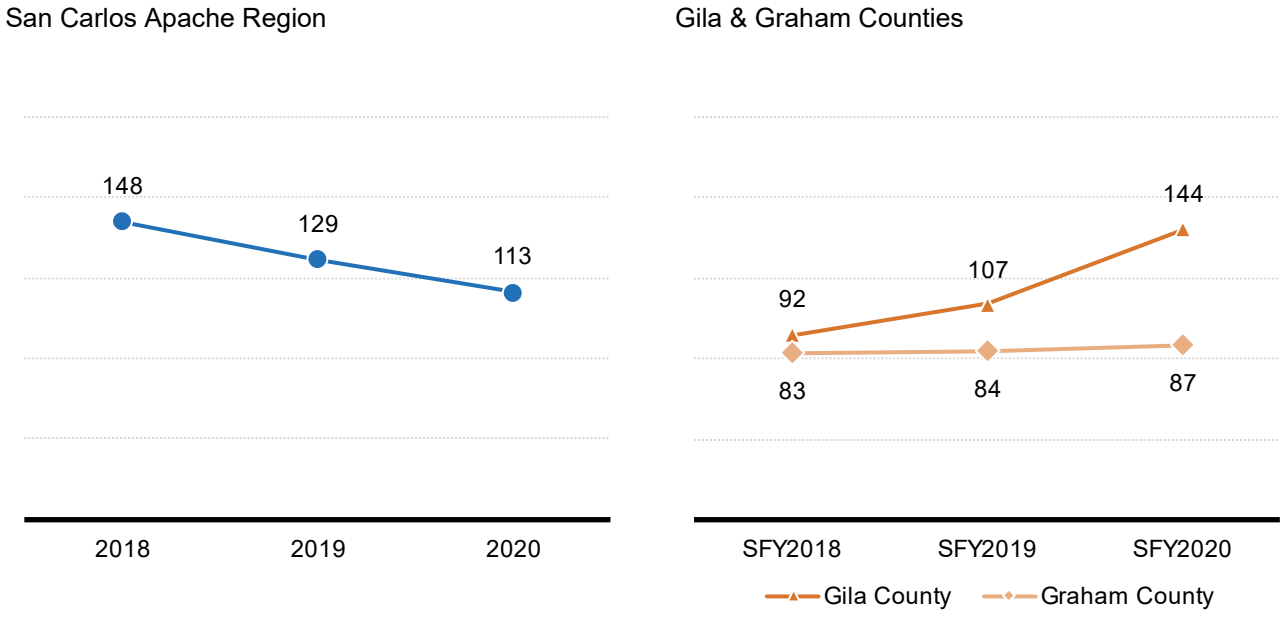
Figure 14. Children birth to age 5 living at selected poverty thresholds, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B17024

Note: The four percentages in each bar should sum to 100%, but may not because of rounding. In 2021, the poverty threshold for a family of two adults and two children was $27,479; for a single parent with one child, it was $18,677. The 185% thresholds are $50,836 and $34,552, respectively.

Figure 15. Number of children birth to age 5 receiving TANF through Nnee Bich'o Nii, 2018 to 2020



Sources: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Food security

Many families struggle with consistent access to "enough food for an active, healthy life," a problem known as food insecurity.[119] Food insecurity is linked with many aspects of child and parent well-being; it can be a major source of stress for parents and has been linked to health and behavioral problems for children, such as poorer parent-child attachment, decreased social skills and self-control and increased risk of depression.[120, 121, 122, 123, 124, 125]

The Supplemental Nutrition Assistance Program (SNAP; also referred to as "nutrition assistance" and "food stamps"),[vii] is administered by the Arizona Department of Economic Security and aims to support working families who are unable to afford the food necessary to sustain their health with their income alone. Nationally, about one in every five children participates in SNAP, and families on average receive a benefit of up to $2.61 per person for each meal.[126] The SNAP program has been shown to reduce hunger and improve access to healthy food options among those who utilize it.[127]

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) [viii] is a federally funded program administered by the Arizona Department of Health Services aimed to support economically disadvantaged women who are pregnant, postpartum and/or breastfeeding, along with infants and young children. The program's services include directing participants to health services, nutrition and breastfeeding education and supplemental funding for food. In Arizona, WIC provided an average monthly benefit of $42 per month in 2022, lower than the national average of $48 per month.[128] The WIC program is administered in the state of Arizona by the Arizona Department of Health Services (ADHS) as well as the Inter Tribal Council of Arizona (ITCA) for 20 tribal nations in the state.

School meals provide another important nutritional safety net for children and their families. The National School Lunch Program (NSLP), administered by the Arizona Department of Education (ADE) and funded by the United States Department of Agriculture (USDA), provides meals for students of low-income families at a reduced price. The Summer Food Service Program (SFSP)[ix], also funded by the USDA and administered by ADE, works to keep all children birth to age 18 fed when school is out of session by providing free meals (breakfast, lunch, supper) and snacks at community sites. SFSP unites community sponsors like camps, faith-based organizations and schools with sites like parks, libraries, community centers and apartment complexes in high-need areas to distribute food.[129] In March 2020, in response to school closures due to the COVID-19 pandemic, the USDA issued waivers allowing year-round operation of the (SFSP) to serve meals to children of all ages engaging in remote learning; these waivers remained in effect through June 2022 and led to increased meal service through SFSP compared

---

[vii] *For more information see: https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program and https://des.az.gov/na*

[viii] *For more information see: https://www.fns.usda.gov/wic and https://www.azdhs.gov/prevention/azwic/*

[ix] For more information see: *https://www.azed.gov/hns/sfsp*

to NSLP for many schools.[130] The Child and Adult Care Food Program (CACFP),[x] also funded by the USDA, gives reimbursements to participating child care centers, preschools, emergency centers and after-school programs for nutritious meals and snacks served to eligible children. Eligible providers include for-profit child care centers serving at least 25% free or reduced-price lunch participants or any non-profit program.[131]

How the San Carlos Apache Region is faring

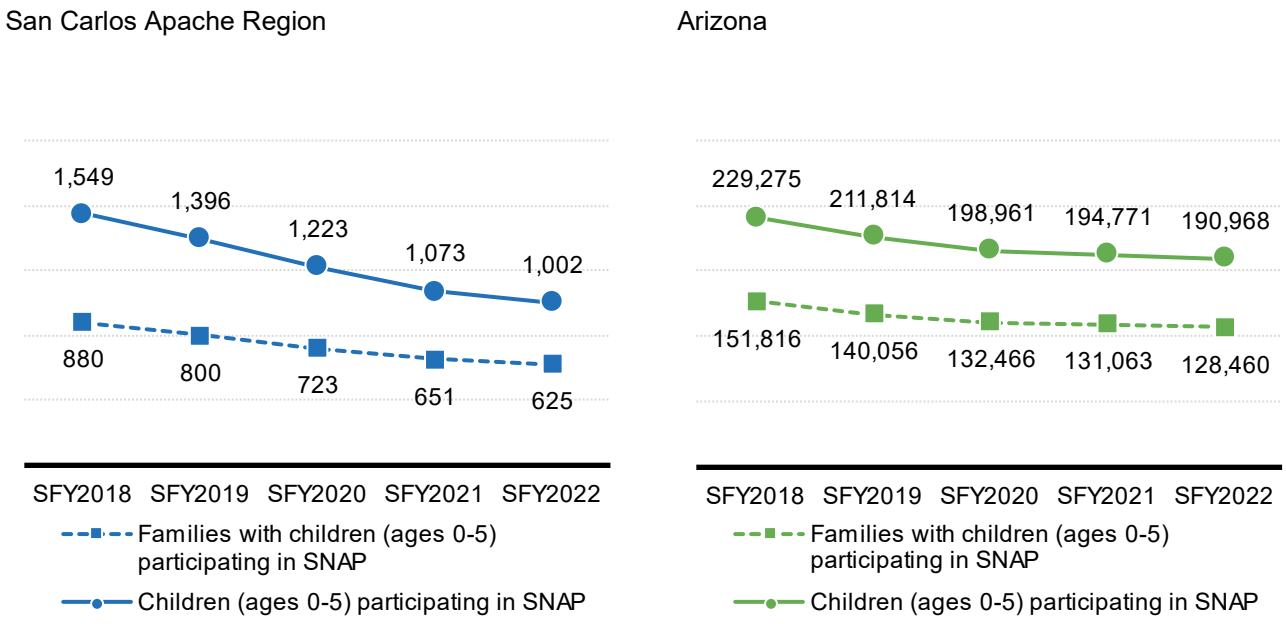
- Since state fiscal year (SFY) 2018, SNAP participation among young children (birth to age 5) in the San Carlos Apache Region has declined steadily from 1,549 in SFY 2018 to 1,002 in SFY 2022, a 30% decrease (Figure 16). This parallels the downward trend seen statewide for SNAP participation among young children.
- The San Carlos Apache WIC program is administered by the Inter Tribal Council of Arizona (ITCA). In 2020, a total of 1,544 individuals in the region were enrolled in the program, including 299 women (19%), 340 infants (22%) and 905 children (ages 1-4; 58%). Children make up a larger proportion of participants in the San Carlos Apache WIC program compared to all ITCA WIC programs, where children make up about half of those enrolled (6,247; 51%) (Table 7).
- From 2017 to 2020, the number of children (birth to age 4) enrolled in WIC in the region showed similar declines to those seen across all ITCA WIC programs, falling from 1,581 children enrolled in 2017 to 1,245 in 2020 (Figure 17).
- WIC participation rates were high in the region in 2020, with 97% of women, 100% of infants and 97% of children enrolled in the program receiving benefits that year (Figure 18). Overall participation rates for the San Carlos Apache WIC program increased from 93% in 2017 to 98% in 2020 and were consistently higher than participation rates in all ITCA WIC programs (Figure 19).
- From 2019-20 to 2021-22, the total number of school lunches served through school nutrition programs in the San Carlos Apache Region varied by program due to the effects of the COVID-19 pandemic. Due to USDA waivers that allowed for greater flexibility in meal service through SFSP year-round, the number of lunches served through SFSP more than doubled between 2019-20 and 2020-21, peaking at nearly 400,000 lunches served (Figure 20). Conversely, lunch service through NSLP fell to historic lows. In 2021-22, both programs began to return to baseline, with fewer lunches served through SFSP and more through NSLP, but neither program has yet returned to pre-pandemic numbers. Lunches served through CACFP in the region increased from nearly 19,000 in 2019-20 to over 27,000 in 2020-21 before declining slightly to about 25,500 in

[x] For more information see: https://www.azed.gov/hns/cacfp

2021-22. Overall, these trends point to rapid adaptation to changing needs for children's meals and alternative delivery modes during the most intense years of the COVID-19 pandemic.

- According to the 2022 Regional Needs and Assets Report, there were no early care and education programs participating in CACFP prior to the 2019-20 school year. [132] However, from 2019-20 onward, all San Carlos Apache Head Start and Early Head Start centers as well as Apache Kids Child Care have served lunches through CACFP (Table 8).

Figure 16. Number of children birth to age 5 and households with children birth to age 5 participating in SNAP, state fiscal years 2018 to 2022



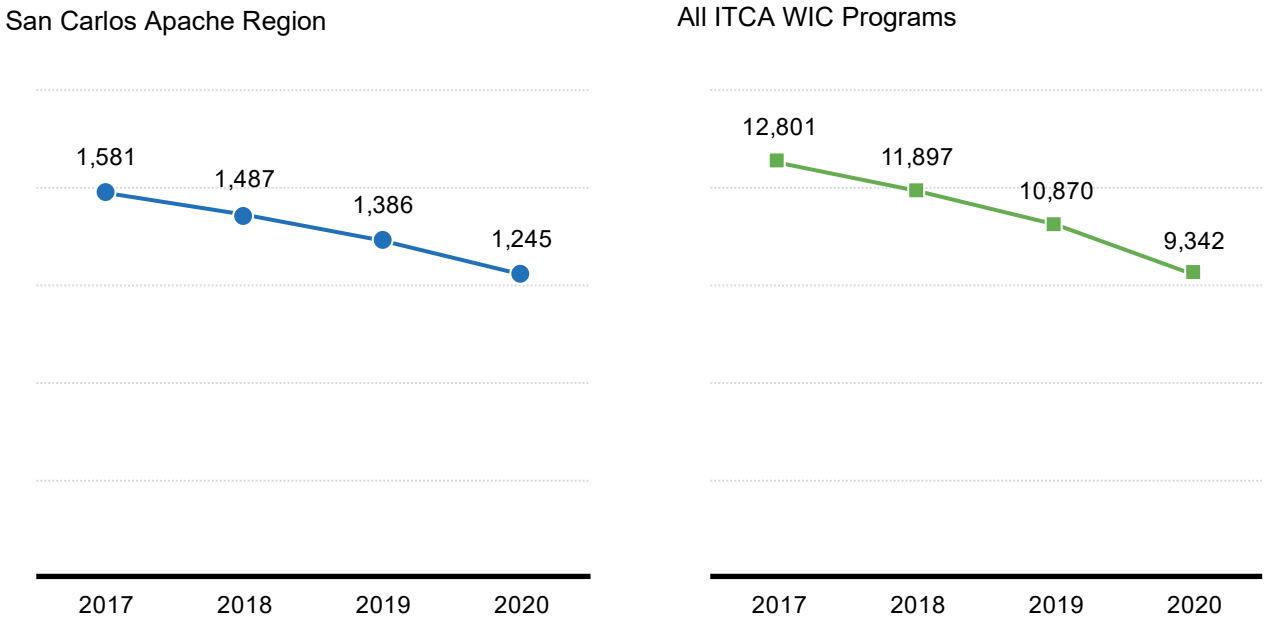
Sources: Arizona Department of Economic Security (2023). [Division of Benefits and Medical Eligibility dataset]. Unpublished data.

Table 7. Enrollment in the San Carlos Apache WIC Program, 2020

	Women enrolled	Infants enrolled	Children enrolled	Total enrolled
San Carlos Apache	**299**	**340**	**905**	**1,544**
All ITCA WIC programs	2,865	3,095	6,247	12,207

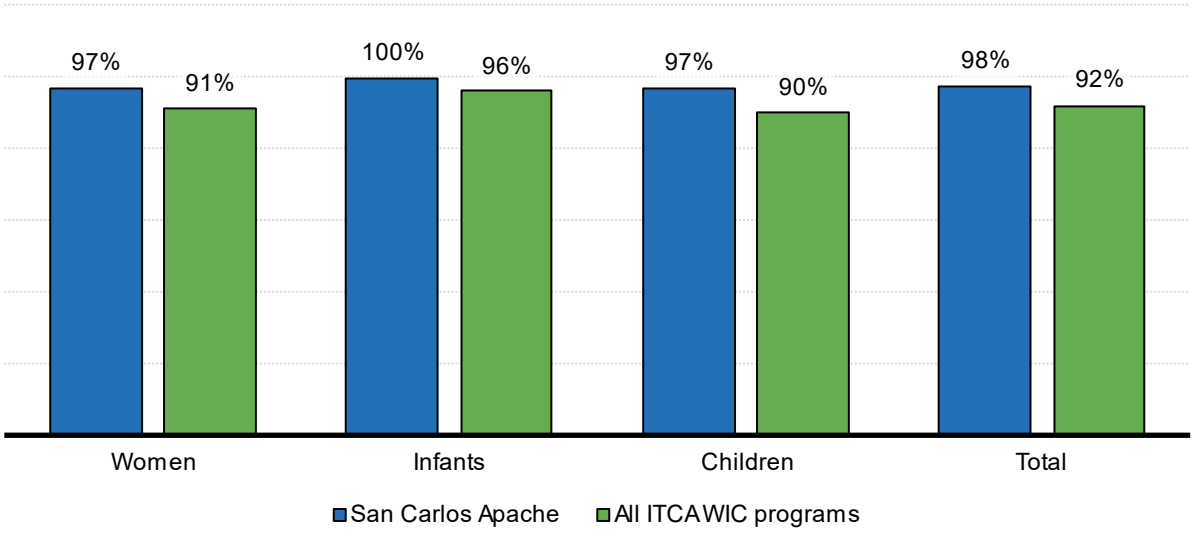
Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Figure 17. Children birth to age 4 enrolled in the San Carlos Apache & All ITCA WIC Programs, 2017 to 2020



Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

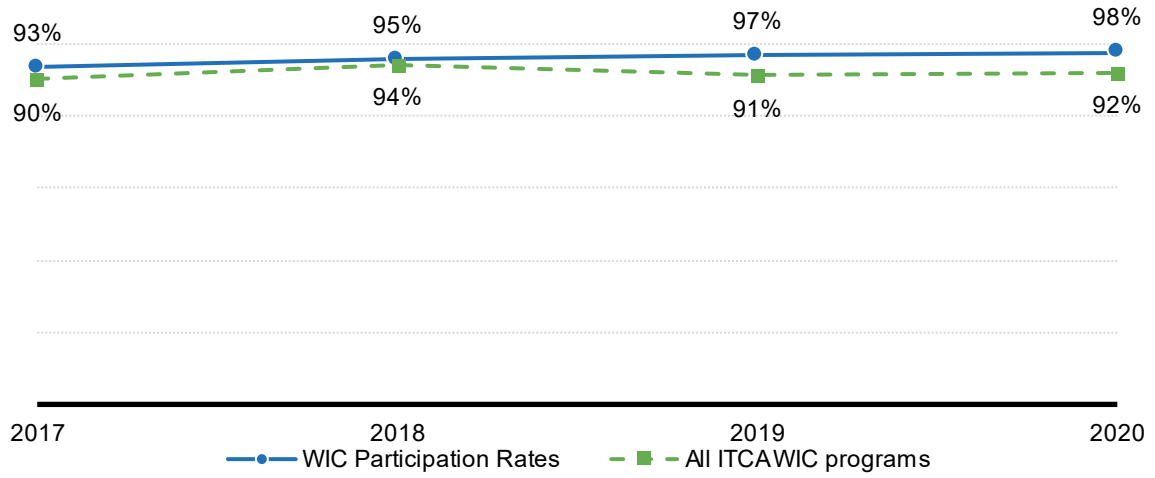
Figure 18. Participation rates in the San Carlos Apache WIC Program by type, 2020



Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

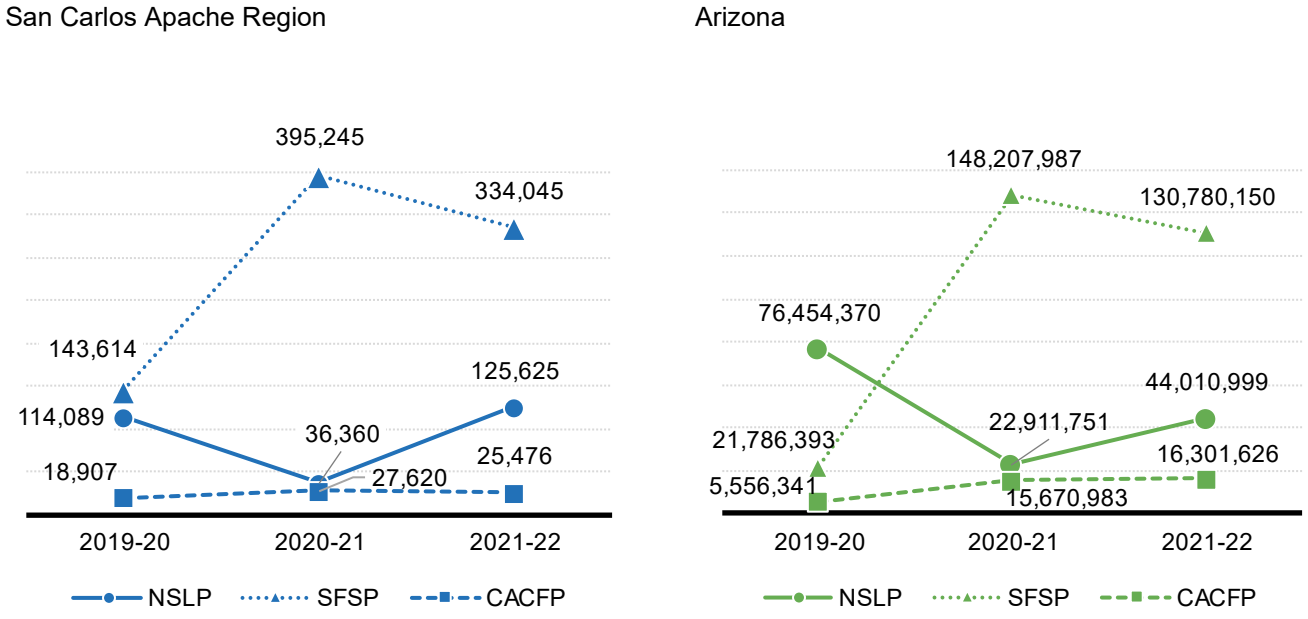
Note: Individuals are counted as 'participating' if they received benefits during the time period in question.

Figure 19. Yearly participation rates in the San Carlos Apache WIC Program, 2016 to 2020



Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Figure 20. Trends in lunches served through school nutrition programs, 2019-20 to 2021-22



Source: Arizona Department of Education (2023). [Health and Nutrition Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Due to the COVID-19 pandemic, the USDA issued a substantial number of waivers for school nutrition programs to allow greater flexibility for schools to get meals to students in need. More information on the pandemic's effect on school nutrition can be found on the ADE website: https://www.azed.gov/hns/covid19

Table 8. Lunches served through CACFP, 2019-20 to 2021-22

Geography	Number of sites			Number of lunches served		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
San Carlos Apache Region Child Care Programs	**6**	**6**	**6**	**18,907**	**27,620**	**25,476**
Apache Kid Child Care	1	1	1	1,460	4,805	5,557
Bylas Early Head Start	1	1	1	809	2,429	1,858
Bylas I Head Start	1	1	1	5,532	12,762	12,337
Gilson Wash Head Start	1	1	1	3,203	6,919	5,497
Peridot I Head Start	1	1	1	6,318	3,420	2,477
Seven Mile Head Start	1	1	1	3,045	2,090	3,307
Gila County sites	N/A	5	5	19,026	19,944	27,394
Graham County Schools	N/A	7	7	25,294	68,590	76,662
Arizona Schools	N/A	715	643	5,556,341	15,670,983	16,301,626

Source: Arizona Department of Education (2023). [Health and Nutrition Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Employment

Unemployment and underemployment[xi] can impact families in ways that affect children's health and well-being.[133] Unemployment can limit access to resources that support children's physical and mental health, like health insurance, and can also contribute to family stress, conflict, homelessness and child abuse.[134, 135] Children with parents who have lost their jobs may also experience poorer school performance and behavioral issues, resulting in grade repetition, suspension or expulsion.[136] 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.[137]

Education and employment support programs for parents and caregivers are important for increasing wages and improving the economic stability of families. "Two-generation" or "2Gen" approaches address the needs of both parents and children simultaneously through programs to support children and families together, such as a family literacy program that provides educational support to parents while enrolling children in free high-quality preschool.[138, 139, 140] These programs have the goal of decreasing

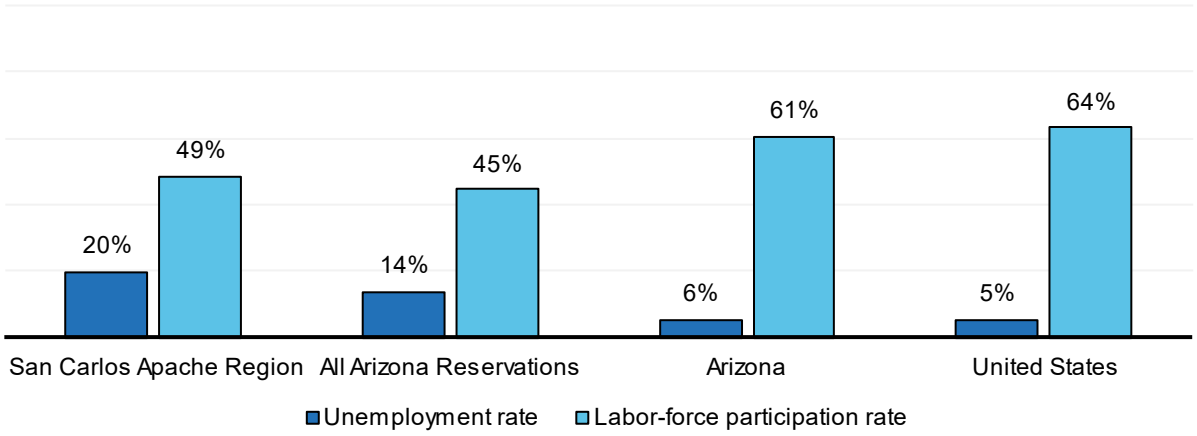
[xi] Underemployment means that someone works fewer hours than they would like or is in a job that does not require the skills or training that they have.

the intergenerational effects of poverty by building parental capacity and protective factors within families.[141, 142, 143]

How the San Carlos Apache Region is faring

- The unemployment rate is the proportion of the total number of people in the civilian labor force who are unemployed and looking for work. Unemployment rates do not include people who have dropped out of the labor force entirely, including those who wanted to work but could not find a suitable job and have stopped looking for employment.[144] The ACS estimates that the average unemployment rate for the San Carlos Region between 2017 to 2022 was 20%. This is more than triple the unemployment rate for Arizona as a whole (6%) and higher than the rate in all Arizona reservations (14%) (Figure 21 & Table 9).
- An additional metric of employment is the labor-force participation rate. This rate is the fraction of the population who are in the labor force, whether employed or unemployed. The labor force participation rate in the region (49%) is higher than that seen across all Arizona reservations (45%) but substantially lower than the Arizona labor force participation rate (61%). This means that about half of working-age teens and adults in the San Carlos Apache Region are working (39%) or actively looking for work (10%), while the remaining 58% are not (which includes students, retirees, stay-at-home parents and others) (Figure 21 & Table 9).
- More than two-thirds (69%) of young children (birth to age 5) in the San Carlos Apache Region live in a household where at least one parent is in the labor force, compared to 90% of young children statewide. More than half of young children in the region (58%) live in households where all their parents are in the workforce, indicating they likely require some form of child care (Figure 22).

Figure 21. Unemployment and labor-force participation for the adult population (ages 16 and older), 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B23025

Note: The labor force is all persons who are working (employed) or looking for work (unemployed). Persons not in the labor force are mostly students, stay-at-home parents, retirees, and institutionalized people. The "labor force participation rate" is the fraction of the population who are in the labor force, whether employed or unemployed. The "unemployment rate" is the fraction of the civilian labor force which are unemployed.

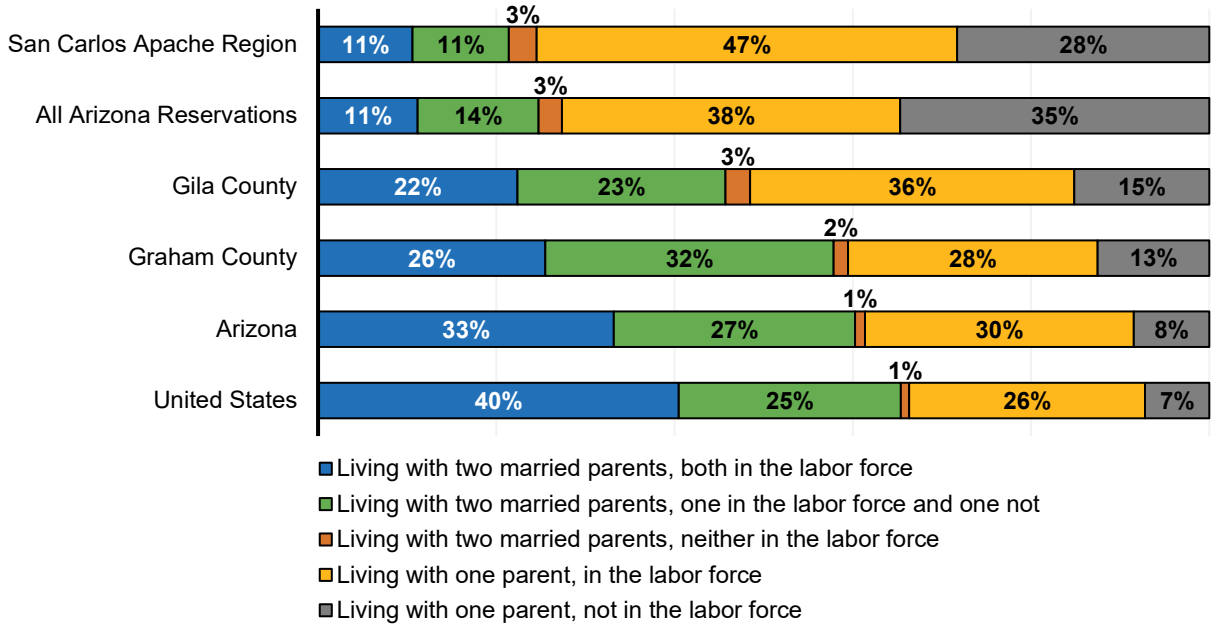
Table 9. Unemployment and labor-force participation for the adult population (ages 16 and older), 2017-2021 ACS

Geography	Estimated working-age population (age 16 and older)	Unemployment rate	Labor-force participation rate	In the labor force and employed	In the labor force but unemployed	In armed forces	Not in the labor force
San Carlos Apache Region	**7,331**	**20%**	**49%**	**39%**	**10%**	**0.0%**	**51%**
All Arizona Reservations	132,731	14%	45%	39%	6%	0.0%	55%
Gila County	43,627	7%	47%	43%	3%	0.1%	53%
Graham County	29,205	6%	49%	46%	3%	0.0%	51%
Arizona	5,650,624	6%	61%	57%	3%	0.4%	39%
United States	264,087,642	5%	64%	60%	3%	0.5%	36%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B23025

Note: The labor force is all persons who are working (employed) or looking for work (unemployed). Persons not in the labor force are mostly students, stay-at-home parents, retirees, and institutionalized people. The "labor force participation rate" is the fraction of the population who are in the labor force, whether employed or unemployed. The "unemployment rate" is the fraction of the civilian labor force which are unemployed. The last four percentages in each row (employed, unemployed, in armed forces, and not in the labor force) should sum to 100% but may not because of rounding.

Figure 22. Parents of children birth to age 5 who are or are not in the labor force, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B23025

Note: The labor force is all persons who are working (employed) or looking for work (unemployed). Persons not in the labor force are mostly students, stay-at-home parents, retirees, and institutionalized people. The term "parent" here includes step-parents. The five percentages in each row should sum to 100%, but may not because of rounding. Please note that due to the way the ACS asks about family relationships, children living with two unmarried, cohabitating parents are not counted as living with two parents (these children are counted in the 'one parent' category).

Housing instability and internet access

Housing instability can have harmful effects on the development of young children. High housing costs relative to family income are associated with increased risk for overcrowding, frequent moving, poor nutrition, declines in mental health and homelessness.[145, 146, 147] High relative housing costs leave inadequate funds for other necessities, such as food and utilities.[148] This can negatively affect the physical, social-emotional and cognitive development of children, with severe forms of housing instability associated with poorer performance in school.[149, 150]

In Native nations, land- and homeownership differs legally from other parts of the state. Native nations have experienced periods of forced relocation and assimilation as well as complex and changing policies of land ownership that have significantly reduced the total amount of land under tribal governance as well as the resources on these lands.[151] Tribal housing authorities have worked to build affordable housing options for their people, however housing availability is typically limited by funding and other critical infrastructure issues.[152] The most common housing challenges on tribal lands include overcrowding and physical housing problems such as insufficient kitchen, plumbing, electrical, heating

and cooling utilities.[153] A nationwide study found that Native households are 19 times more likely to lack indoor plumbing than White households, meaning that access to safe and reliable drinking water is a major concern for many families.[154]

Another increasingly important utility in homes is reliable internet access. Access to broadband (high-speed) internet enables quick access to a far greater number of resources and information, telehealth options and other opportunities that can be critical for education and employment. Internet access has been deemed a "super determinant" of health because of its influence on more traditional social determinants of health such as education, employment, health care access and social connection.[155] Household access to computers and high-speed internet is also important for school-aged children who may need this technology for school assignments and projects, particularly during the later years of primary education and beyond.[156] Lack of access to reliable high-speed internet disproportionately occurs in rural areas and pockets of segregated urban areas, and this disparate access is known as the digital divide. Due to the importance of high-speed internet access, the federal government has instituted several funding initiatives to improve access to and affordability of high-speed internet, including for Native communities in particular, such as the Tribal Broadband Connectivity Project.[xii, 157]

How the San Carlos Apache Region is faring

- Housing is considered to be affordable for families if it costs less than 30% of annual household income.[158] According to recent ACS estimates, only 14% of households in the San Carlos Apache Region spent more than 30% of their income on housing, disproportionately impacting renters (18%) over homeowners (10%) in the region. Housing cost burden is notably lower in the region compared to the state (29%) and very similar to that seen in all Arizona reservations (13%) (Table 10).
- According to the 2022 Regional Needs and Assets Report, the San Carlos Apache Housing Authority, established in 1961, provides affordable housing in the San Carlos Apache Region.[xiii] The Housing Authority offers subsidized rental housing for low-income families under NAHASDA income guidelines as well as a homebuyer program. The goals of the Housing Authority are to remedy unsafe and unsanitary housing, address the shortage of affordable housing in the community and provide employment opportunities in the construction and maintenance trades.[159]
- The McKinney-Vento Act definition of homelessness includes children living in shelters, transitional housing, campgrounds, motels, trailer parks and cars, as well as children whose families are temporarily living within another family's household. The number of students experiencing homelessness in public schools in the region nearly doubled from 54 in 2019-20 to 107 in 2021-22, with a drop in the 2020-21 school year when schools were operating through

[xii] *For more information, please see https://internetforall.gov/program/digital-equity-act-programs and https://www.ntia.gov/page/tribal-broadband-connectivity-program*

[xiii] *For more information about the San Carlos Apache Housing Authority, visit https://sancarloshousingauthority.org/*

remote learning (Table 11). The number of students experiencing homelessness in off-reservation public schools that serve San Carlos Apache students declined over the same period, from 15 in 2019-20 to fewer than 11 in 2021-22. The McKinney-Vento Act definition of homelessness includes children living in shelters, transitional housing, campgrounds, motels, trailer parks and cars, as well as children whose families are temporarily living within another family's household (living "doubled up"). According to key informants consulted in the 2022 Regional Needs and Assets Report, there is a severe shortage of safe and adequate housing in the region that has led to many families living in overcrowded housing or living in often unstable "doubled up" arrangements with other families. These unstable housing arrangements can make it challenging for families to consistently access services. [160]

- Over half (58%) of households in the San Carlos Apache Region have both a computer (i.e., a desktop, laptop, tablet or smartphone) and broadband internet connectivity. This proportion is higher than that in all Arizona reservations (44%) but substantially lower than the proportion of households in Arizona overall (88%) (Table 12).
- At the individual level, about two in every three (67%) individuals in the San Carlos Apache Region have access to both a computer and internet in their household. Access is the same for children birth to age 17 (67%), which is substantially higher than the 55% of children with access in all Arizona reservations but far below the 92% seen in Arizona statewide (Figure 23 & Figure 24).

Table 10. Households with housing costs of 30% or more of household income by home ownership status, 2017-2021 ACS

Geography	Estimated number of households	Housing costs 30 percent or more of household income	Estimated number of owner-occupied housing units	Housing costs 30 percent or more of household income	Estimated number of renter-occupied housing units	Housing costs 30 percent or more of household income
San Carlos Apache Region	**2,510**	**14%**	**1,435**	**10%**	**1,075**	**18%**
All Arizona Reservations	52,248	13%	35,840	12%	16,408	16%
Gila County	22,306	25%	17,052	22%	5,254	35%
Graham County	11,577	23%	8,256	20%	3,321	31%
Arizona	2,683,557	29%	1,765,658	21%	917,899	45%
United States	124,010,992	30%	80,152,161	22%	43,858,831	46%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B25106

Table 11. Students experiencing homelessness (McKinney-Vento), 2019-20 to 2021-22

Geography	Number of students experiencing homelessness			Percent of students who were experiencing homelessness		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
San Carlos Apache Region schools	**54**	**<11**	**107**	**3%**	**<2%**	**7%**
Gila County schools	213	159	256	3%	2%	3%
Graham County schools	14	11	<11	<2%	<2%	<2%
Off-Reservation schools serving San Carlos Apache Region Students	15	<11	<11	<2%	<2%	<2%
Arizona Schools	12,931	8,542	11,161	<2%	<2%	<2%

Source: Arizona Department of Education (2023). [Oct 1 Enrollment Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: The McKinney-Vento Act provides funding and supports to ensure that homeless children and youth have access to education. Under the McKinney-Vento Act, children are defined as homeless if they lack a "fixed, regular, and adequate nighttime address." This includes children living in shelters, cars, transitional housing, campgrounds, motels and trailer parks, as well as children who are living 'doubled up' with another family due to loss of housing or economic hardship. More information can be found on the ADE website: https://www.azed.gov/homeless

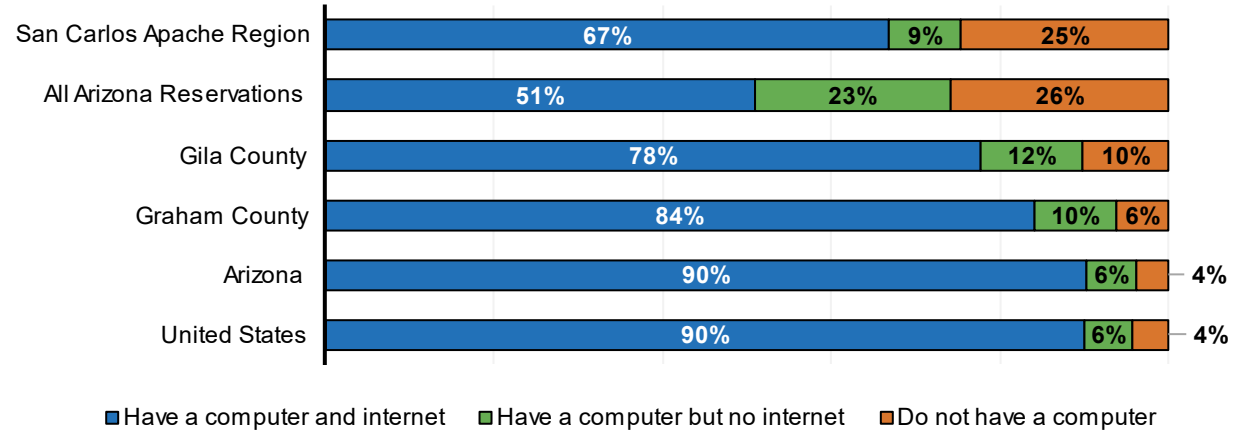
Table 12. Households with a computer and broadband internet connectivity, 2017-2021 ACS

Geography	Estimated number of households	Number and percent of households with a computer and broadband internet connectivity	
San Carlos Apache Region	**2,510**	**1,460**	**58%**
Gila County	22,306	16,329	73%
Graham County	11,577	9,265	80%
All Arizona Reservations	52,248	22,993	44%
Arizona	2,683,557	2,350,265	88%
United States	124,010,992	106,957,995	86%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B28008.

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

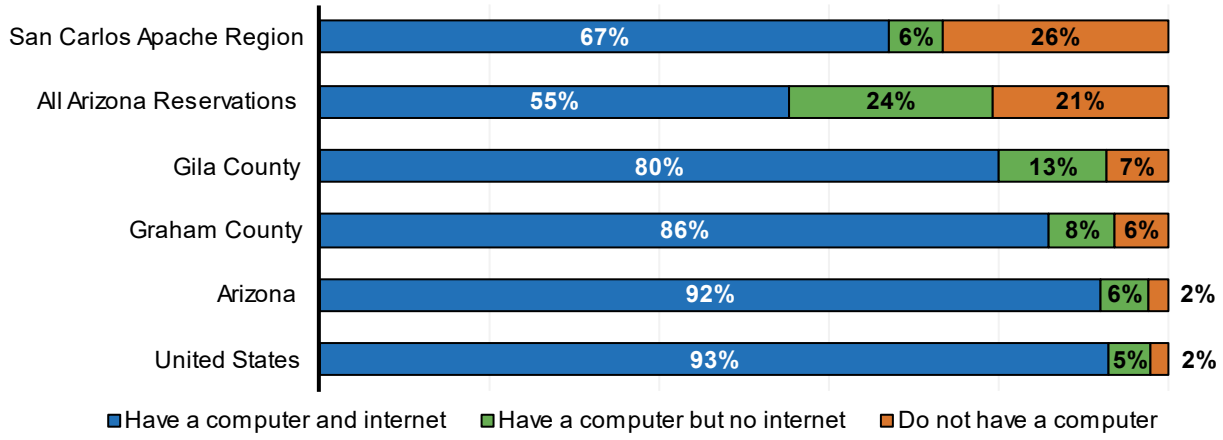
Figure 23. Persons of all ages in households with and without computers and internet connectivity, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B28005

Note: The three percentages in each bar should sum to 100%, but may not because of rounding.

Figure 24. Children birth to age 17 in households with and without computers and internet connectivity, 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B28005

Note: The three percentages in each bar should sum to 100%, but may not because of rounding.

Additional data tables related to *Economic Circumstances* can be found in Appendix 1 of this report.

EDUCATIONAL INDICATORS

EDUCATIONAL INDICATORS

Why it Matters

A community's K-12 education system can support positive outcomes for children, families and the overall well-being of the community. Individuals who have higher levels of education tend to live longer and healthier lives.[161] Graduating from high school, in particular, is associated with better health, financial stability and socio-emotional outcomes as well as a lower risk for incarceration compared to dropping out of high school.[162, 163] Children with parents that have attained higher levels of education are more likely to do well in school, such as score higher in reading, math and science in their first four years of school and attain higher levels of education themselves.[164, 165, 166] High-quality early learning experiences also set a strong foundation for children's learning in kindergarten, elementary school and beyond.[167] When children participate in high-quality early education, they are more likely to perform better in reading and math in later grades.[168] Given these lifetime and intergenerational impacts of educational attainment, it is critical to provide substantial support for early education and promote policies and programs that encourage the success of Arizona's children.

What the Data Tell Us

School attendance and absenteeism

School attendance is an important factor in predicting the academic performance and future health of children. Chronic absenteeism, defined as missing 10% of school days in a school year, predicts a student experiencing academic difficulties and even dropping out of school entirely.[169] Children who are part of a racial or ethnic minority group, have disabilities or other health conditions or are economically disadvantaged are at increased risk of absenteeism.[170, 171] These are also the children who are most likely to benefit from resources available through schools. Elementary school absenteeism among Native youth, in particular, may be influenced by a number of factors including a historically-rooted distrust of educational institutions, low use of culturally-relevant teaching methods and curricula as well as infrastructure-related issues (e.g., road conditions, bus availability and distances to schools).[172, 173, 174]

How the San Carlos Apache Region is faring

- Children in the San Carlos Apache Region attend school at public schools in the San Carlos Unified School District and the Fort Thomas Unified School District, private schools such as Peridot- Our Savior's Lutheran School and St. Charles Apache Mission School and off-reservation schools including Globe Unified School District schools, Miami Unified School District #40 schools and Destiny Charter School in Globe.[175]
- In the 2021-22 school year, 458 students were enrolled in preschool through 3rd grade in public schools within the San Carlos Apache Region, and an additional 181 American Indian students were enrolled in off-reservation public and charter schools known to serve San Carlos Apache

Region students (Table 13). Overall, about 100 students were enrolled in each grade between kindergarten and 3rd grade, and 19 students were enrolled in preschool (including students enrolled in special education) in the region.

- Between 2019-20 and 2021-22, kindergarten through 3rd grade chronic absence rates increased dramatically across all schools in Arizona, more than quadrupling statewide from 8% in 2019-20 and 34% in 2021-22. However, the chronic absence rate was already higher in schools in the San Carlos Apache Region, at 34% in 2019-20, and like in statewide schools, chronic absence rates have risen sharply, climbing to 75% in 2021-22. Rates also increased in off-reservation schools, rising from 13% in 2019-20 to 38% in 2021-22 (Figure 25).

Table 13. Preschool to 3rd grade students enrolled in public and charter schools, 2021-22

Geography	Preschool	Kindergarten	1st Grade	2nd Grade	3rd Grade
San Carlos Apache Region schools	**19**	**108**	**113**	**118**	**100**
Off-Reservation schools serving San Carlos Apache Region students *(American Indian students only)*	<11	70	62	68	76
Arizona schools *(American Indian students only)*	541	2,924	3,042	3,130	3,221
Gila County schools	187	562	556	582	577
Graham County schools	139	591	537	547	514
Arizona schools	17,840	79,423	79,202	82,342	82,243

Source: Arizona Department of Education (2023). [Oct 1 Enrollment Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

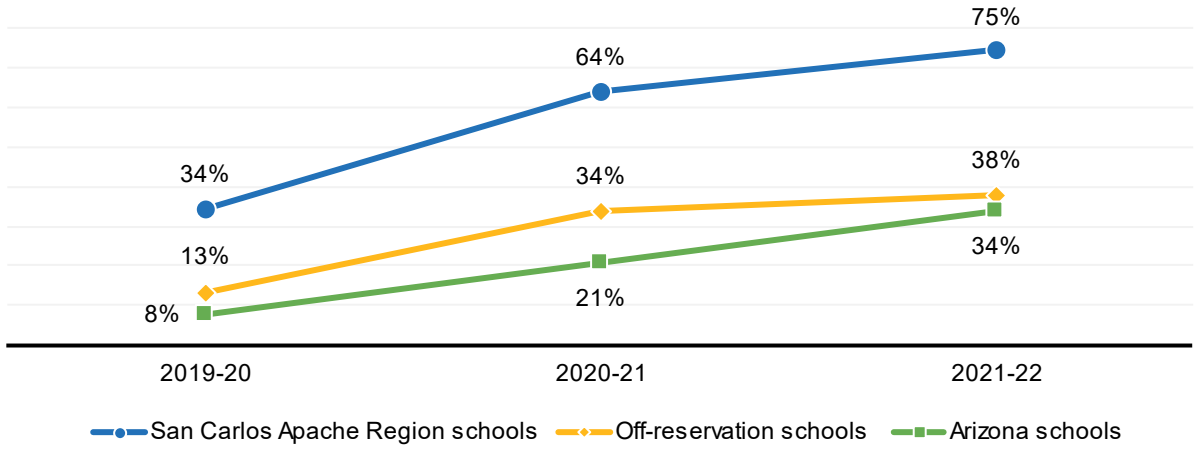
Table 14. Kindergarten to 3rd grade students with chronic absences, 2019-20 to 2021-22

Geography	K-3 Students with chronic absences			Percent of K-3 students with chronic absences		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
San Carlos Apache Region schools	**187**	**261**	**323**	**34%**	**64%**	**75%**
Off-Reservation schools serving San Carlos Apache Region students	83	219	218	13%	34%	38%
Gila County	381	599	718	17%	33%	36%
Graham County	N/A	438	649	7%	25%	30%
Arizona schools	25,382	56,547	100,955	8%	21%	34%

Source: Arizona Department of Education (2023). [Absenteeism Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Students are considered chronically absent if they miss more than 10% of the school days in a school year. This table includes children who are absent due to chronic illness. Data in this table are for students of all races and ethnicities. Schools in the region with K-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Figure 25. Kindergarten to 3rd grade students with chronic absences, 2019-20 to 2021-22



Source: Arizona Department of Education (2023). [Absenteeism Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Students are considered chronically absent if they miss more than 10% of the school days in a school year. This table includes children who are absent due to chronic illness. Data in this table are for students of all races and ethnicities. Schools in the region with K-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this figure are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Achievement on standardized testing

All Arizona public schools, including both district and charter schools, are required to administer state and federally mandated standardized tests. Between 2019 and 2022, the statewide English language arts (ELA) and math assessment tool for 3rd through 8th graders in public schools was Arizona's Statewide Achievement Assessment for English Language Arts and Math (AzM2), previously called Arizona's Measurement of Educational Readiness to Inform Teaching (AzMERIT).[xiv,176,177] The *Move on When Reading* policy, enacted by the Arizona legislature in 2010, states that a 3rd grade student shall not be promoted to 4th grade if their reading score falls far below the 3rd grade level, as established by the State Board of Education.[xv, 178] These policies are intended to help identify struggling readers who may benefit from more targeted literacy interventions. Children's reading comprehension and proficiency skills when in the 3rd grade can predict their future academic success, such as their likelihood of graduating high school and attending college.[179] Poor reading skills are associated with a six-fold increase in the likelihood of dropping out of high school compared to proficient readers.[180] However, it is important to note that standardized tests have been found to have lower cultural relevancy to non-White students, which has contributed to a disparity in achievement on standardized tests across racial and ethnic groups.[181]

How the San Carlos Apache Region is faring

- In the 2021-22 school year, only 3% of students in San Carlos Apache Region schools achieved a passing score on the 3rd grade English Language Arts (ELA) assessment. This is lower than the passing rates for American Indian students in all Arizona schools (16%) and considerably lower than the passing rates for American Indian students in off-reservation schools (28%) and for students of all races and ethnicities in Arizona (41%) (Table 15).
- In regional schools, ELA passing rates increased slightly between 2020-21 and 2021-22, going from less than 2% to 3%. Passing rates for American Indian students in off-reservation schools increased substantially, from 8% to 28% in the same period. Across the state, ELA passing rates for American Indian students remain exceptionally low, less than half that of students of all races and ethnicities in any year (Figure 26). Passing rates on ELA assessment have yet to reach the rates seen pre-pandemic at schools in the region and statewide in Arizona.

[xiv] *In 2022, AzM2 was replaced by Arizona's Academic Standards Assessment (AASA).*

[xv] *Exceptions exist for students identified with or being evaluated for learning disabilities 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. Students who test in the 'far below' proficiency range can also be promoted to 4th grade if they complete summer school and then demonstrate reading at a proficient level. Given these exceptions, historically very few 3rd grade students (<1%) have been retained due to Move on When Reading. As of 2022, schools with early elementary grade students are now required to screen all kindergarten and first grade students for dyslexia and have at least one teacher who has complete ADE-approved trainings in reading instruction, intensifying instruction and understanding and recognizing dyslexia.*

- Compared to ELA passing rates, a similar proportion of students in San Carlos Apache Region schools passed the 3rd grade Math assessment in 2021-22 (3%). This is again lower than the passing rates for American Indian students in all Arizona schools (16%) and substantially lower than the passing rates for American Indian students in off-reservation schools serving San Carlos Apache Region students (Table 16).
- Similar to patterns seen for ELA passing rates, passing rates for the 3rd grade Math assessment increased slightly in the region from less than 2% in 2020-21 to 3% in 2021-22. Passing rates improved more dramatically for American Indian students in off-reservation schools, more than quadrupling from 8% in 2020-21 to 34% in 2021-22. However, even with these improvements, passing rates for students in the region (3%), American Indian students in off-reservation schools (34%) and American Indian students across Arizona (16%) remain below statewide passing rates for Math for all students (40%) (Figure 27).

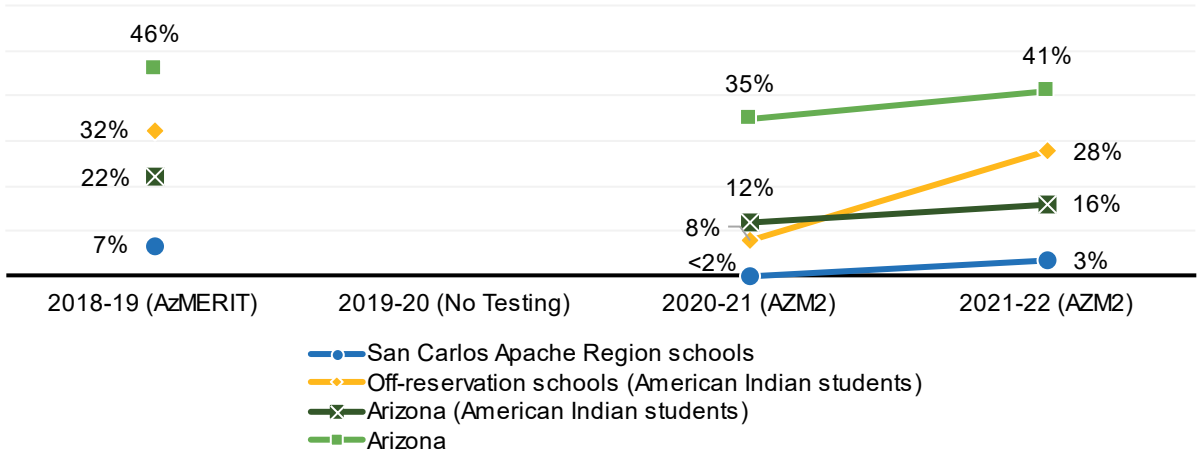
Table 15. Assessment results: Third Grade English Language Arts, 2021-22

Geography	Students Tested	Falls Far Below	Approaches	Meets	Exceeds	Passing
San Carlos Apache Region schools	**DS**	**91%**	**5%**	**3%**	**<2%**	**3%**
Off-Reservation schools serving San Carlos Apache Region students *(American Indian students only)*	DS	59%	13%	25%	3%	28%
Arizona schools *(American Indian students only)*	3,100	74%	10%	13%	3%	16%
Gila County schools	526	63%	11%	18%	8%	26%
Graham County schools	508	45%	14%	29%	12%	41%
Arizona schools	79,586	47%	12%	26%	15%	41%

Source: Arizona Department of Education (2023). [AzMERIT Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Schools in the region with 3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled 3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Figure 26. Trends in passing rates for Third Grade English Language Arts assessments, 2018-19 to 2021-22



Source: Arizona Department of Education (2023). [AzMERIT Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Schools in the region with 3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

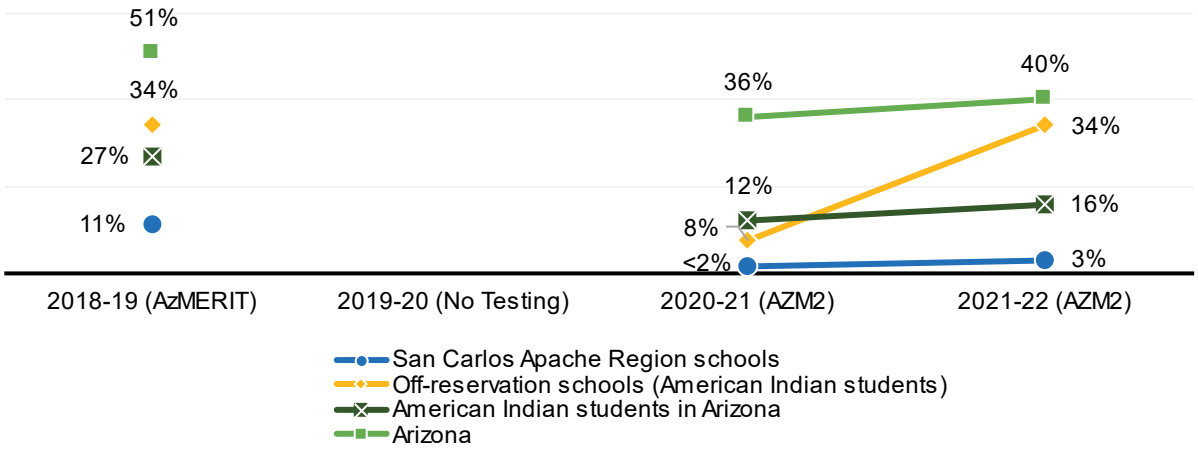
Table 16. Assessment results: Third Grade Math, 2021-22

Geography	Students Tested	Falls Far Below	Approaches	Meets	Exceeds	Passing
San Carlos Apache Region schools	**DS**	**76%**	**21%**	**3%**	**<2%**	**3%**
Off-Reservation schools serving San Carlos Apache Region students *(American Indian students only)*	DS	42%	24%	30%	4%	34%
Arizona schools *(American Indian students only)*	3,100	57%	27%	13%	3%	16%
Gila County schools	543	50%	23%	21%	6%	27%
Graham County schools	515	23%	33%	32%	12%	44%
Arizona schools	80,445	33%	27%	28%	12%	40%

Source: Arizona Department of Education (2023). [AzMERIT Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Schools in the region with 3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled 3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Figure 27. Trends in passing rates for Third Grade Math for American Indian students, 2018-19 to 2021-22



Source: Arizona Department of Education (2023). [AzMERIT Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: Schools in the region with 3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Graduation rates and adult educational attainment

Understanding the current high school graduation and dropout rates within a region provides insight into the assets within and challenges faced by a community and its future workforce. Adults who graduated from high school have higher rates of employment, higher incomes and better overall health compared to adults who dropped out of high school, even if they received a high school equivalency degree (GED).[182] Maternal education is associated with an array of child outcomes starting with infant health,[183, 184, 185] and both targeted and universal programs serving children from families with lower educational backgrounds can support child development.[186, 187]

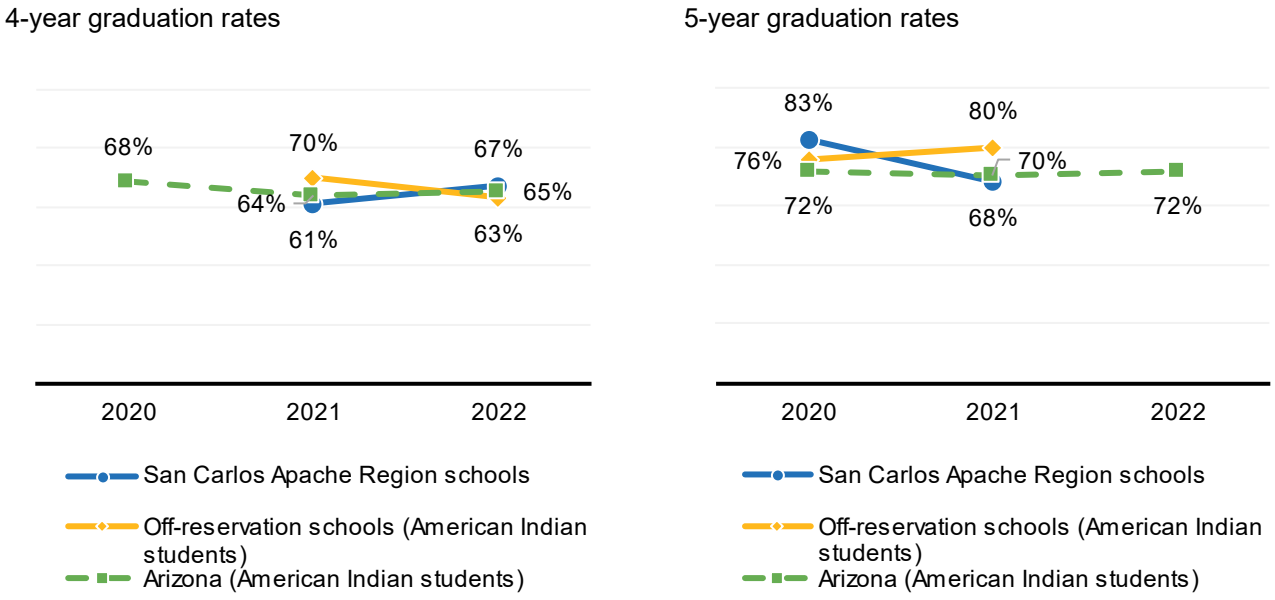
In contrast to the U.S. as a whole, Arizona has a larger proportion of disconnected youth, defined as teenagers ages 16 to 19 who are neither attending school nor employed,[xvi] which has been linked to negative physical and mental health outcomes and higher rates of unemployment.[188] Native youth, both nationally and in Arizona, are disproportionately disconnected and therefore particularly vulnerable to negative outcomes and may need additional outreach and supports.[189]

[xvi] *Age ranges used for 'disconnected youth' vary by source, with some estimates including both teenagers ages 16-19 and young adults ages 20-24 and others focusing on only teenagers or young adults.*

How the San Carlos Apache Region is faring

- Both four- and five-year graduation rates for schools in the San Carlos Apache Region have been similar to graduation rates for American Indian students statewide (Figure 28). In 2022, 67% of San Carlos Apache Region students graduated in four years, compared to 65% statewide (Table 17), and in 2021, 68% of students graduated within five years compared to 70% statewide (Figure 28). Graduation rates for American Indian students enrolled in off-reservation schools that serve San Carlos Apache Region students followed similar patterns. In 2022, 63% of American Indian student in these off-reservation schools graduated in four years, and 80% graduated within five years in 2021 (Figure 28).
- In 2021-22, the 7th-12th grade dropout rate (12%) was higher in San Carlos Apache Region schools than for American Indian students throughout Arizona (9%). Dropout rates for American Indian students in off-reservation schools were substantially lower that year (3%). Dropout rates for students in San Carlos Apache Region schools (13%), for American Indian students in off-reservation schools (5%) and for American Indian students statewide (10%) peaked in 2020-21 (Table 18).
- Among adults in the San Carlos Apache Region, 75% have at least a high school education. This is a slightly lower proportion than seen across all Arizona reservations (77%) and much lower than seen statewide (89%). While educational attainment generally looks similar between the San Carlos Apache Region and all Arizona reservations, 4% of adults in the region have a bachelor's degree or higher, compared to 9% in all Arizona reservations (Figure 29).
- A higher proportion of mothers giving birth between 2019 and 2022 in the San Carlos Apache Region had less than a high school education (31% compared to 25% of all residents). This rate is higher than for mothers in all Arizona reservations (27% in 2020) and Arizona overall (12% in 2021) (Table 19; Figure 29).

Figure 28. Trends in 4-year and 5-year graduation rates, 2020 to 2022



Source: Arizona Department of Education (2023). [Graduation Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: Data for off-reservation schools were not available for 2020 4-year graduation rates, and 5-year graduation rates for 2022 had yet to be released at the time of the data pull for this report (December 2023).

Table 17. 4-year and 5-year graduation rates, 2022

Geography	4-Year senior cohort (2022)	4-Year graduates (2022)	4-Year graduation rate (2022)	5-Year graduates (2022)	5-Year graduation rate (2022)
San Carlos Apache Region schools	**120**	**84**	**67%**	**N/A**	**N/A**
Off-Reservation schools serving San Carlos Apache Region students *(American Indian students only)*	68	61	63%	N/A	N/A
Arizona schools *(American Indian students only)*	4,213	2,739	65%	3,040	72%
Gila County schools	554	424	77%	439	79%
Graham County schools	526	441	84%	449	85%
Arizona schools	90,880	69,623	77%	71,277	79%

Source: Arizona Department of Education (2023). [Oct 1 Enrollment Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Note: 2022 5-year graduation rates had yet to be released at the time that ADE data were accessed for this report. The 4-year graduation rate reflects the percentage of students who graduated high school within 4 years of entry; the 5-year graduation rate reflects the percentage of students who graduated high school within five years of entry. See https://www.azed.gov/sites/default/files/2017/08/2018%2006%2001%20Graduation%20DO%20and%20Persistence%20Rate%20Tech%20Manual.pdf?id=598a34233217e10ce06647ff

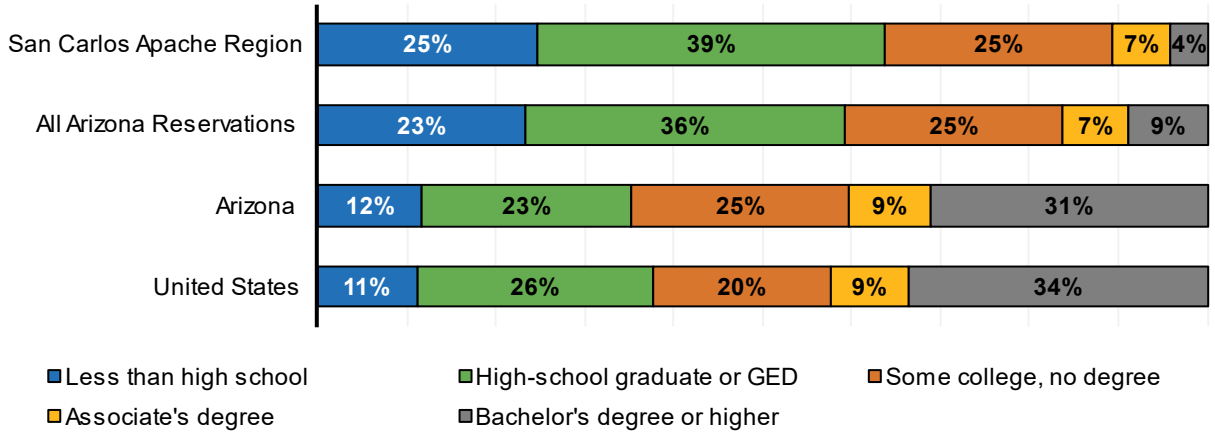
Table 18. 7th to 12th grade dropout rates, 2019-20 to 2021-22

Geography	Dropout Rate, 2019-20	Dropout Rate, 2020-21	Dropout Rate, 2021-22
San Carlos Apache Region schools	**8%**	**13%**	**12%**
Off-Reservation schools serving San Carlos Apache Region students *(American Indian students only)*	N/A	5%	3%
Arizona schools *(American Indian students only)*	5%	10%	9%
Gila County schools	4%	6%	7%
Graham County schools	3%	5%	5%
Arizona schools	3%	4%	5%

Source: Arizona Department of Education (2021). [Dropout Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Notes: Dropout rates for American Indian students alone in off-reservation schools were not available for 2019-20 (the dropout rate for students of all races and ethnicities in these schools was 1%). Dropouts are defined by ADE as students who were enrolled in school at any time during the school year but were not enrolled at the end of the year and who did not transfer to another school, graduate, or die. Dropout rates are calculated by dividing the number of dropouts by the total enrollment. In many elementary districts, dropout rates reflect students who transferred out and were lost to follow-up.

Figure 29. Level of education for the adult population (ages 25 and older), 2017-2021 ACS



Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B15002

Note: The five percentages in each bar should sum to 100% but may not because of rounding.

Table 19. Level of education for the mothers of babies born in 2020 and 2021

Geography	Calendar year	Number of births	Mother had less than a high-school education	Mother finished high school or had GED	Mother had more than a high-school education
San Carlos Apache Region	**2020**	**165**	**33 to 35%**	**38%**	**24 to 28%**
	2021	**187**	**30%**	**43%**	**24 to 26%**
	2019-2022 combined	**715**	**31%**	**43%**	**24%**
All Arizona Reservations	2020	1,900	27%	38%	35%
	2021	*Data for All Arizona Reservations not available*			
Gila County	2020	471	19 to 20%	38%	43%
	2021	452	23%	34%	42%
Graham County	2020	464	16%	30%	54%
	2021	522	13 to 14%	26%	59%
Arizona	2020	76,781	12%	27%	57%
	2021	77,857	12%	27%	58%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data. Arizona Department of Health Services (2022). Health status profile of American Indians in Arizona 2020. Retrieved from https://pub.azdhs.gov/health-stats/report/hspam/index.php

Note: Mothers of twins are counted twice in this table. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health Status Profile of American Indian in Arizona for 2021 has not yet been released. A small number of births are missing data on maternal educational attainment, so percentages in this table may not sum to 100%.

Additional data tables related to *Educational Indicators* can be found in Appendix 1 of this report.

EARLY LEARNING

EARLY LEARNING

Why it Matters

Early childhood is a pivotal time when crucial physical, cognitive and social-emotional skills are built.[190,191] Early experiences are important for healthy brain development and set the stage for lifelong learning and well-being.[192, 193, 194] Just as rich, stimulating environments can promote healthy development, early negative experiences can also have lasting effects.[195, 196] However, considering the major COVID-19 pandemic-related challenges experienced by many Arizona families, including disproportionate numbers of deaths and losses of family member and caregivers in American Indian and Alaska Native communities,[197] it remains important to remember that while these short- and long-term effects may be more likely, they are not inevitable.[198, 199] Access to quality early care and learning environments can be a powerful protective factor for every child, and the effects can be particularly life-changing for children facing chronic stressors and for children with disabilities.[200, 201]

Quality early care and educational experiences help children develop into capable learners by supporting many crucial systems in the body.[202] In addition to brain development, positive and adverse experiences in the first few years of life can shape a child's immune functioning, ability to handle stress in a healthy way and capacity to learn and thrive.[203] Each of these factors contribute to being a skillful learner and well-adjusted person.[204]

What the Data Tell Us

Access to early care and education

Early childhood systems play a key role in supporting children, parents, caregivers and communities as a whole.[205, 206] In Native nations, early care and education services are provided at center-based, home-based and school-based settings that are funded through a combination of tribal, state and federal grants in addition to privately-owned and operated child care facilities.[207] Unfortunately, many Arizona families, both Native and non-Native, continue to face obstacles when seeking quality early care and education. Communities in both urban and rural areas of Arizona face a gap between the number of young children and licensed child care slots.[208, 209, 210, 211] According to the Center for American Progress, almost half of Arizonans (48%), including the majority of rural, low-income and Hispanic or Latino families, live in a "child care desert," defined as areas where there are three times as many children as there are available child care opportunities.[212, 213]

Analyses by the Bipartisan Policy Center indicate that Arizona needed an additional 76,740 licensed or registered early care and education slots to have enough for all young children in working families in 2019.[214] Because the COVID-19 pandemic forced many child care centers and home-based providers to close either temporarily or permanently, care has been disrupted for many more families in Arizona and nationwide.[215]

Availability and cost are especially challenging for parents seeking care for infants and young children in Arizona. For example, a family with one infant and one preschooler can expect to pay about $1,670 per month for a licensed child care provider. This monthly cost exceeds what many Arizonans pay per month for housing, creating potential financial challenges that are further compounded for families with multiple children under the age of 6.[xvii, 216, 217] The Arizona Department of Economic Security (DES) provides child care assistance to financially eligible families, including specific funding for families involved with the Arizona Department of Child Safety (DCS).[218] However, families that are eligible to receive funding may not have access to child care services in their community that are licensed or that accept assistance payments, leaving them unable to utilize the funding.[219, 220]

How the San Carlos Apache Region is faring

- According to the 2022 FTF San Carlos Apache Regional Needs and Assets Report, early childhood care and education opportunities in the San Carlos Apache Region include Apache Kid Child Care Center, the San Carlos Apache Head Start program, the San Carlos Apache Early Head Start program and the school-based preschool at Rice Elementary, a local public school in the San Carlos Unified School District.[221]
- Apache Kid Child Care Center is a tribally operated child care program that offers child care for children birth to age 12 Monday to Friday at two sites located in San Carlos and Bylas (the program is co-located with the Bylas Head Start and Early Head Start programs). Families eligible to enroll children in Apache Kid Child Care Center include low-income families, teen parents enrolled in high school, Tribal TANF clients, and families with parents in the workforce. Before the onset of the COVID-19 pandemic in March 2020, Apache Kid Child Care Center had the capacity to serve 64 children at the San Carlos location and 12 children in Bylas, for a total capacity of 84 (Table 21). As of early 2022, the program was operating at about half capacity due to staffing challenges and space constraints.[222]
- San Carlos Apache Head Start offers comprehensive early childhood education for preschool-aged children in families that meet income eligibility criteria. The program operates four facilities, one in each district of the reservation: Gilson Wash, Peridot, Seven Mile and Bylas.[223] Overall, San Carlos Apache Head Start has a funded enrollment of 233 children ages 3 to 5. Prior to the onset of the pandemic, there were 252 children cumulatively enrolled throughout the year in fiscal year (FY) 2019 (as children may exit the program and new children are enrolled in their place). In FY 2023, 200 children were cumulatively enrolled in the program, indicating a slight decline in participation compared to 2019 (Table 20).

[xvii] *In addition to the financial challenges faced by parents paying for child care, the early care and education workforce is one of the most underpaid fields in the country. Nationally, educators working with infants and toddlers are 7.7 times more likely to live in poverty compared to K-8 teachers. The median hourly wage for a child care worker in Arizona ($11.97) is $13.19 less per hour than what is considered a living wage for a single parent with 1 child ($25.16). For more information on early care and education workforce wages visit* https://cscce.berkeley.edu/workforce-index-2020/the-early-educator-workforce/early-educator-pay-economic-insecurity-across-the-states/

- The San Carlos Apache Education Department received funding to open the San Carlos Apache Early Head Start program in 2017. The Early Head Start program is co-located with Apache Kid Child Care Center in Bylas and has a funded enrollment of 75 children. However, local key informants consulted in the 2022 Regional Needs and Assets Report noted that Early Head Start has had difficulties reaching full enrollment, with enrollment growing slowly from 40 children in FY 2018 to finally reaching full enrollment just before the onset of the COVID-19 pandemic.[224] In FY 2019, the program had a cumulative enrollment of 68 infants and toddlers, and in FY 2023 cumulative enrollment was lower (n=53) (Table 20). As of spring 2022, both Early Head Start and Head Start, like Apache Kid Child Care, were facing challenges related to lack of qualified staff, high staff turnover and space constraints.[225]
- The San Carlos Unified School District opened an inclusive preschool at Rice Elementary School in the 2021-22 school year. According to the 2022 Regional Needs and Assets report, the goal of the inclusive preschool is to expand early education opportunities for preschool-aged children who Head Start may not be able to serve due to space constraints and income eligibility requirements. Under the inclusive preschool model, both typically-developing children as well as children with speech and language delays attend the same preschool classroom with a general preschool teacher, and those children with delays are supported by a speech and language pathologist. Special needs preschool teachers still teach those children who need more wraparound support.[226] The inclusive preschool has a capacity to serve 20 children and had 14 children enrolled in 2020-21 (Table 21). In 2021-22, 19 children were enrolled in the inclusive preschool at Rice Elementary (see Table 13).
- Pre-pandemic, early care and education programs had the capacity to serve 412 children birth to age 5 in the region (Table 21); however, the current capacity of these programs is likely lower due to staffing challenges and space constraints affecting many programs. According to the 2020 Census, there were 1,192 children birth to age 5 in the region, indicating that there is likely capacity to serve about one-third of young children in the region.
- Very few children in the region receive assistance from DES. The numbers of children ages birth to five that were eligible for and receiving child care assistance though DES has decreased sharply, dropping from 32 children receiving assistance in 2019 to fewer than 10 in 2022 (Figure 30).

Table 20. Funded and cumulative enrollment in San Carlos Apache Head Start, fiscal years 2019 & 2023

	FY 2019		FY 2023	
	Funded	Cumulative	Funded	Cumulative
Head Start	233	251	233	200
Early Head Start	75	68	75	53

Source: Office of Head Start (2023). 2023 Program Information Report & 2019 Program Information Report. Retrieved on Dec 1, 2023 from https://hses.ohs.acf.hhs.gov First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

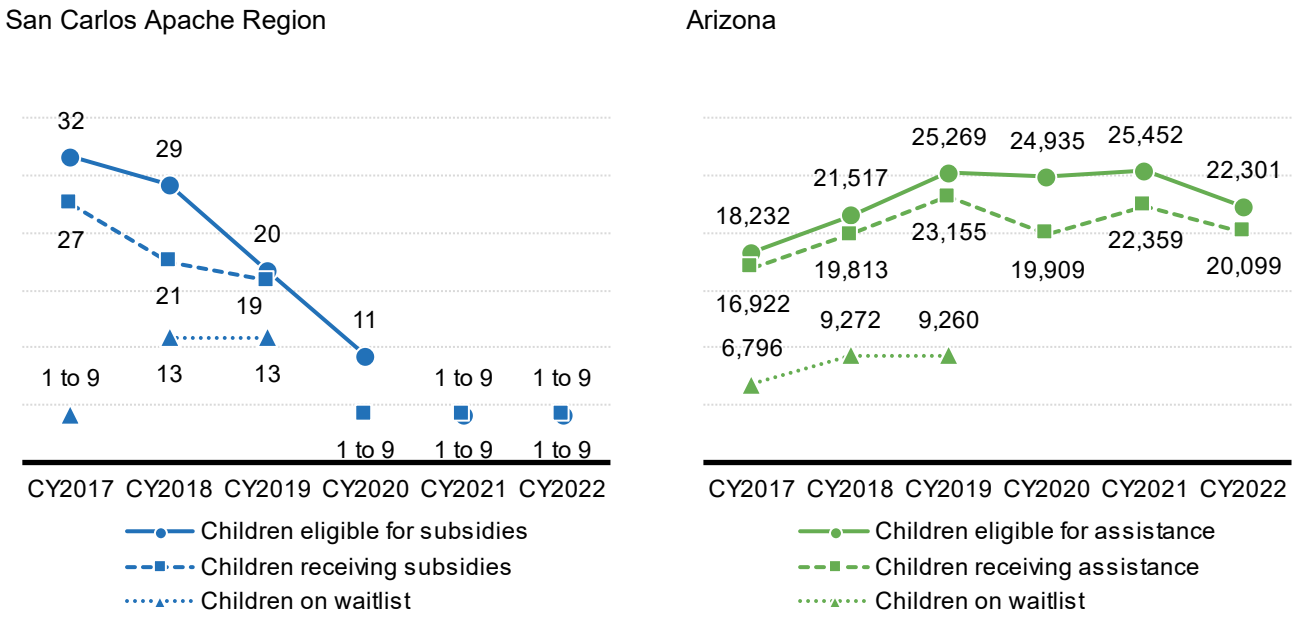
Table 21. Total Capacity in Early Care and Education Programs, 2018-19*

	Ages served	Capacity	Cumulative Enrollment
Head Start	Ages 3-5	233	251
Early Head Start	Ages 0-2	75	68
Apache Kid Child Care	Ages 0-12	84	N/A
Rice Inclusive Preschool*	Age 3-4	20	14
Total	Ages 0-5	412	N/A

Source: Office of Head Start (2020). 2019 Program Information Report. Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/data/pir. First Things First (2021) Quality First Data Center [Dataset]. Arizona Department of Education (2021). [Enrollment dataset]. Personal correspondence with Apache Kid Child Care and Rice Elementary School staff.

*Note: *This program opened during the 2021-22 school year and data here reflect enrollment and capacity from that year. Head Start, Early Head Start, and Apache Kid Child Care data reflect pre-pandemic enrollment and capacity. As of 2022, Apache Kid Child Care currently is operating at approximately half the capacity compared to their pre-pandemic capacity, with the ability to enroll up to 40 children.*

Figure 30. Children receiving DES child care assistance, 2017 to 2022



Source: Arizona Department of Economic Security (2023). [Child Care Administration dataset]. Unpublished data.

High quality early care and education

Children who begin their education in high-quality preschool programs tend to repeat grades less frequently, obtain higher scores on standardized tests, experience fewer behavior problems and are more likely to graduate from high school.[227] This provides 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.[228, 229] The key ingredients in positive early experiences include responsive relationships, core adaptive skills development, reduced sources of stress and appropriate nutrition – all things that quality early care and education are in a unique position to provide at the critical time to encourage optimal learning and well-being for years to come.[230] Early care and education shapes far more than a child's future academic achievement, and an investment in early childhood can be one of the most productive investments a community can make.[231]

One way that the quality of early child care and education is measured in Arizona is through the Quality First program.[232] The Quality First program rates the quality of child care providers and preschools on a scale of one to five stars, with providers considered high quality when they have received a three-star rating or higher. Quality First also offers training and funding for participating schools and providers to improve their services.[233] Quality First providers are supported by regional funding.

How the San Carlos Apache Region is faring

- As of state fiscal year (SFY) 2023, there were 8 child care providers participating in Quality First in the San Carlos Apache Region (Table 23). This included all of the San Carlos Apache Head Start centers, both Apache Kid Child Care Center locations, Rice Inclusive Preschool and the San Carlos Youth Home.[234]
- The majority of child care providers in the region (88%) have a 3- to 5-star Quality First rating, indicating a quality-level child care setting. This is much higher than the share seen statewide (68%) (Figure 31). More than half of children who are enrolled in a Quality First center (54%) are enrolled in a provider with a 3- to 5-star rating.
- Overall, 134 children were enrolled in Quality First providers in 2023 (Table 24). This again shows lower enrollments in recent years compared to pre-pandemic enrollments. In 2018-19, more than 400 children were enrolled in these programs (see Table 21).

Table 22. Quality First child care providers by funding source, state fiscal year 2023

Geography	Child care providers served	Regional Funding	DES Expansion	Buy-In
San Carlos Apache Region	8	8	0	0
Arizona	1,434	1,045	384	5

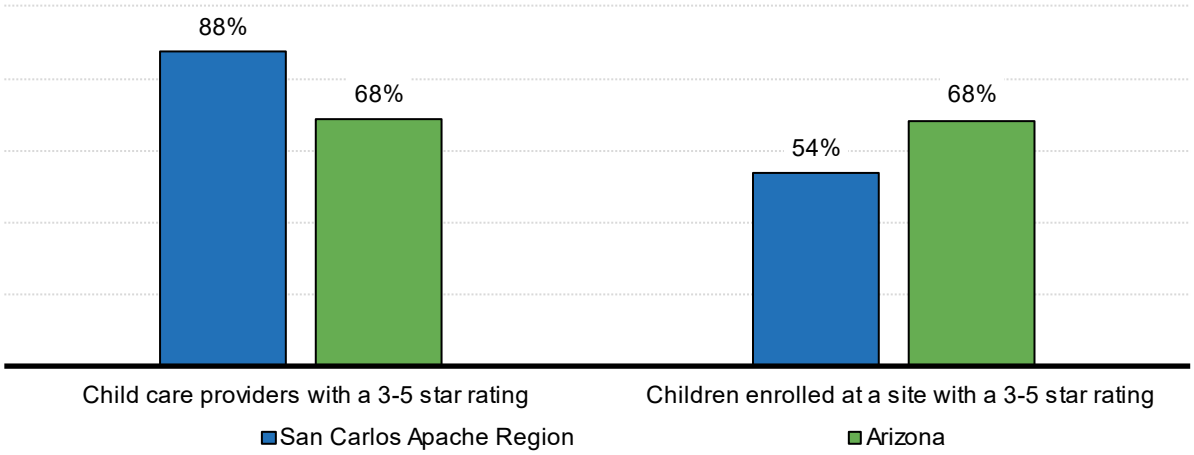
Source: First Things First (2023). Quality First Summary Data. Unpublished data.

Table 23. Children served by Quality First child care providers, state fiscal year 2023

Geography	Children enrolled at a Quality First provider site	Children enrolled at a Quality First provider site with a star rating	Children enrolled at a Quality First provider site with a 3-5 star rating	% of Children in a Quality-Level Setting (3-5 Stars)	Children served by Quality First Scholarships
San Carlos Apache Region	**134**	**72**	**72**	**54%**	**0**
Arizona	70,837	54,155	48,379	68%	8,262

Source: First Things First (2023). Quality First Summary Data. Unpublished data.

Figure 31. Percent of Quality First programs with a 3-5 star-rating and percent of children enrolled in quality-level programs, state fiscal year 2023



Source: First Things First (2023). Quality First Summary Data. Unpublished data.

Note: Quality First considers providers with a 3-star rating and above to be 'quality level.' Percents are of total Quality First providers and children enrolled in Quality First sites.

Young children with special needs

Timely intervention can improve the language, cognitive and socio-emotional developmental outcomes of young children who have, or are at risk for, developmental delays.[235, 236, 237] Early intervention also reduces educational costs by decreasing the need for special education.[238] Ensuring that children have access to timely and adequate screening and intervention services from birth to age 5 can be key for preparing children for kindergarten.

In Arizona, the Arizona Early Intervention Program (AzEIP),[xviii] the Division of Developmental Disabilities (DDD)[xix] and the Arizona Department of Education Early Childhood Special Education Program are designed to provide services to families with children who have special needs.[xx] AzEIP is a division of DES that provides early intervention and a variety of supportive services to Arizona children birth to age 2 with disabilities and their families.[239] The goal of these services is to improve the learning and development of children and inform their family members of how they can best support their child.[240] DDD is a division of DES that provides supportive services to people of all ages with a qualifying developmental disability, including cerebral palsy, autism spectrum disorder, down syndrome, epilepsy and cognitive disabilities.[241] Children under the age of 6 that have been assessed by AzEIP to have a qualifying disability may also receive DDD services. At age 3, children with special needs transition from AzEIP services to their local education agency (LEA), usually a school district. Each Arizona school district is mandated to participate in Child Find[xxi] and to provide preschool services to children with special needs either through their own schools or through agreements with other programs such as Head Start.

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 tribal nations. According to national research, insufficient funding and staffing of these programs are the greatest obstacles to identifying and providing resources for all children who would benefit from early intervention, and Arizona already falls in the bottom 10 states in the nation for early intervention service provision.[242] Fewer children in Arizona are accessing critical early intervention services that can identify disabilities, provide parent-coaching and encourage optimal development at home.[243] This matters because, while early education discussions often center around pre-kindergarten for 4-year-olds, research continues to point to the impact of experiences during the first 3 years of life as being just as crucial for healthy brain and body development.[244] Positively, Arizona has taken steps toward improving funding for early intervention, including being 1 of 10 states to cross-reference Medicaid and Early Intervention data to maximize federal Medicaid matching of funds.[245]

How the San Carlos Apache Region is faring

- In federal fiscal years (FFY) 2021 and 2022 combined, the largest share (36%) of children birth to age 2 in the San Carlos Apache Region were referred to AzEIP through physicians' offices,

---

[xviii] *For more information on AzEIP (which is a division of the Department of Economic Security), visit https://www.azdes.gov/azeip/*

[xix] *For more information on DDD (which is a division of the Department of Economic Security), visit https://des.az.gov/services/disabilities/developmental-disabilities*

[xx] *For more information on ADE's Early Childhood Special Education program, visit http://www.azed.gov/ece/early-childhood-special-education/ and http://www.azed.gov/special-education/az-find/*

[xxi] *The Arizona Child Find program is a component of the Individuals with Disabilities Education Act (IDEA) that requires states to identify and evaluate all children with disabilities (birth through age 21) to attempt to ensure that they receive the supports and services they need.*

followed by other sources[xxii] (28%), public health or social service agencies (18%) and parents or families (18%). Compared to the state, there were fewer referrals in the region through health care providers such as physician offices (36% region; 57% state) or hospitals (0% region; 6% state) and more through public health or social service agencies (18% region; 6% state) and other sources (28% region; 9% state) (Table 25). The difference in referral sources in the region may be due to the developmental and sensory screenings conducted by the University of Arizona Cooperative Extension as part of a funded strategy from the FTF San Carlos Apache Regional Partnership Council. [246]

- In the region, 42% of children (birth to age 2) who were referred to AzEIP in federal fiscal year 2022 were found eligible and received services, double that seen in Arizona overall (21%). There were no children referred in the region whose family chose not to proceed with screening for eligibility, compared to 14% of referrals statewide. Overall half of children referred to AzEIP were found eligible in the region compared to 37% statewide (Figure 32).
- However, despite higher rates of referred children being found eligible, the total number of children served by AzEIP in the region remains very small; fewer than 10 children were served by AzEIP as of October 1 in all years except in 2019, when 10 children were served (Table 26). In 2021 and 2022 combined, 10 children were served in the region.
- Similarly, fewer than 10 children birth to age 5 received services from DDD in any year between state fiscal year (SFY) 2019 and 2022 (Table 27).
- Qualifying children may receive services from AzEIP and/or DDD, a number which can be used to estimate the total number of young children receiving early intervention services in a region. The number of children receiving AzEIP and/or DDD services fell from 12 in SFY 2019 to fewer than 10 in SFY 2020 and every year that followed. Based on the population of children birth to age 2 in the region per the 2020 Census, this suggests that 1.7% of children or fewer in the region may be receiving early intervention services, a substantially lower proportion than the 2.6% of children statewide (Table 28).
- In 2018 through 2022, a total of 522 students in preschool through 3rd grade in San Carlos Apache Region schools were enrolled in special education. This included 78 preschoolers, 91 kindergarteners, 108 1st graders, 119 2nd graders and 126 3rd graders (Table 29). Similar numbers of students (of all races and ethnicities) were enrolled in special education in off-reservation schools that serve San Carlos Apache Region students.
- Similar to trends seen in early intervention, the number of preschoolers with disabilities served by a local educational agency (LEA) has declined substantially in recent years, falling from 36 in SFY 2018 to fewer than 11 in SFY 2021 and 2022 (Table 30).

[xxii] *The largest single "other" source of referrals were child care and early learning programs.*

- Of the preschoolers with disabilities receiving services through LEAs in 2022, more than half (58%) were diagnosed with a developmental delay, 23% with a speech or language impairment and 19% with a preschool severe delay. The proportion of preschoolers with a developmental delay is much higher than that seen statewide (43%), and speech or language impairment much lower (34% statewide). Patterns of primary disability in off-reservation schools were much closer to those seen statewide (Figure 33).
- The number of kindergarten through 3rd grade students enrolled in special education peaked in SFY 2019 at 109 then declined steadily to 57 in SFY 2022 (Figure 34). In 2022, nearly half of these students were diagnosed with a developmental delay (49%), 26% a speech or language impairment, 12% a specific learning disability, 9% autism and 5% another disability. The proportion of children diagnosed with a developmental delay was again much higher for students in the region (49%) than Arizona overall (27%) (Figure 35). In off-reservation ADE schools, most children enrolled in special education had a speech or language impairment (37%) or developmental disability (36%).

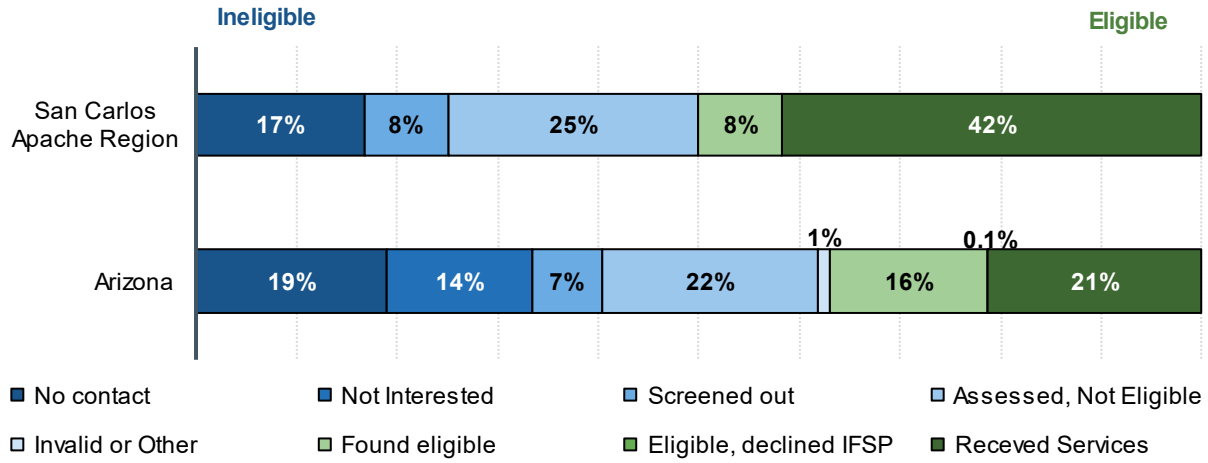
Table 24. Children birth to age 2 referred to AzEIP by referral source, federal fiscal years 2021-2022 (combined)

Geography	Total Referrals	FFY 2021-2022 Referral Source (combined)				
		Physician Office	Parent or Family	Hospital	Public Health or Social Service Agency	Other
San Carlos Apache Region	**DS**	**36%**	**18%**	**0%**	**18%**	**28%**
Gila County	187	38%	16%	6%	11%	29%
Graham County	138	33%	41%	4%	10%	12%
Arizona	29,446	57%	21%	6%	6%	9%

Sources: Arizona Department of Economic Security (2023). [Arizona Early Intervention Program dataset]. Unpublished data.

Note: Other referral sources include audiologists, child care or early learning programs, foster care or adoption agencies, homeless shelters or programs, public health facilities, schools, Department of Child Safety, or referrals without a recorded sources. The largest source of "other" referrals in the region was a child care or early learning program. Total referrals are suppressed to prevent calculations of numbers less than 10.

Figure 32. Outcomes for children birth to age 2 referred to AzEIP, federal fiscal year 2022



Sources: Arizona Department of Economic Security (2023). [Arizona Early Intervention Program dataset]. Unpublished data.

Note: These referral outcomes are recorded by AzEIP service providers. "No contact" means that a service coordinator made multiple attempts to contact a child's family but was unsuccessful. "Not interested" indicates that when contacted the family of the child did not proceed with screening for eligibility. Children who are "screened out" were not suspected to have a qualifying developmental delay based on an initial developmental screening with a service coordinator; children who are "assessed, not eligible" are those with a formal evaluation who were found to not have a qualifying developmental delay. "Invalid or Other" refers to cases where the child was over-age (age 3 or older) or residing outside Arizona, the referral was a duplicate, the referral was for information-only, or the outcome was listed as "other."

Table 25. Number of children birth to age 2 receiving services from AzEIP as of October 1, 2018 to 2022

Geography	2018	2019	2020	2021	2022
San Carlos Apache Region	**1 to 9**	**10**	**1 to 9**	**1 to 9**	**1 to 9**
Gila County	41	41	33	32	42
Graham County	42	39	28	29	36
Arizona	5,974	5,828	5,403	5,275	5,473

Sources: Arizona Department of Economic Security (2023). [Arizona Early Intervention Program dataset]. Unpublished data.

Note: These data reflect the Oct 1 snapshot of AzEIP services, not a cumulative total throughout the year.

Table 26. Number of children (birth to age 5) receiving DDD services, state fiscal years 2019 to 2022

Geography	SFY 2019	SFY 2020	SFY 2021	SFY 2022	Percent change from 2019 to 2022
San Carlos Apache Region	**1 to 9**	**1 to 9**	**1 to 9**	**1 to 9**	**DS**
Gila County	11	1 to 9	1 to 9	1 to 9	DS
Graham County	10	15	10	21	+110%
Arizona	4,005	4,078	2,438	3,691	-8%

Source: Arizona Department of Economic Security (2023). [Division of Developmental Disabilities dataset]. Unpublished data.

Table 27. Number of children (ages 0-2) receiving AzEIP and/or DDD services, state fiscal years 2019 to 2022

Geography	Number of children ages 0-2 receiving services from AzEIP and/or DDD				Population ages 0-2 (Census 2020)	Estimated percent of children (ages 0-2) receiving AzEIP and/or DDD services, SFY 2022
	SFY 2019	SFY 2020	SFY 2021	SFY 2022		
San Carlos Apache Region	**12**	**1 to 9**	**1 to 9**	**1 to 9**	**515**	**0.2 to 1.7%**
Graham County	41	39	29	32	1,546	2.1%
Greenlee County	10	1 to 9	1 to 9	1 to 9	437	0.2 to 2.1%
Arizona	6,376	5,721	5,916	5,876	225,737	2.6%

Source: Arizona Department of Economic Security (2023). [Arizona Early Intervention Program dataset]. Unpublished data.

Table 28. Preschool to 3rd grade students enrolled in special education, state fiscal years 2018-2022 combined

	Students enrolled in special education, SFY 2018-2022				
	Preschool	Kindergarten	1st Grade	2nd Grade	3rd Grade
San Carlos Apache Region schools	**78**	**91**	**108**	**119**	**126**
Off-reservation schools serving San Carlos Apache Region students	66	88	114	111	125
Gila County schools	428	376	415	398	430
Graham County schools	478	330	344	368	403
Arizona schools	47,581	35,592	47,046	50,498	54,448

Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

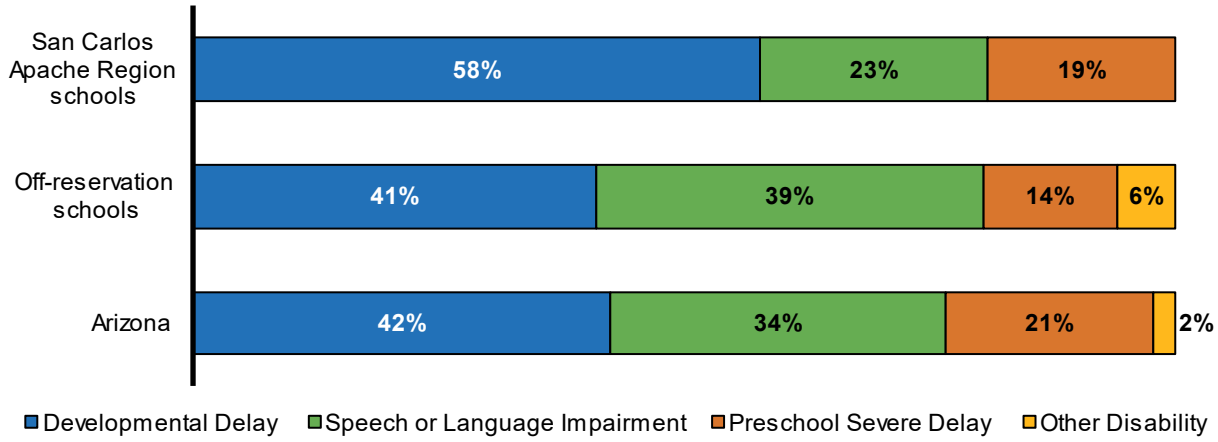
Table 29. Preschoolers with disabilities receiving services through Local Education Agencies (LEAs), state fiscal years 2018 to 2022

	Preschoolers enrolled in special education				
Geography	SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022
San Carlos Apache Region schools	**36**	**22**	**16**	**<11**	**<11**
Off-reservation schools serving San Carlos Apache Region students	<11	<11	17	19	14
Gila County schools	104	106	97	59	62
Graham County schools	99	88	95	100	96
Arizona schools	10,123	10,314	10,521	8,537	8,086

Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

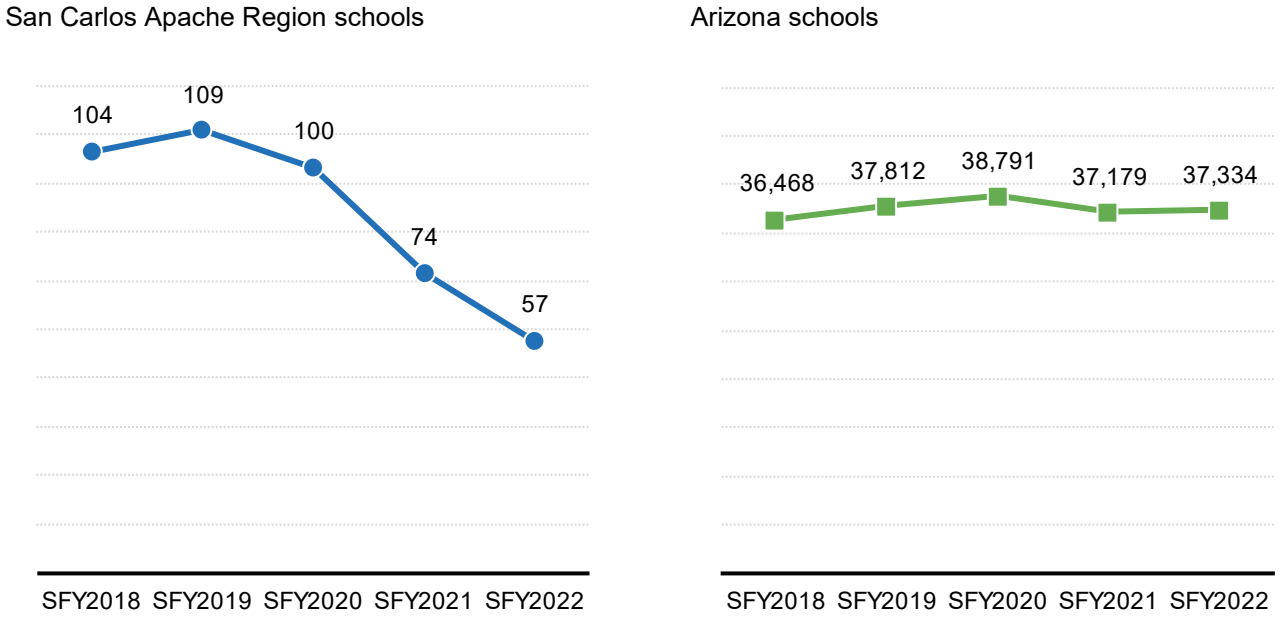
Figure 33. Preschoolers with disabilities receiving services through Local Education Agencies (LEAs) by type of disability, state fiscal years 2018-2022 combined



Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: The "Other Disability" category includes children with hearing impairment, visual impairment, or deaf-blindness. Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

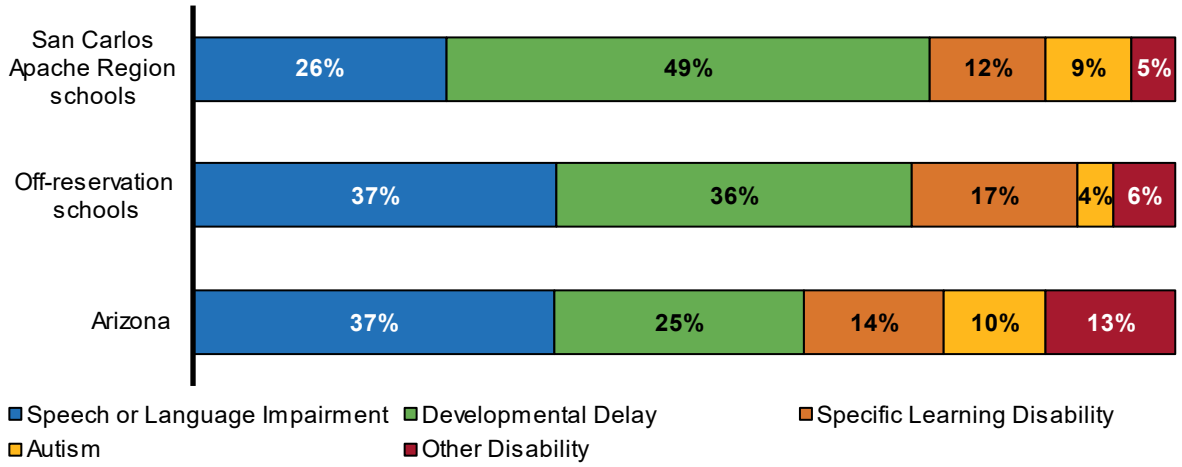
Figure 34. Kindergarten to 3rd grade students enrolled in special education in public and charter schools, state fiscal years 2018 to 2022



Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5), Mt Turnbull Elementary School (PS-6) and Mt Turnbull Academy (K-12). The off-reservation schools with enrolled PS-3rd graders represented in this table are Destiny School (K-8, charter), Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Figure 35. Kindergarten to 3rd grade students enrolled in special education in public and charter schools by primary disability, state fiscal year 2018-2022 combined



Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: The "Other Disabilities" category includes children with emotional disturbance, deafness, deaf-blindness, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairments such as chronic medical conditions that affect a child's ability to participate in the educational setting, traumatic brain injury, or visual impairment. Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5) and Mt Turnbull Elementary School (PS-6). The off-reservation schools with enrolled PS-3rd graders represented in this table are Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Additional data tables related to *Early Learning* can be found in Appendix 1 of this report.

CHILD HEALTH

CHILD HEALTH

Why it Matters

The physical and mental health of both children and their caregivers are important for optimal child development and well-being. Early childhood health, and even maternal health before pregnancy, has lasting impacts on an individual's quality of life.[247, 248] Experiences during the prenatal and early childhood periods can result in lifelong impacts on immune functioning, brain development and risk for chronic diseases.[249, 250] Poor health in childhood can also result in lower educational attainment and socioeconomic status in adolescence, adulthood and even inter-generationally.[251, 252] Therefore, adequate access to preventive care and treatment services is vital to support a child's long-term health, development and success.[253, 254, 255] Members of federally-recognized tribes have access to health care services provided through Indian Health Services (IHS) and/or tribally-administered health care facilities.[256, 257]

What the Data Tell Us

Access to health services

Health insurance coverage is an important indicator of whether families can access, afford and utilize medical care. In Arizona, children up to 19 years of age can enroll in health insurance through the Arizona Health Care Cost Containment System (AHCCCS), Arizona's Medicaid program. Children whose families earn too much to qualify for AHCCCS but do not earn enough to afford private health insurance may also be enrolled in KidsCare, Arizona's Children's Health Insurance Program.[xxiii] During the COVID-19 pandemic, uninsured rates declined due to federal policies prohibiting states from disenrolling people from Medicaid.[258] Despite these efforts, uninsured rates in the overall population are still high.[259] One primary reason for this is perceived cost, with more than two-thirds (69.6%) of uninsured U.S. adults citing their inability to pay for health insurance as the primary reason they were uninsured.[260] Families who qualify for low- or no-cost health insurance may not be aware that they qualify or they may face administrative barriers to enrolling.[261]

A variety of health outcomes for both mothers and infants depend on access to quality health care and support before, during and after pregnancy. Early initiation of prenatal care reduces the risk of prenatal smoking, pregnancy complications, [xxiv] premature births and maternal and infant mortality.[262, 263, 264, 265, 266] Poor access to maternal health care (e.g., hospitals with labor and delivery units, birth centers and obstetric providers) is one factor that can contribute to these outcomes.[267, 268, 269] Black, Hispanic,

---

[xxiii] *For more information on AHCCCS and KidsCare see: https://www.azahcccs.gov/Members/GetCovered/Categories/KidsCare.html*

[xxiv] *One such complication is congenital syphilis, where untreated maternal syphilis is passed to the fetus and can lead to stillbirth or infant death. The number of babies born in Arizona with congenital syphilis increased more than 10-fold in the last 6 years, even though congenital syphilis can be prevented with adequate prenatal care. For more information, see: https://www.azdhs.gov/preparedness/epidemiology-disease-control/disease-integration-services/std-control/congenital-syphilis/index.php*

American Indian and Alaska Native mothers experience a disproportionate lack of access to quality health care and support for their pregnancies.[270, 271] Lack of access to this care has contributed to considerably higher rates of low birth weight births, preterm births and maternal and infant mortality compared to non-Hispanic White Americans.[272, 273, 274] Efforts to increase the number of women in Arizona with access to early prenatal care, such as expanding access to telehealth care and midwifery care, could improve the health outcomes of the state's mothers and babies, especially in counties with lower access to maternal health care services.[275]

Like many rural communities, Native communities often have lower access to high-quality health care. Hospitals and specialty services are fewer and further-between on reservations and in rural areas than in urban areas, and factors such as poor road conditions and lower transportation and internet access can further worsen access issues. Additionally, a report from 2022 estimated that the IHS, through which many tribal members access services, is chronically underfunded by as much as 50% compared to health care needs.[276, 277] Significant and sustained investment is needed to reduce this gap in adequate health care services for Native communities.

How the San Carlos Apache Region is faring

- According to the 2022 FTF San Carlos Apache Regional Needs and Assets Report, families in the San Carlos Apache Region primarily access health care through Izee Baa' Gowąh San Carlos Apache Healthcare Corporation, a tribally operated 638 contract facility. Under the Indian Self-Determination and Education Assistance Act (PL-93-638), federally recognized tribes have the option to receive the funds that IHS would have used to provide health care services in order to directly provide services for tribal members through 638 contracts. The Izee Baa' Gowąh health care campus in Peridot co-locates emergency services, public health nursing and behavioral health services with the hospital. Health care services offered through Izee Baa' Gowąh include internal medicine, obstetrics and gynecology, pediatrics, surgery, emergency medicine, radiology, podiatry, specialty health services, nutrition and dietetics, physical therapy and dental care. Izee Baa' Gowah, a level IV trauma center, is one of only two tribally-operated trauma centers in the entire state of Arizona. Izee Baa' Gowąh also operates the Clarence Wesley Health Center (CWHC) in Bylas, which houses outpatient clinics for women's health, pediatrics, podiatry, diabetes, nutrition and dietetics, dental care, optometry, physical therapy and wound care.[278]
- For young children birth to age 5, pediatric care is available both at the Izee Baa' Gowąh hospital and through the Maternal and Child Health Clinic, part of the San Carlos Apache Department of Health and Human Services (DHHS). The Maternal and Child Health Clinic offers routine care, well child visits and immunization appointments. The Public Health Nurses program, also under DHHS, provides health screenings for children enrolled in San Carlos Apache Head Start and Early Head Start and children enrolled in school in the region. [279]
- Between January 2018 and April 2021, there were 17,053 active users who received services through Izee Baa' Gowąh, according to data provided by the Healthcare Corporation for the

2022 Regional Needs and Assets Report (Table 31). This included 1,595 children birth to age 5. When compared to population estimates from the 2020 Census (see Table 1) and tribal enrollment data (see Table 3), this suggests that nearly all community members receive care at Izee Baa' Gowąh.

- Health insurance plays a key role in facilitating access to health care. According to data from the American Community Survey (ACS), the proportion of young children without health insurance has decreased in recent years, falling from 20% in 2012-2016 ACS estimates to only 7% in 2017-2021 estimates, the same as seen in Arizona statewide. However, it is important to note that the U.S. Census Bureau does not consider coverage by IHS, including care at 638 or other Urban Indian health care facilities, to be insurance coverage. This means that, unlike uninsured children statewide, children considered "uninsured" in the San Carlos Apache Region still have access to health care services at Izee Baa' Gowąh and through programs like the Maternal and Child Health Clinic. The decrease in children without health insurance in the region also runs counter to the trend seen across all Arizona reservations, where the percentage of young children without health insurance increased from 17% to 20% between 2012-2016 and 2017-2021 estimates (Figure 36).
- Health insurance coverage data from the ACS are generally consistent with data on insurance coverage provided by Izee Baa' Gowąh for the 2022 Regional Needs and Assets Report. Between January 2018 and April 2021, 78% of young children birth to age 5 seen at Izee Baa' Gowąh were covered by Medicaid (AHCCCS in Arizona), 11% had private or 3rd party insurance, and 11% were only covered through IHS funding (these children would count as "uninsured" in the ACS estimates) (Figure 37). Facilitating enrollment in AHCCCS can have positive outcomes for both individuals and communities by increasing access to health care services and increasing funds available for health care provision to all community members.[280]
- However, despite high rates of health insurance coverage among young children, most births in the San Carlos Apache Region were covered by IHS funding in 2020 (69%) and 2021 (75%), which is much higher than IHS coverage across all Arizona reservations in 2020 (16%). Only 17% of births in 2020 and 16% in 2021 were covered by AHCCCS, compared to 71% in all Arizona reservations and nearly half in Arizona (2020: 48%; 2021:46%) (Figure 38; Table 32).
- Between 2018 and 2022, the proportion of births in the San Carlos Apache Region paid for by AHCCCS were consistently between 16-17% until 2022, when the percent covered by AHCCCS jumped to 21%. The proportion of births paid for by IHS hit a five-year low in 2022 at 64% compared to a high of 76% in 2018 (Figure 38).
- In 2021, less than half (43.3%) of the 187 births in the San Carlos Apache Region were to mothers who began prenatal care in the first trimester, while more than one in four births (28%) were to mothers who had fewer than five prenatal visits, and another 8% were to mothers who had no prenatal care. In all Arizona reservations in 2020, 5% of births were to mothers with no prenatal care, 14% to mothers with fewer than five visits and 55.8% to mothers who began care

in the first trimester, meaning that births in San Carlos Apache Region much more likely to have inadequate or late prenatal care than those in all reservations in the state. The region also substantially lagged behind the state in terms of timely and adequate prenatal care (Table 33).

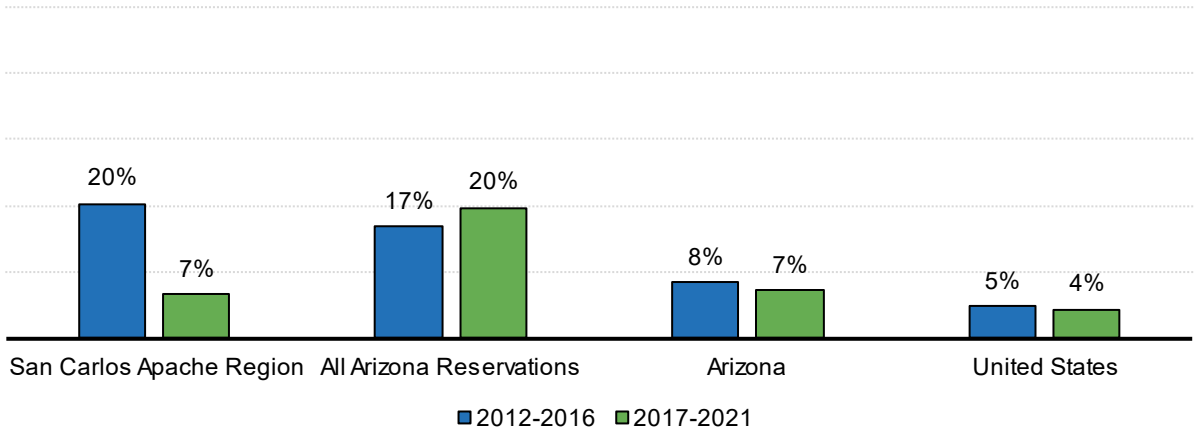
- The proportion of births to mothers with fewer than five prenatal care visits has remained consistently about 28-29% from 2018 to 2022, more than five times the statewide rate of 4.7-5.6% in the same period. The share of births with no prenatal care rose to a five year high of 10.7% in 2022, again, more than five times statewide rate of 2.3% (Figure 39). Both of these trends indicate that access to adequate prenatal care is a concern in the region.
- Between 2018 and 2022, the proportion of births in the San Carlos Apache Region to mothers who began prenatal care in the first trimester decreased from a high of 51% in 2019 to 42% in 2022, lower than the statewide rate of 71% (Figure 40). This indicates an ongoing need for timely prenatal care in the region.
- According to the 2022 Regional Needs and Assets Report, the Community Health Representatives, part of DHHS, work with young mothers in the region to provide education on prenatal health through both phone and home visits.[281]

Table 30. Number of Active Users at Izee Baa' Gowąh (San Carlos Apache Healthcare Corporation), Jan 2018- Apr 2021

	Young Children (ages 0-5)	All ages
San Carlos Apache Healthcare	1,595	17,053

Source: San Carlos Apache Healthcare Corporation (2021). [Health services data]. Unpublished tribal data.

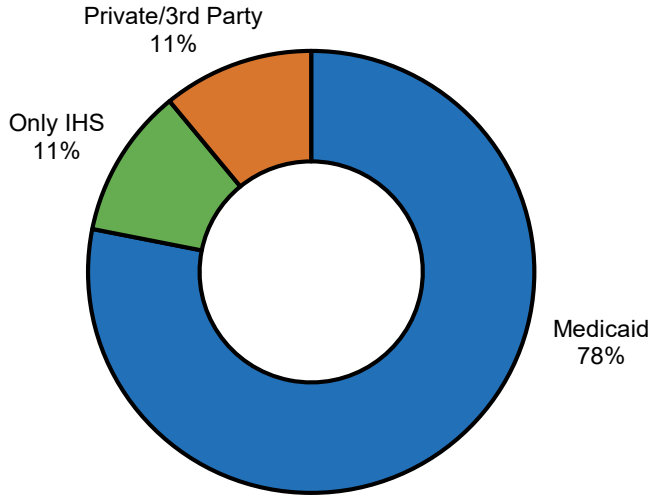
Figure 36. Children birth to age 5 without health insurance, 2012-2016 and 2017-2021 ACS



Source: U.S. Census Bureau. (2021). American Community Survey 5-year estimates 2012-2016 & 2017-2022, 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" by the U.S. Census Bureau.

Figure 37. Percentage of children birth to 5 with insurance seen at Izee Baa' Gowąh (San Carlos Apache Healthcare Corporation), Jan 2018- Apr 2021



Source: San Carlos Apache Healthcare Corporation (2021). [Health services data]. Unpublished tribal data.

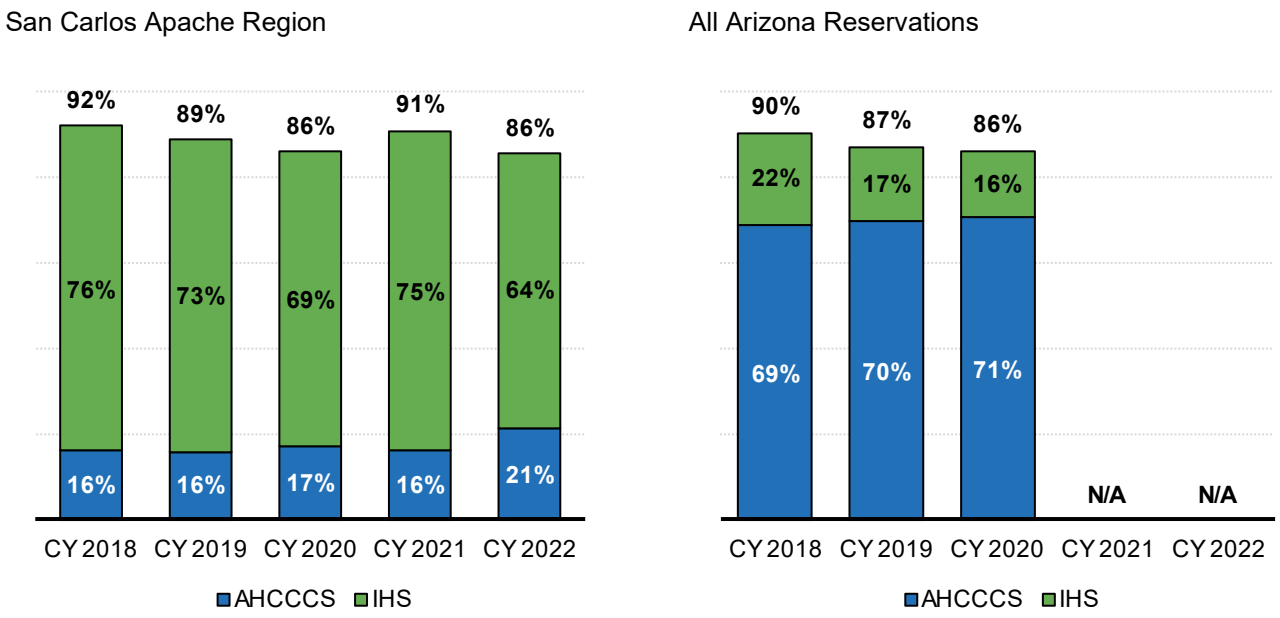
Table 31. Insurance coverage for babies born in 2020 and 2021

Geography	Calendar year	Number of births	Birth was covered by AHCCCS	Birth was covered by IHS	Birth was covered by AHCCCS or IHS
San Carlos Apache Region	**2020**	**165**	**17%**	**69%**	**86%**
	2021	**187**	**16%**	**75%**	**91%**
All Arizona Reservations	2020	1,900	71%	16%	86%
	2021	*Data for All Arizona Reservations not available*			
Arizona	2020	76,781	48%	1%	49%
	2021	77,857	46%	1%	47%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this table. Percentages may not sum to 100% due to rounding. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health status profile of American Indian in Arizona for 2021 has not yet been released.

Figure 38. Births paid for by AHCCCS or IHS, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this figure. 'All Arizona Reservations' figure reflects only births to American Indian mothers residing on Arizona reservations. The Health status profiles of American Indian in Arizona for 2021 and 2022 have not yet been released.

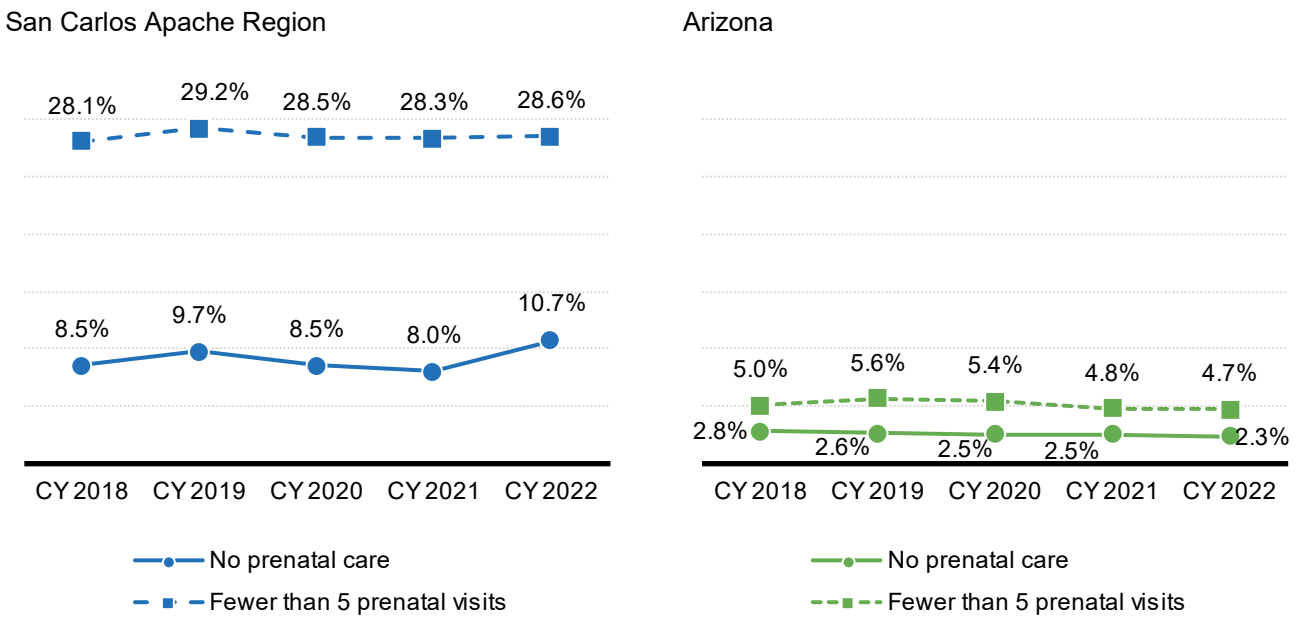
Table 32. Prenatal care for the mothers of babies born in 2020 and 2021

Geography	Calendar year	Number of births	Mother had no prenatal care	Mother had fewer than five prenatal visits	Mother began prenatal care in the first trimester
San Carlos Apache Region	**2020**	**165**	**8%**	**28%**	**47.9%**
	2021	**187**	**8%**	**28%**	**43.3%**
All Arizona Reservations	2020	1,900	5%	14%	55.8%
	2021	Data for All Arizona Reservations not available			
Arizona	2020	76,781	2%	5%	68.8%
	2021	77,857	2%	5%	71.7%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this table. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health status profile of American Indian in Arizona for 2021 has not yet been released.

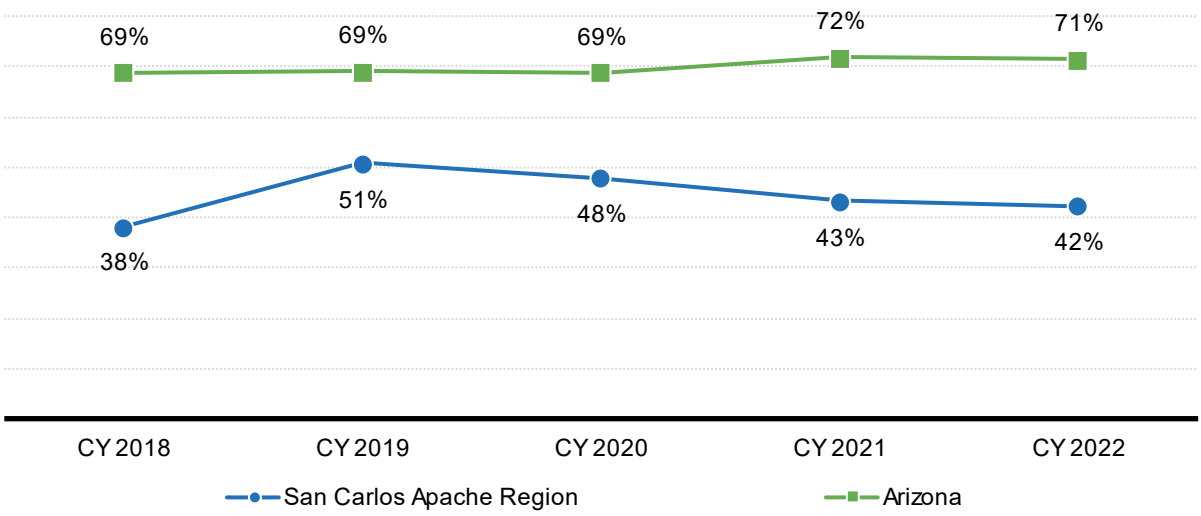
Figure 39. Births to mothers with inadequate prenatal care, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in these figures

Figure 40. Births to mothers who began prenatal care in the first trimester, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this figure. Due to data suppression of counts of births between 1 and 5, some values are shown as a range, with the true value falling somewhere within the range.

Maternal age and substance abuse

Infants' immediate and long-term health can be influenced by maternal characteristics including age and substance use during or after pregnancy. For example, teenage parents often experience increased stress and hardship in comparison to older parents and other non-parent teenagers as they are less likely to complete high school or college and more likely to maintain a lower socioeconomic status and require public assistance to make ends meet.[282, 283, 284, 285, 286]

The use of substances during pregnancy can cause negative health complications for fetuses and babies. For example, babies born to mothers who smoked cigarettes during pregnancy are more likely to be born preterm, have low birth weight, die from sudden infant death syndrome (SIDS) and have weak lungs.[287, 288] The use of opioids, whether prescribed or illicit, during pregnancy also poses health risks to developing fetuses including preterm birth, stillbirth and birth defects.[289] It may also cause infants to experience withdrawal symptoms after birth, which is referred to as neonatal abstinence syndrome (NAS). Symptoms of NAS include sleep problems, seizures, poor feeding, dehydration, loose stool, sweating, tremors and vomiting. In Native communities, substance abuse issues can be linked to historical trauma and adverse childhood experiences (ACEs). Protective factors, which are also important elements of effective substance use interventions, include cultural and family connection and traditional healing.[290, 291]

How the San Carlos Apache Region is faring

- In 2020 and 2021, 13-14% of births in the San Carlos Apache Region were to mothers younger than age 20 and 5-7% were to mothers younger than 18. Both of these percentages were higher than the 9% of births to mothers younger than 20 in all Arizona reservations and 4% to mothers younger than 18, suggesting that births to teenaged mothers are more prevalent in the region compared to reservations statewide (Table 34).
- Looking at trends in births to teenaged mothers between 2018 and 2022, the proportion of births to mothers younger than 20 has been consistently higher in the region (16.1-7.7%) than in the state (4.6%-5.8%). However, in an encouraging trend, the percentage of births to mothers younger than 20 and younger than 18 fell to five-year lows of only 7.7% and 3.6%, respectively, in 2022. The share of births to teenaged mothers in 2022 was approximately half that seen in 2018 (Figure 41).
- The share of mothers giving birth who smoked cigarettes during pregnancy was much smaller in the region in 2020 (4.8%) than in all Arizona reservations (11.1%) but higher than Arizona overall (3.6%) (Table 34). The San Carlos Apache Region met the Healthy People 2030 target of no more than 4.3% of women using tobacco during pregnancy for the first time in five years in 2022, with rates declining from 6.5% in 2018 to 3.6% in 2022 (Figure 42).
- Between 2018 and 2022, 111 newborns were hospitalized because of maternal drug use during pregnancy in the San Carlos Apache Region. Based on the total number of births, this equates to 12.1 newborns hospitalized per 100 births, much higher than the 3.3 newborns hospitalized per 100 live births in the state, indicating that substance use during pregnancy may be more prevalent in the region than statewide. The average length of hospital stay for these newborns was shorter in the region (3.9 days) than in Arizona as a whole (9.5 days) (Table 35).

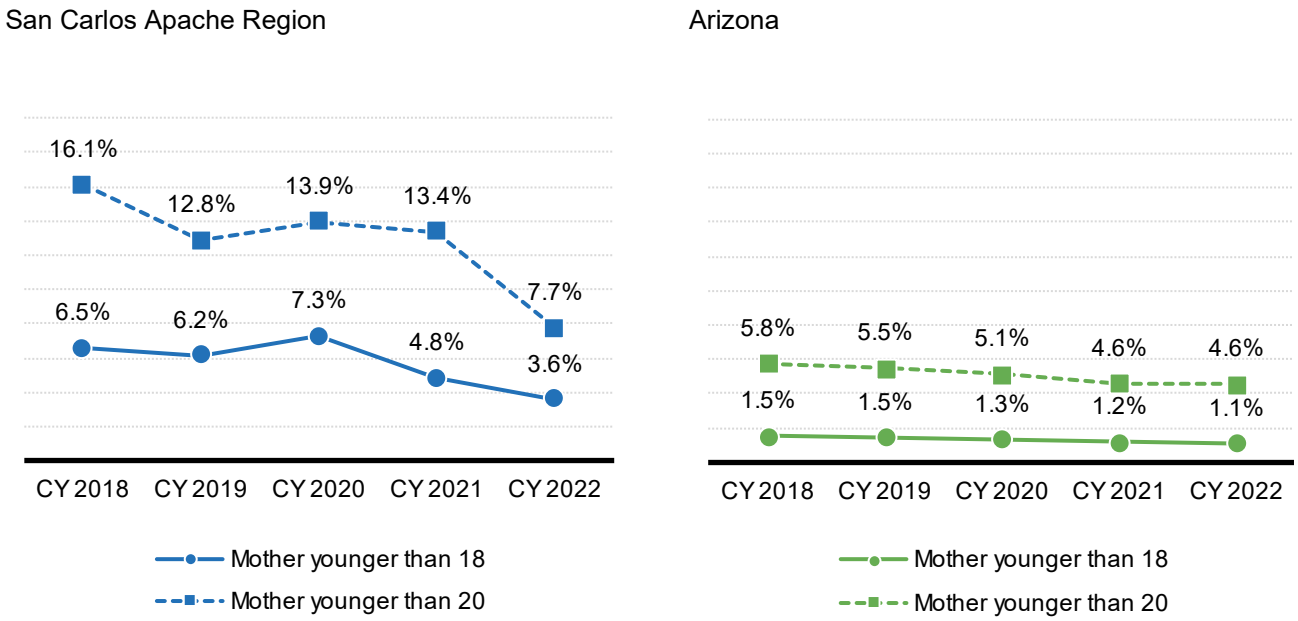
Table 33. Selected characteristics of mothers giving birth, 2020 to 2021

Geography	Calendar year	Number of births	Mother was younger than 18	Mother was younger than 20	Mother smoked cigarettes during pregnancy
San Carlos Apache Region	**2020**	**165**	**7%**	**14%**	**4.2%**
	2021	**187**	**5%**	**13%**	**4.8%**
All Arizona Reservations	2020	1,900	4%	9%	11.1%
	2021	*Data for All Arizona Reservations not available*			
Gila County	2020	471	3%	10%	13.2%
	2021	452	4%	10%	10.0%
Graham County	2020	464	4%	9%	11.0%
	2021	522	2%	8%	6.3%
Arizona	2020	76,781	1%	5%	3.6%
	2021	77,857	1%	5%	3.2%
Healthy People 2030 target					4.3%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this table. The Healthy People 2030 target for maternal use of tobacco during pregnancy is 95.7% of females reporting abstaining from smoking during pregnancy. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health Status Profile of American Indian in Arizona for 2021 has not yet been released.

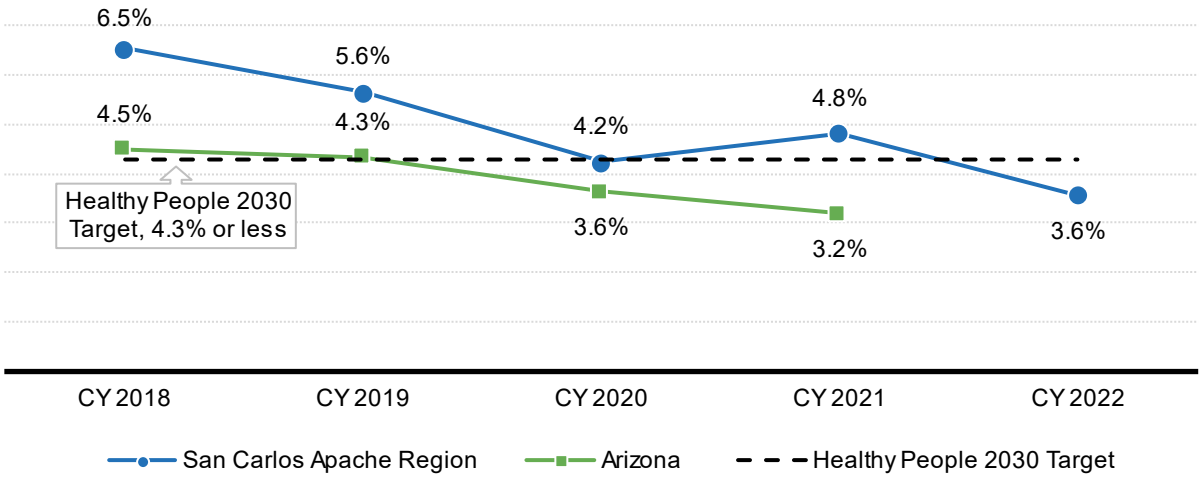
Figure 41. Births to mothers who were younger than 20, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this figure. Data for births to mothers younger than 18 for the region is not presented because the percentages are suppressed in most years.

Figure 42. Births to mothers who smoked cigarettes during pregnancy, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Data for 2018 and 2019 are presented as a range because the number of births with maternal smoking was less than 6 in these years.

Table 34. Newborns hospitalized because of maternal drug use during pregnancy, 2018-2022 combined

Geography	Newborns hospitalized	Average length of stay (days)
San Carlos Apache Region	**111**	**3.9**
Arizona	12,939	9.5

Source: Arizona Department of Health Services (2023). [Hospital Discharge dataset]. Unpublished data.

Note: Data on newborns hospitalizations were geocoded to FTF regions using the address provided by parents at the time of hospitalization; however, in cases where the address provided was not valid, hospitalizations could not be assigned to a region. County of residence is captured separately from addresses, meaning that counts in the county often exceed those seen in a particular region because they include all newborns regardless of address validity.

Maternal health and well-being

A pregnant woman's health and well-being are closely linked to infant and child health and development. Gestational diabetes (i.e., diabetes that only presents during the pregnancy) increases the likelihood of an infant having low blood sugar, being born preterm, being larger than average at birth, needing to be delivered through cesarean section and even developing type 2 diabetes and cardiovascular diseases later in life.[292, 293] Children of mothers categorized as having maternal obesity have increased risk of birth complications, asthma, diabetes, heart disease and neonatal and infant mortality.[294, 295, 296] A variety of social determinants of health have been linked to the development of diabetes and obesity, including low socioeconomic status, employment struggles, lack of health insurance and living in rural areas with fewer resources.[297, 298, 299, 300] Risks associated with these conditions can be reduced through increased access to maternal health care before, during and after childbirth as well as planning high-risk deliveries at hospital facilities with more resources and technical expertise.[301, 302]

Postpartum depression has a clear link to negative outcomes in infant health and development. Untreated postpartum depression can lead to infant sleeping, eating and behavioral problems, issues with maternal and infant bonding and infant developmental delays.[303,304] Groups that have higher rates of postpartum depression include American Indian and Alaska Native mothers, mothers who are under the age of 19 and mothers who smoked during or after pregnancy.[305] The United States Preventive Services Task Force and the American Congress of Obstetricians and Gynecologists recommend assessing mothers' mental health both during pregnancy and after giving birth to facilitate early identification and intervention.[306] In 2022, AHCCCS implemented a policy requiring depression screenings during prenatal and postpartum visits as well as well-child visits within the first 6 months of an infant's life for all enrolled mothers in Arizona.[307] Mothers who screen positively for depression must be referred to a case manager or treatment services. [308] These screenings, as well as the ability to bill AHCCCS for the

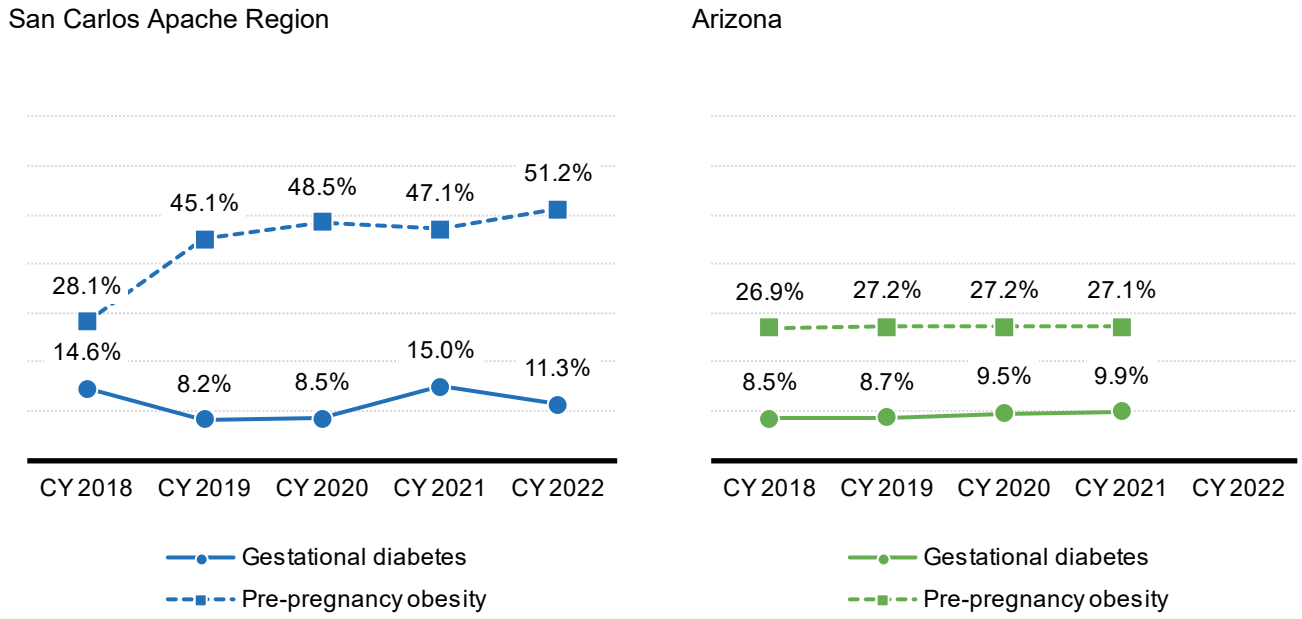
cost of screenings, will hopefully increase the likelihood that mothers experiencing postpartum depression are referred to appropriate mental health services.

In a recent study, American Indian mothers shared that their experiences of postpartum depression were shaped by their medical experiences just before and after giving birth and a feeling that historical factors and colonized perspectives have limited their ability to birth and mother fully in their culture.[309] Additionally, mothers expressed needing to remain resilient for their families and communities, which may increase the feeling of isolation common in postpartum disorders. Integrating cultural birthing practices into healthcare services and considering cultural-specific factors in follow-up treatment services is a key need to support Native mothers and their families.[310]

How the San Carlos Apache Region is faring

- Between 2018 and 2022, rates of pre-pregnancy obesity in the San Carlos Apache Region steadily increased while rates of gestational diabetes varied. Births to mothers with pre-pregnancy obesity increased from about one in four births in 2018 (28.1%) to more than half of all births in 2022 (51.2%). Births with gestational diabetes varied between a high of 15.0% in 2021 and a low of 8.2% in 2019, with 11.3% of births to mothers diagnosed with gestational diabetes in 2022. In 2021, the latest year that can be compared with the state, the San Carlos Apache Region had substantially higher rates of both pre-pregnancy obesity (47.1% compared with 27.1%) and gestational diabetes (15.0% compared with 9.9%) (Figure 43).
- Statewide, about 1 in 7 mothers (13.7%) of all race and ethnicities reported experiencing postpartum depressive symptoms in 2020, nearly the same rate as that seen nationwide (13.4%).[311] National data show that more than one in five (22%) American Indian and Alaska Native mothers in the U.S. experienced postpartum depressive symptoms in 2018, suggesting that Native mothers may be at higher risk of postpartum depression.[312, 313]

Figure 43. Births to mothers diagnosed with pre-pregnancy obesity or gestational diabetes, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this figure. Data on pre-pregnancy obesity and gestational diabetes were not available for Arizona in 2022.

Infant health

Health in early infancy shapes childhood health for many years to come. Infants who are born preterm or at a low birthweight have a higher possibility of short- and long-term health complications. Preterm birth is defined as birth at less than 37 weeks of gestation. Risks related to preterm births include respiratory, immune, neurological, vision, hearing and intestinal developmental issues.[314] Infants born preterm also have increased rates of mortality during their first 28 days to 1 year of life, longer hospitalization after birth, more health care costs and physical impairments.[315, 316] Preterm births are more likely among mothers who are under age 20, over the age of 35, low income, experience infections during pregnancy or engage in substance use.[317]

Low birthweight is defined as weighing less than 5 pounds and 8 ounces (2,500 grams) at birth. Babies born with this condition have a higher risk of infant mortality and long-term health problems such as diabetes, hypertension and cardiac disease.[318, 319] Low birthweight risk factors include low maternal weight during pregnancy, preterm birth, teen pregnancy, pregnancy over the age of 35, high blood pressure, diabetes, substance use and air pollution.[320]

Newborns are admitted into neonatal intensive care units (NICUs) in hospitals for numerous reasons that can vary across medical providers and have implications for the short- and long-term health of babies

and families.[321] NICU stays can take a large emotional and financial toll on families, especially families living far from the hospital. However, although NICU admissions may be an indicator of important health concerns in newborns, including low birthweight, they can also be a site of family-based interventions that can positively impact infant development and parent-child relationships.[322]

For parents who are able to breastfeed, the American Academy of Pediatrics recommends breastfeeding infants exclusively for the first 6 months after birth, followed by a combination of breastfeeding and other foods for up to 2 years or longer.[323] Breastfeeding offers a variety of benefits to infants due to the nutrition and antibodies that human breast milk provides. These benefits include lowering an infant's risk of type 1 diabetes, obesity, ear infections, SIDS, asthma and gastrointestinal infections.[324] Robust data on breastfeeding rates are only available for children served through the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) program.

How the San Carlos Apache Region is faring

- In 2021, higher proportions of babies born were preterm (12.8%) in the San Carlos Apache Region than in Arizona overall (10.0%), but the proportion of low birth weight births (5.3%) and babies admitted to the NICU (7%) were lower in the region than in the state (9.6% and 8%, respectively). The proportion of births that were at a low birth weight (7.3%) in 2020 was also lower in the region than across all Arizona reservations (8.9%), but the rates of preterm births was notably higher in the region (15.2%) than in reservations statewide (12.6%) (Table 36).
- Between 2018 and 2022, the proportion of births at low birth weight in the San Carlos Apache Region was higher than that seen in the state for all but one year, when the region had a five-year low of only 5.8% of births at low birthweight. The proportion of low birthweight births in the region was most frequently between 9.0-12.1%, higher than the statewide range of 7.4-7.9% (Figure 44).
- The Healthy People 2030 target for the percentage of preterm births is 9.4% or lower. In 2021, the San Carlos Apache Region met this target, but in all other years, preterm birth rates were above 9.4%. In 2022, 9.5% of births were preterm, meaning the region did meet this target. Since 2019, the share of preterm births ranged from 8.7% to 10.5%, only slightly above the statewide range of 9.3-10.0% of births in this period (Figure 45).
- From 2017 to 2020, about half of WIC-enrolled infants in the San Carlos Apache Region were breastfed at least once, with rates declining from 56% in 2017 and 2018 to 47% in 2020. The region had lower rates of breastfeeding than those seen across all ITCA WIC Programs, with around two-thirds of WIC-enrolled infants ever breastfed in three of four years. Trends in breastfeeding at 6 months also declined in the region during this time, from a high of 13% in 2018 to a low of 10% in 2020 (Table 37).

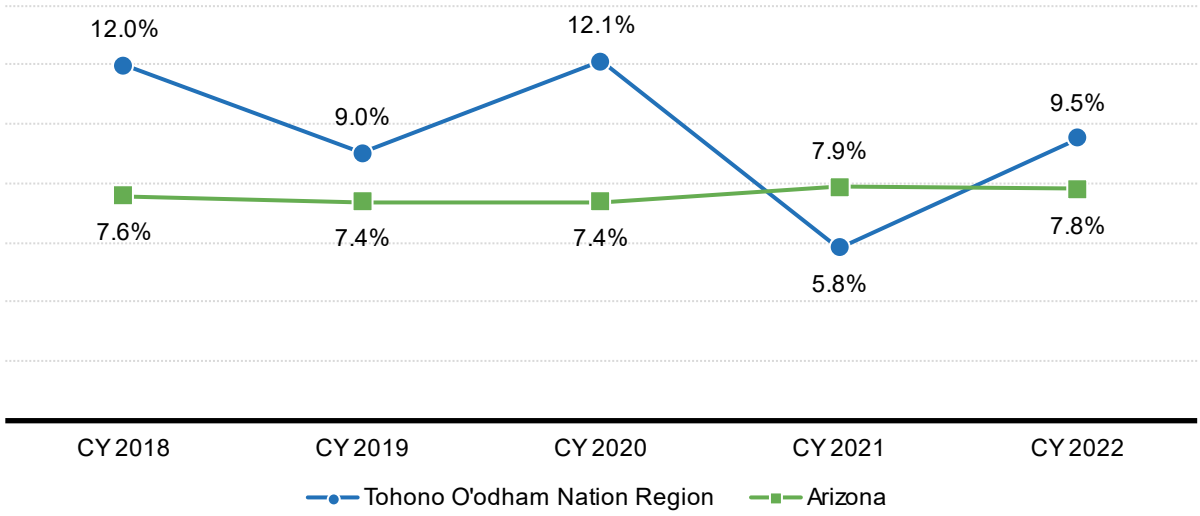
Table 35. Selected birth outcomes, 2020 to 2021

Geography	Calendar year	Number of births	Baby weighed less than 2500 grams	Baby was preterm (less than 37 weeks)	Baby was admitted to a NICU
San Carlos Apache Region	**2020**	**165**	**7.3%**	**15.2%**	**9%**
	2021	**187**	**5.3%**	**12.8%**	**7%**
All Arizona Reservations	2020	1,900	8.9%	12.6%	N/A
	2021	Data for All Arizona Reservations not available			
Gila County	2020	471	8.9%	13.0%	7%
	2021	452	9.1%	14.6%	6%
Graham County	2020	464	41%	9%	50%
	2021	522	42%	8%	50%
Arizona	2020	76,781	7.4%	9.5%	8%
	2021	77,857	9.6%	10.0%	8%
Healthy People 2030 targets				9.4%	

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

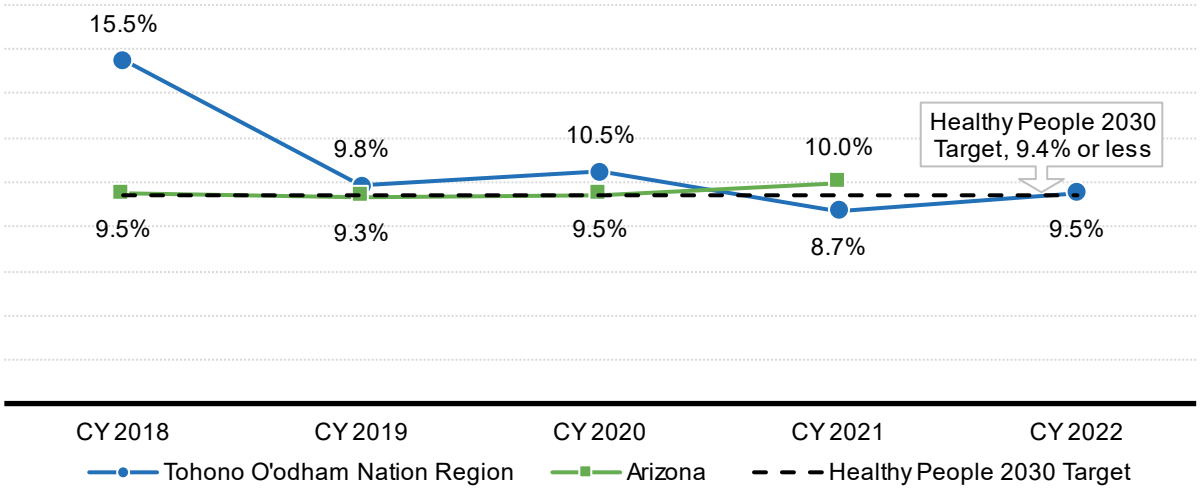
Note: 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health Status Profile of American Indian in Arizona for 2021 has not yet been released.

Figure 44. Low birth weight births, 2018 to 2022



Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Figure 45. Preterm births, 2018 to 2022



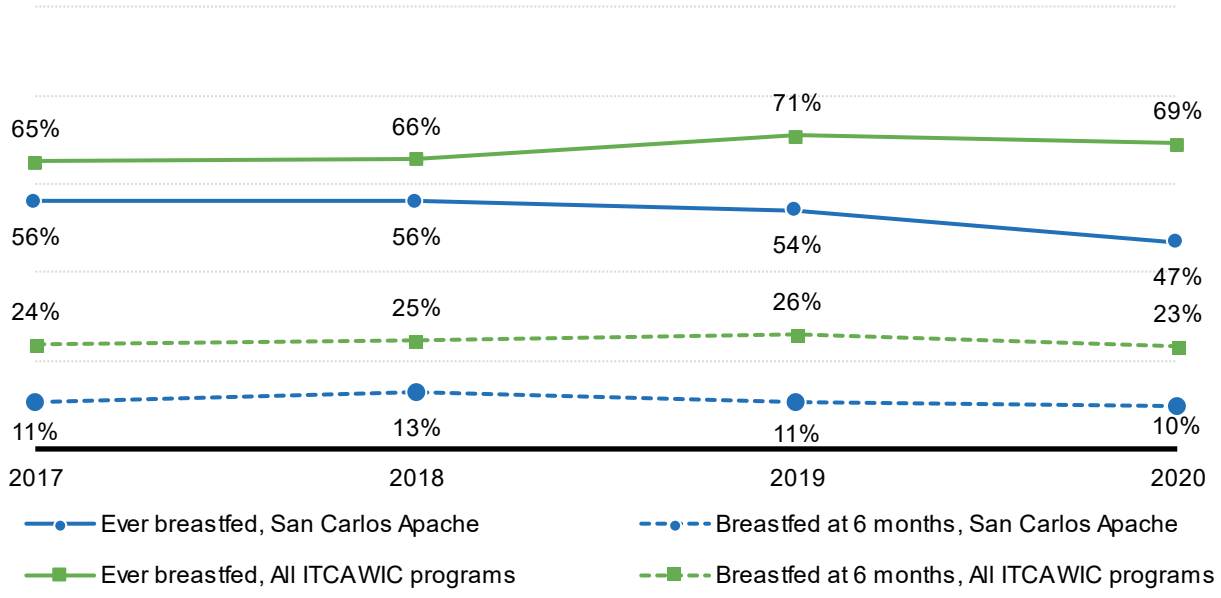
Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Table 36. Breastfeeding status for WIC enrolled infants, 2020

Geography	Infants For Whom Breastfeeding Status Is Determined (2020)	Infants Ever Breastfed (2020)	Infants Ever Breastfed (2020)	Infants Breastfed For 6+ Months (2020)
San Carlos Apache	**198**	**47%**	**75**	**10%**
All ITCA WIC programs	1,754	69%	729	23%

Source: Inter-Tribal Council of Arizona (2021) [WIC Dataset]. Unpublished data received by request.

Figure 46. Breastfeeding rates for WIC-enrolled infants



Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Childhood infectious disease and immunization

Immunization against preventable diseases protects both children and the surrounding community from potential illness and death. Immunization protects not only the vaccinated person but also individuals who are unable to be vaccinated through "community immunity."[325] In order to attend state-licensed child care programs and public or charter schools, children are required to receive specific vaccinations or obtain an official exemption, which can be requested for medical, personal or religious reasons.[326] Statewide and nationally, childhood immunization rates have been declining in recent years. The COVID-19 pandemic exacerbated disparities in health care access, including routine immunizations, that specifically impacted children who are Black, Hispanic, low-income, live in rural areas or lack health insurance.[327] National survey data from the Pew Research Center also show that declining

childhood immunization rates, particularly for the Measles, Mumps and Rubella (MMR) vaccine, can be linked to parents' shifting attitudes towards vaccines. While most U.S. parents continue to express confidence in the value of childhood vaccination for MMR, a sizable proportion expressed concerns about the necessity of vaccines and showed declining support for vaccine requirements for children to attend public schools.[328]

Respiratory syncytial virus (RSV) and influenza (flu) are leading causes of serious illness in young children, and following the COVID-19 pandemic in 2020, recent flu and RSV seasons have been more severe nationwide.[329, 330] RSV is the most frequent cause of hospitalization in children under 1 year of age.[331] In 2023, two new preventative therapies for RSV were approved—a single-dose antibody medication for infants, and an adult immunization for pregnant people administered in the 3rd trimester of pregnancy.[332, 333] These new treatments have the potential to prevent severe illness in infants and young children, but shortages of the antibody medication have led the Centers for Disease Control and Prevention (CDC) to recommend prioritizing access for the highest-risk infants. This includes infants under 6 months of age, those with underlying health conditions such as lung or heart disease and American Indian or Alaska Native infants under 8 months of age, as well as older American Indian or Alaska Native infants who live in remote areas with limited access to health care facilities.[334] The flu can also cause serious illness in young children under age 5, particularly for children birth to age 2, who are the most likely to be hospitalized with flu complications.[335] The American Academy of Pediatrics recommends that all children ages 6 months and older be vaccinated against influenza each year.[336]

How the San Carlos Apache Region is faring

- According to data from the Izee Baa' Gowąh that was included in the 2022 Regional Needs and Assets Report, 40% of children ages 19 to 35 months were up to date on all early childhood immunizations, which did not meet the national IHS target of 45.6% or more (Table 38).
- Immunization data for children enrolled in child care were not available through ADHS in the region, but immunization data in the fiscal year (FY) 2023 Head Start Program Information Report for the San Carlos Apache Head Start program show that 97% of children birth to age 2 enrolled in Early Head Start and 99% of children age 3 to 5 enrolled in Head Start were up-to-date on all immunizations appropriate for their age by the end of the year.[337] This indicates that immunization rates are high among children enrolled in Head Start, the largest early education program in the region.
- However, kindergarten immunization rates in select schools in the region (DTaP 64.0%; Polio 64.0%; MMR 64.0%) were substantially lower than statewide rates (DTaP 89.6%; Polio 90.3%; MMR 89.9%) in the 2022-23 school year. Immunization rates in regional schools did not meet the Healthy People 2030 kindergarten MMR immunization target of 95% or more. Personal belief exemption rates and rates of exemptions from all required vaccines (0.0% for both) were again lower than rates in Arizona overall (7.3% and 4.6%, respectively), indicating that there may be a number of kindergarteners with incomplete documentation or incomplete immunizations in the region who are still open to completing these immunizations (Table 39).

Rates of exemptions from immunizations among kindergarteners in the region have been consistently below 1%, with the exception of the 2020-21 school year when 2.9% of children had a medical exemption from at least one vaccine (Figure 47).

- The pattern of confirmed and probable cases of RSV and influenza in young children birth to age 5 changed substantially between 2019 and 2022. In 2021, influenza cases in young children fell to 0, and there were fewer than six RSV cases. However, in 2022, there were 17 cases of RSV in young children in the region, the highest number seen in four years, and influenza cases rebounded to 11. Similar increases were seen in cases statewide, though without the 2021 dip in RSV cases (Figure 48).

Table 37. Children (ages 19-35 months) with complete immunizations at Izee Baa' Gowąh (San Carlos Apache Healthcare Corporation), Jan 2018 - Apr 2021

	Total children (ages 19-35 months) assessed	Children (ages 19-35 months) with complete immunizations (4313*314 series)	Percent of children (ages 19-35 months) with complete immunization (4313*314 series)
San Carlos Apache Healthcare	326	132	40%

Source: San Carlos Apache Healthcare Corporation (2021). [Health services data]. Unpublished tribal data.

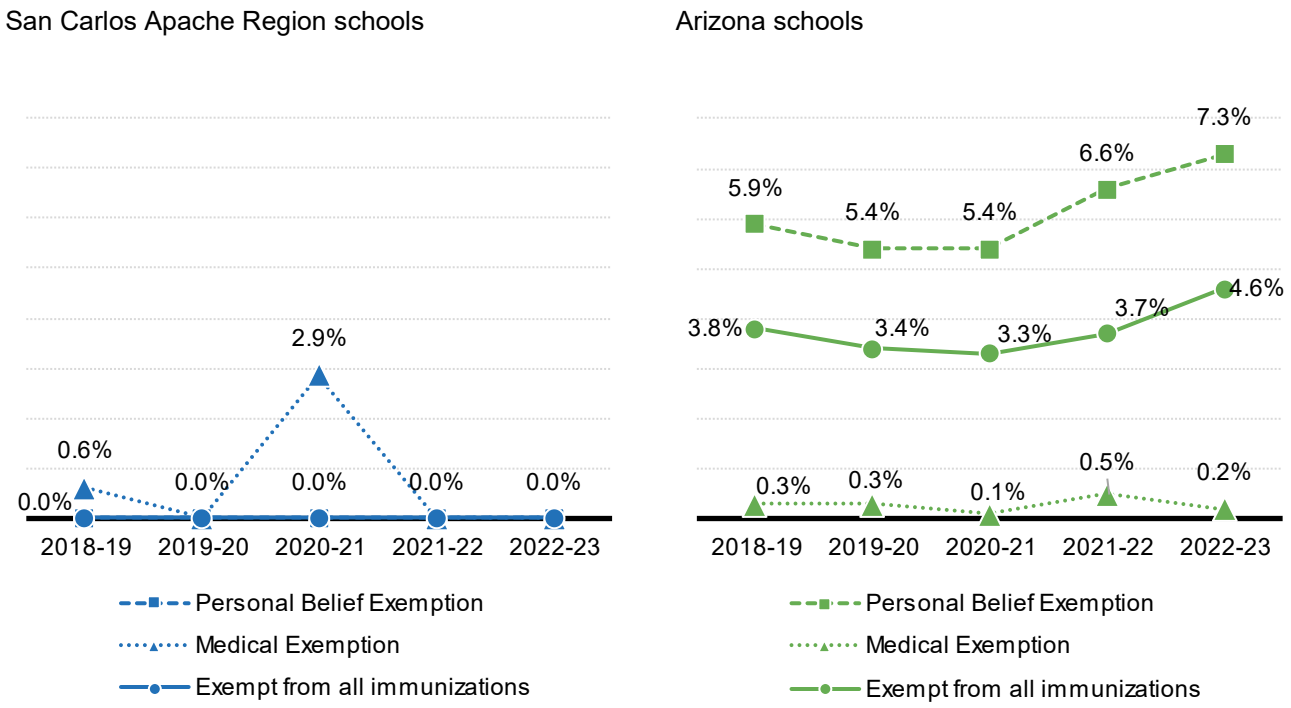
Table 38. Kindergarteners with selected required immunizations, 2022-23

Geography	Number Enrolled	DTaP	Polio	MMR	Personal belief exemption	Medical exemption	Exempt from every required vaccine
San Carlos Apache Region	**50**	**64.0%**	**64.0%**	**64.0%**	**0.0%**	**0.0%**	**0.0%**
Gila County	433	86.1%	86.6%	85.7%	12.7%	0.2%	8.8%
Graham County	601	91.3%	92.3%	91.3%	6.5%	0.0%	5.5%
Arizona	78,937	89.6%	90.3%	89.9%	7.3%	0.2%	4.6%
Healthy People 2030 targets				95.0%			

Source: Arizona Department of Health Services (2023). Kindergarten Immunization Coverage, 2022-23 School Year. Unpublished data received by request & aggregated by the Community, Research, & Development Team. Arizona Department of Health Services (2023). Kindergarten Immunization Coverage by County, 2022-23 School Year. Retrieved from https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage

Note: Data reflects immunization rates in Peridot-Our Savior's Lutheran Elementary School, Mt. Turnbull Elementary School, St. Charles School. Immunization data from Rice Elementary School was not available for 2022-23.

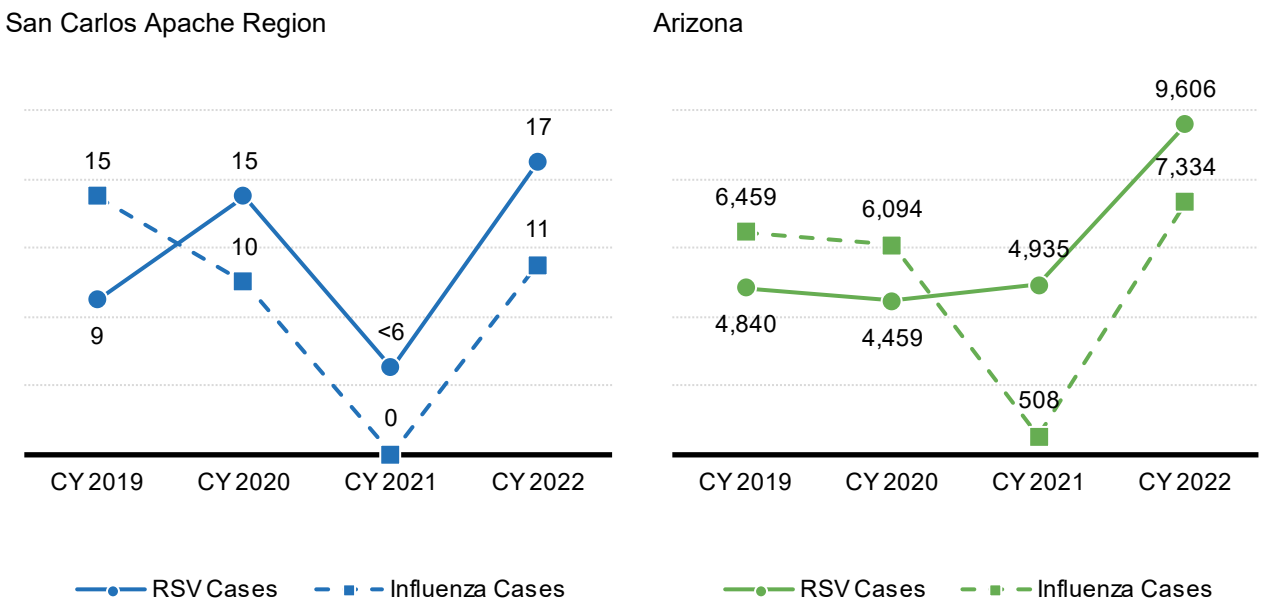
Figure 47. Kindergarten immunization exemption rates, 2018-19 to 2022-23



Source: Arizona Department of Health Services (2023). Kindergarten Immunization Coverage, 2018-19 to 2022-23 School Years. Unpublished data received by request & aggregated by the Community, Research, & Development Team. Arizona Department of Health Services (2023). Kindergarten Immunization Coverage by County, 2018-19 through 2022-23 School Years. Retrieved from: https://www.azdhs.gov/preparedness/epidemiology-disease-control/immunization/index.php#reports-immunization-coverage

Note: Data reflects immunization rates in Peridot-Our Savior's Lutheran Elementary School, Mt. Turnbull Elementary School, St. Charles School and Rice Elementary School (2018-19 and 2019-20 only).

Figure 48. Confirmed and probable cases of infectious diseases in children birth to age 5, 2019 to 2022



Source: Arizona Department of Health Services (2023). [FTF VPD Flu RSV dataset]. Unpublished data.

Infant and child hospitalization and mortality

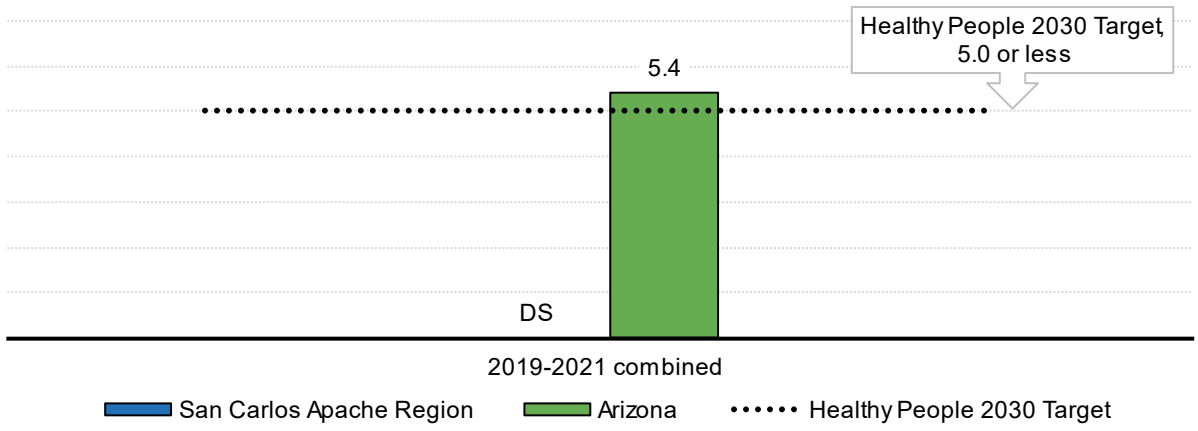
Infant mortality refers to the death of infants under 1 year of age. Some of the most common causes of infant mortality in Arizona and the U.S. include congenital abnormalities, low birth weight, preterm birth, pregnancy complications, sudden infant death syndrome (SIDS) and unintentional injuries.[338, 339, 340] According to provisional CDC data, infant mortality increased between 2021 and 2022 by 3% nationally, 13% in Arizona for all infants and 21% for American Indian or Alaska Native infants nationwide, the highest increase seen for any group.[341] In addition to increasing, the infant mortality rates for American Indian or Alaska Native (9.1 deaths per 1,000 live births) and Black infants (10.9) were also notably higher than White (4.52) or Hispanic (4.9) infants in 2022, racial disparities that have been linked to maternal care deserts, which are particularly prevalent on tribal lands.[342, 343] This indicates a serious need to increase access to timely prenatal care, newborn screening and home visiting programs in rural and tribal areas to begin to reduce infant mortality rates.[344]

The leading cause of death for children birth to age 17 in the United States is unintentional injuries.[345] The most prevalent accidental injuries are car crashes, drowning, falls, suffocation, fires and poisoning.[346] Deaths from unintentional injuries are more common for children living in rural areas, as well as among American Indian and Alaska Native children.[347, 348] Increased awareness and safety precautions have helped reduce childhood deaths in the last decade, including child swimming lessons, proper infant sleeping position, installing smoke detectors, keeping medications out of reach, practicing gun safety and utilizing seatbelts and helmets.[349]

How the San Carlos Apache Region is faring

- There were fewer than six death of infants (under age 1) in the San Carlos Apache Region between 2019 and 2021, meaning that an infant mortality rate cannot be shown to protect individual privacy. Arizona's infant mortality rate (5.4) failed to meet the Healthy People 2030 target of 5.0 or fewer (Figure 49).
- The types of unintentional injuries leading to non-fatal emergency department visits among young children (birth to age 4) were generally similar in the San Carlos Apache Region to the state as a whole. Between 2018 and 2022, the majority of emergency department visits among young children in the region were due to falls (n=58), with smaller numbers due to being struck by or against an object (n=26) or other causes (n=140) (Figure 50). However emergency visits due to fire or hot objects (n=14; 9%), poisoning (n=13; 9%) or motor vehicle traffic (n=12; 7%) were much more prevalent in the region than in the state (fire/hot objects 3%; poisoning 6%; MV traffic 3%) (Figure 50). In this period, 23 of these non-fatal injuries led to in-patient hospitalizations for young children, most often due to falls (n=8; 35%).
- There were 16 deaths of children birth to age 17 in the San Carlos Apache Region between 2019 and 2021. No single cause of death contributed to more than 6 deaths in this period, so data on leading causes of child mortality cannot be presented. Statewide, the leading causes of child death are accidents (20%), congenital malformations (birth defects) (15%), low birthweight (9%), intentional self-harm or suicide (6%) and cancer (5%).[350]

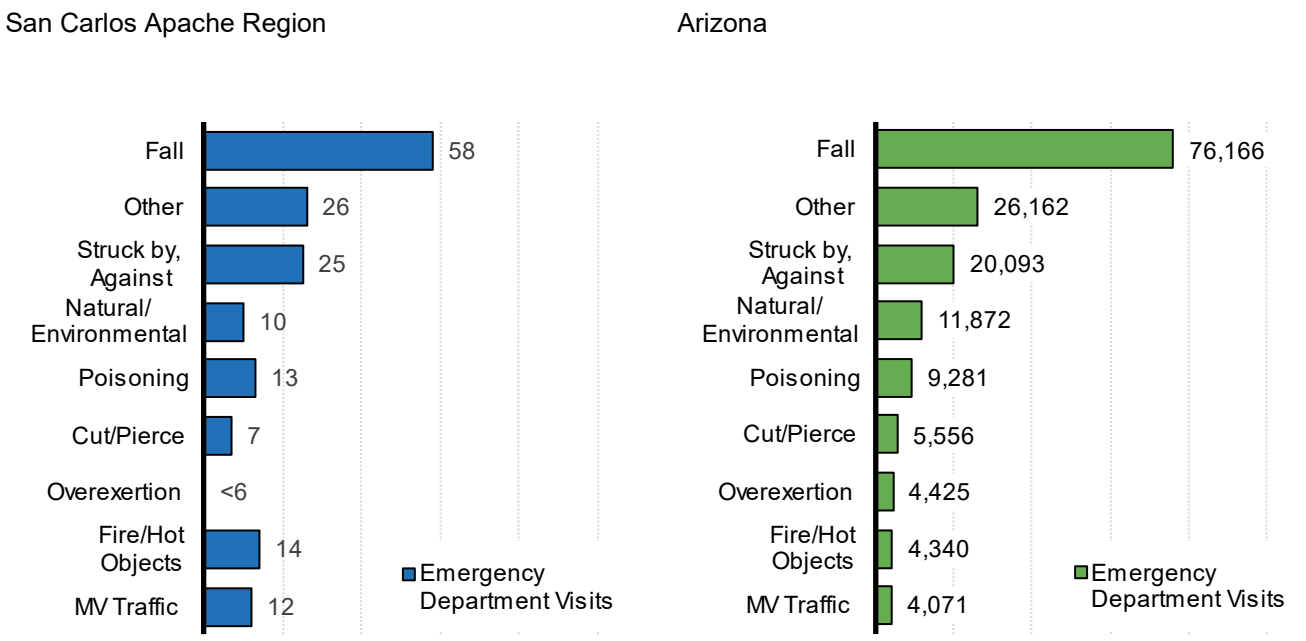
Figure 49. Infant mortality rates, 2019 to 2021 combined



Source: Arizona Department of Health Services (2023). [Vital Statistics Mortality Report dataset]. Unpublished data.

Note: Infant mortality rates are the number of infant deaths (babies under age 1) per 1,000 live births.

Figure 50. Non-fatal emergency department visits due to unintentional injuries for children birth to age 4 by selected mechanism of injury, 2018-2022 combined



Source: Arizona Department of Health Services (2023). [Hospital Discharge dataset]. Unpublished data.

Note: There were 23 in-patient hospitalizations for young children in the region, with 8 due to falls and all other causes contributing to fewer than 6 hospitalizations (meaning the data are suppressed to protect privacy.

Additional data tables related to *Child Health* can be found in Appendix 1 of this report.

FAMILY SUPPORT AND LITERACY

FAMILY SUPPORT AND LITERACY

Why it Matters

Children's long-term well-being and success is tied to their relationships and experiences with their caregivers. Adverse childhood experiences (ACEs) refer to childhood experiences of abuse, neglect and other life events that can negatively impact children's immediate and long-term well-being.[xxv, 351] ACEs have been associated with negative effects on development, educational achievement, future employment, mental health, drug and alcohol use and overall increased health care utilization.[352, 353, 354] ACEs are more prevalent among Arizona children with special health care needs and children living in poverty.[355]

Social, physical, academic and economic outcomes are positively influenced by healthy relationships and interactions with family members and caregivers during childhood.[356, 357, 358, 359, 360] An understanding of, and ability to utilize, positive parenting skills is an important protective factor that reduces the likelihood of abuse and neglect, leading to better childhood and long-term outcomes.[361] Positive Childhood Experiences (PCEs), including positive parent-child relationships and feelings of safety and support, have been shown to have positive long term impacts on mental and relational health.[362] Even if children have experienced multiple ACEs, if their families show high levels of resilience and connection (e.g., working together to solve problems, staying hopeful in difficult times and talking together about things that matter to their family) they show higher rates of flourishing, characterized by healthy social and emotional development and an open and engaged approach to learning.[363] These higher flourishing scores coupled with higher ACE scores point to the reality that childhood flourishing can, and does, exist amid adverse experiences and can potentially help mitigate their negative health effects.[364] Supporting families with the knowledge and skills to promote resilience and connection can therefore be critical for ensuring children's long-term well-being.

What the Data Tell Us

Early literacy and developmental support

Parents and families can play an important role in promoting early academic skills. When families read, sing and tell stories together, it can help young children develop reading and writing fluency as well as their capacity for reading comprehension.[365, 366, 367] Literacy practices at home have also been found to increase children's motivation to learn.[368] These early literacy skills are important because they are linked to durable outcomes including elementary school performance and overall educational achievement.[369]

[xxv] *ACEs include 8 categories of traumatic or stressful life events experienced before the age of 18 years. The 8 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.*

Some families may face challenges to implementing literacy practices with their young children, especially when they are low-resourced. Barriers include being unfamiliar with child development benchmarks, having limited free time to spend with children, and lower access to books in the home.[370] In Arizona, reading scores have been slowly approaching the national average, however American Indian students still have the lowest scores as a group.[371] Community programs, family resources centers, home visitation and larger-scale initiatives can help caregivers implement home-based literacy practices to improve children's reading scores. Recognizing the influence caregivers can have, the American Academy of Pediatrics suggests that pediatricians provide information to families about the benefits of early literacy practices. Doctor's offices and other community locations are also places where initiatives like Read on Arizona and Reach Out & Read may provide books and other materials that families can bring home.[372] How the San Carlos Apache Region is faring

- According to the 2022 First Things First (FTF) San Carlos Apache Regional Needs and Assets Report, multiple parenting education, family support and early literacy programs are available for families with young children in the region: [373]
    - The FTF San Carlos Apache Regional Partnership Council provides funding to The University of Arizona Cooperative Extension Gila for Gowa: Teachable Moments for Apache Children promotes early literacy in the region through drop-in events for families, online materials for at-home activities and professional development for early care and education staff.
    - Read On San Carlos Apache Tribe[xxvi] promotes awareness of the importance early literacy for young children's brain development and supports literacy and reading programs in the San Carlos Apache Region.
    - Nnee Bich'o Nii operates two parenting programs in the region, Fatherhood is Sacred and Motherhood is Sacred. These programs aim to teach the values of parenting and encourage affectionate and supportive parent-child relationships.
    - Nnee Bich'o Nii also distributes books and materials through their building's reading corner and on daily bus services to Globe and Safford.
    - Finally, the San Carlos Apache Social Services Department also provides parenting classes for families involved with Tribal Child Protective Services.

Substance use disorders

Parental substance use has major implications for children's health and well-being. Children of parents with substance use disorders are frequently referred to child welfare services due to neglect or abuse and face a higher risk of later mental health and behavioral health issues, including developing substance use disorders themselves.[374, 375] Access to treatment for substance use disorders and supports for parents and

[xxvi] *For more information, please see: https://readonarizona.org/community/san-carlos-apache-tribe/*

families grappling with these issues can help to ameliorate the short and long-term impacts on young children.[376, 377]

How the San Carlos Apache Region is faring

- Behavioral and mental health services for residents of all ages are available in the San Carlos Apache Region through the San Carlos Apache Wellness Center, a tribally-operated outpatient mental health and substance abuse program.[378] The Wellness Center offers preventative mental health services and education, individual and group therapy, traditional healing, telepsychiatry services, crisis stabilization services and a sober living program.[379] Specifically for children and youth, the Wellness Center offers before- and after school programs, in-school mentoring and support and individual and family therapy.[380]
- Between 2018 and 2021, there were fewer than six deaths with opiates or opioids contributing in the San Carlos Apache Region (Table 40). However, it is important to note that this only includes deaths occurring within the region and with address data that allowed the death to be properly assigned to a FTF region, meaning this may be an undercount.
- Local key informants consulted in the 2022 Regional Needs and Assets Report noted that substance abuse is an ongoing challenge in the region. The Wellness Center's sober living program, called Nohwi'ihi'n̲a' Bá Gózhǭǭ Doleeł, opened in March 2022 and provides a safe living space for individuals in recovery. San Carlos Apache College also offers a certificate in substance abuse and addiction studies to train local students to work as substance abuse counselors and professionals.[381]

Table 39. Number of deaths with opiates or opioids contributing, 2018-2021 combined

Geography	Number of deaths with opiates or opioids contributing, 2018-2021
San Carlos Apache Region	**<6**
Gila County	39
Graham County	21
Arizona	6,315

Source: Arizona Department of Health Services (2023). [Vital Statistics dataset]. Unpublished data.

Note: About 35% of overdose deaths statewide were missing address information and thus could not be geocoded to an FTF region.

Child removals and foster care

In situations where the harm in remaining with their family is determined to be too great to a child, they may be removed from their home, either temporarily or permanently. In accordance with the Indian Child Welfare Act of 1978 (ICWA), nearly all tribal governments set their own child welfare laws and manage their own child welfare systems.[382] ICWA established national standards to prevent unwarranted removals and policies for all state custody proceedings involving Indian children. 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 they may petition for tribal jurisdiction over the custody case.[383] 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.[384] Despite being challenged recently by several states, ICWA was upheld by the supreme court.[385, 386] Groups including the National Indian Child Welfare Association (NICWA) and Uniform Law Commission (ULC) are investigating whether state laws could be implemented to promote better compliance with ICWA without threatening tribal sovereignty.[387]

The Family First Prevention Services Act, signed into federal law on February 9, 2018, aims to ensure children are placed in the least restrictive, most family-like setting appropriate to their unique needs when foster care is needed. One effect of the Family First Prevention Services Act has been an increased focus on kinship placements, which are placements of children with relatives or close family friends.[388] In recent years, the number of unlicensed kinship homes has even exceeded the number of foster homes in Arizona.[389] More than half of American Indian and Alaska Native children (55%) in foster care in Arizona were in kinship placements, a much higher rate of kinship placement than that seen nationwide.[390]

How the San Carlos Apache Region is faring

- Child welfare services in the San Carlos Apache Region are provided by the San Carlos Apache Social Services Department, which houses Tribal Child Protective Services (CPS). Tribal CPS takes reports of child abuse and neglect, investigates these reports and determines if a child needs to be removed from their family to keep them safe. According to the 2022 Regional Needs and Assets Report, Tribal CPS receives hundreds of referrals each year, mostly for neglect, where parents are providing inadequate care or supervision for their children.[391]
- There were 45 substantiated cases of child abuse or neglect in 2019 and 59 in 2020 according to data provided by the Social Services Department in the 2022 Regional Needs and Assets Report. The number of children removed also increased from 80 in 2019 to 95 in 2020, as did the number of children in ICWA placements (Table 41).
- In 2020, children birth to age 17 who had been removed from their parents' care were most often placed with relatives (69%), followed by San Carlos Apache group homes (14%) and contracted foster homes (8%). The share of children placed with relatives increased between 2019 (59%) and 2020 (69%) (Figure 51; Table 42).

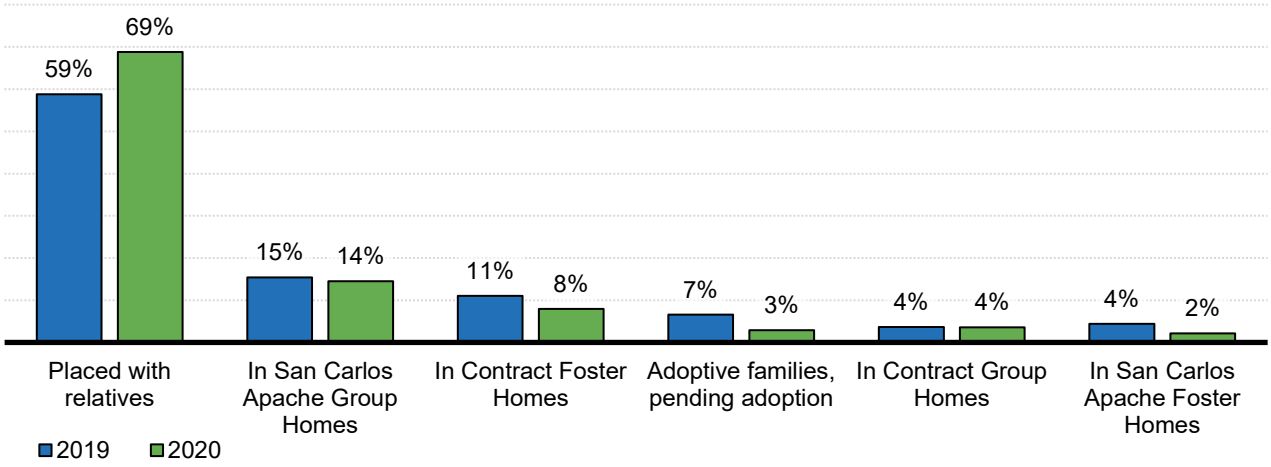
- The number of foster care homes in the region declined slightly from 23 in 2018 to 18 in 2019 (Table 43). According to information provided for the 2022 Regional Needs and Assets Report, most foster homes licensed by the San Carlos Apache Social Services Department are located in the Globe and Safford areas.[392]

Table 40. Children removed by Tribal CPS and Child Abuse Cases, 2019 to 2020

	2019	2020
Children (ages 0-17) removed by Tribal CPS	80	95
Substantiated cases of child abuse or neglect	45	59
Children (ages 0-17) in ICWA placements	7	9

Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Figure 51. Placement of Wards of the Court, 2019 and 2020



Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Table 41. Placement of wards of the court (ages 0-17), 2019 to 2020

	2019	2020
Children (ages 0-17) in contracted foster homes	15	11
Children (ages 0-17) placed with relatives	80	95
Children (ages 0-17) in contracted group homes	<10	<10
Children (ages 0-17) in San Carlos Apache Group Homes	21	20
Children (ages 0-17) in San Carlos Apache Foster Homes	<10	<10
Children (ages 0-17) with adoptive families, pending adoptions	<10	<10

Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

Table 42. Foster Care Availability, 2018 and 2019 Monthly Averages

	2018		2019	
	On-Reservation	Off-Reservation	On-Reservation	Off-Reservation
San Carlos Apache Foster Care Homes	5	18	4	14
Beds in San Carlos Apache Foster Care Homes	10	32	9	24

Source: First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

APPENDIX 1: ADDITIONAL DATA TABLES

Population Characteristics

Table 43. Population of children birth to age 5 by single years of age in the 2020 Census

Geography	Population (Ages 0-5)	Population under age 1	Population age 1	Population age 2	Population age 3	Population age 4	Population age 5
San Carlos Apache Region	**1,192**	**156**	**175**	**184**	**216**	**236**	**225**
All Arizona Reservations	15,140	2,183	2,338	2,492	2,570	2,733	2,824
Gila County	3,022	419	464	494	508	549	588
Graham County	3,404	505	492	549	612	623	623
Arizona	480,744	72,415	75,163	78,159	82,033	84,600	88,374
United States	22,401,565	3,480,117	3,532,512	3,672,703	3,797,741	3,917,162	4,001,330

Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P1, P14. U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P14.

Table 44. Race and ethnicity of the population of all ages, 2020 Census

Geography	Estimated population (all ages)	Hispanic or Latino	White, not Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Two or more races
San Carlos Apache Region	**10,251**	**2%**	**1%**	**0.3%**	**99%**	**0.4%**	**1%**
All Arizona Reservations	173,499	6%	5%	1%	93%	1%	3%
Gila County	53,272	17%	64%	1%	19%	2%	9%
Graham County	38,533	30%	55%	2%	16%	1%	11%
Arizona	7,151,502	31%	57%	6%	6%	5%	14%
United States	331,449,281	19%	62%	14%	3%	8%	10%

Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), P6, P7, P8, P9, P12, P12A-W.

Note: The six percentages in each row may sum to more or less than 100% because (a) persons reporting Hispanic ethnicity are counted twice if their race is Black, American Indian, Asian, Pacific Islander, or any combination of two or more races, (b) persons reporting any other race are not counted here unless they have Hispanic ethnicity, and (c) rounding.

Table 45. Race and ethnicity of children birth to age 4

Geography	Estimated number of children (birth to age 4)	Hispanic or Latino	White, not Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Two or more races
San Carlos Apache Region	**967**	**3%**	**0%**	**0%**	**99%**	**1%**	**2%**
All Arizona Reservations	12,316	8%	3%	1%	95%	1%	4%
Gila County	2,434	26%	43%	2%	32%	2%	10%
Graham County	2,781	32%	48%	3%	22%	1%	13%
Arizona	392,370	44%	42%	10%	8%	7%	21%
United States	18,400,235	25%	54%	18%	4%	9%	16%

Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), P6, P7, P8, P9, P12, P12A-W.

Note: The six percentages in each row may sum to more or less than 100% because (a) children reporting Hispanic ethnicity are counted twice if their race is Black, American Indian, Asian, Pacific Islander, or any combination of two or more races, (b) children reporting any other race are not counted here unless they have Hispanic ethnicity, and (c) rounding.

Table 46. Race and ethnicity for the mothers of babies born in 2020 and 2021

Geography	Calendar year	Number of births	Mother was non-Hispanic White	Mother was Hispanic or Latina	Mother was Black or African American	Mother was American Indian or Alaska Native	Mother was Asian or Pacific Islander
San Carlos Apache Region	**2020**	**165**	**0.6 to 3%**	**0.6 to 3%**	**0%**	**96%**	**0.6 to 3%**
	2021	**187**	**0.5 to 2.7%**	**0.5 to 2.7%**	**0%**	**98%**	**0%**
Gila County	2020	471	54%	18%	1%	25%	1%
	2021	452	44%	24%	0.2 to 1.1%	31%	0.2 to 1.1%
Graham County	2020	464	53%	28%	1%	17%	1%
	2021	522	54%	31%	0.2 to 1%	15%	0.2 to 1%
Arizona	2020	76,781	43%	41%	6%	5%	4%
	2021	77,857	43%	41%	6%	5%	4%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: The five percentages in each row should sum to 100%, but may not because of rounding. Mothers who report more than one race or ethnicity are assigned to the one which is smaller. Mothers of twins are counted twice in this table.

Table 47. Children birth to age 5 living with parents who are foreign-born, 2017-2021 ACS

Geography	Estimated number of children (birth to age 5) living with one or two parents	Number and percent living with one or two foreign-born parents	
San Carlos Apache Region	**1,093**	**0**	**0%**
All Arizona Reservations	14,097	191	1%
Gila County	3,102	177	6%
Graham County	2,623	85	3%
Arizona	473,732	115,267	24%
United States	22,399,131	5,504,770	25%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B05009

Note: The term "parent" here includes stepparents.

Table 48. Language spoken at home (by persons ages 5 and older), 2017-2021 ACS

Geography	Estimated population (age 5 and older)	Speak only English at home	Speak Spanish at home	Speak languages other than English or Spanish at home
San Carlos Apache Region	**9,771**	**66%**	**0.3%**	**34%**
All Arizona Reservations	166,148	47%	3%	50%
Gila County	50,491	84%	8%	8%
Graham County	35,543	79%	15%	6%
Arizona	6,666,597	73%	20%	6%
United States	310,302,360	78%	13%	8%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16001

Note: The three percentages in each row may not sum to 100% because of rounding. The American Community Survey (ACS) no longer specifies the proportion of the population who speak Native North American languages for geographies smaller than the state. In Arizona, Navajo and other Native American languages (including Apache, Hopi, and O'odham) are the most commonly spoken (2%), following English (73%) and Spanish (20%).

Table 49. English-language proficiency (for persons ages 5 and older), 2017-2021 ACS

Geography	Estimated population (age 5 and older)	Speak only English at home	Speak another language at home, and speak English very well	Speak another language at home, and do not speak English very well
San Carlos Apache Region	**9,771**	**66%**	**29%**	**6%**
All Arizona Reservations	166,148	47%	41%	12%
Gila County	50,491	84%	13%	3%
Graham County	35,543	79%	17%	4%
Arizona	6,666,597	73%	18%	8%
United States	310,302,360	78%	13%	8%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16001

Note: The three percentages in each row should sum to 100%, but may not because of rounding.

Table 50. Limited-English-speaking households, 2017-2021 ACS

Geography	Estimated number of households	Number and percent of limited-English-speaking households	
San Carlos Apache Region	**2,510**	**78**	**3%**
All Arizona Reservations	52,248	6,361	12%
Gila County	22,306	346	2%
Graham County	11,577	177	2%
Arizona	2,683,557	99,159	4%
United States	124,010,992	5,241,326	4%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table C16002

Note: A "limited-English-speaking" household is one in which no one over the age of 13 speaks English very well.

Table 51. Grandchildren birth to age 5 living in a grandparent's household, 2020 Census

Geography	Estimated number of children (birth to age 5) living in households	Number and percent living in their grandparent's household	
San Carlos Apache Region	**1,192**	**507**	**43%**
All Arizona Reservations	15,140	6,558	43%
Gila County	3,022	703	23%
Graham County	3,404	632	19%
Arizona	480,744	64,792	13%
United States	22,401,565	2,520,305	11%

Source: U.S. Census Bureau (2022). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P14, PCT11.

Note: This table includes all children (under six years old) living in a household headed by a grandparent, regardless of whether the grandparent is responsible for them, or whether the child's parent lives in the same household.

Economic Circumstances

Table 52. Median annual family income, 2017-2021 ACS

Geography	Median annual income for all families	Median annual income for all families with children under 18 years old	Median annual income for married-couple families with children under 18 years old	Median annual income for single-male-headed families with children under 18 years old	Median annual income for single-female-headed families with children under 18 years old
San Carlos Apache Region	**$39,100**	**$38,400**	**$57,200**	**N/A**	**$12,800**
All Arizona Reservations	*All Arizona reservations data not available*				
Gila County	$59,100	$55,100	$84,000	$40,400	$21,100
Graham County	$62,600	$61,700	$82,500	$27,500	$18,400
Arizona	$78,800	$75,100	$100,000	$49,100	$35,000
United States	$85,000	$82,800	$110,000	$50,900	$32,600

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B19126

Note: Half of the families in the population are estimated to have incomes above the median value, and the other half have incomes below the median.

Table 53. Children birth to age 5 living at selected poverty thresholds, 2017-2021 ACS

Geography	Estimated number of children (birth to age 5) who live with parents or other relatives	Percent of children under 50% of the poverty level	Percent of children between 50% and 99% of the poverty level	Percent of children between 100% and 184% of the poverty level	Percent of children at or above 185% of the poverty level
San Carlos Apache Region	**1,247**	**38%**	**26%**	**15%**	**21%**
All Arizona Reservations	15,304	27%	22%	22%	30%
Gila County	3,222	21%	20%	18%	41%
Graham County	3,065	17%	6%	18%	58%
Arizona	486,513	9%	11%	19%	61%
United States	22,940,195	9%	10%	16%	65%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B17024

Note: The four percentages in each row should sum to 100%, but may not because of rounding. In 2021, the poverty threshold for a family of two adults and two children was $27,479; for a single parent with one child, it was $18,677. The 185% thresholds are $50,836 and $34,552, respectively.

Table 54. Families participating in SNAP, state fiscal years 2018 to 2022

Geography	Households with one or more children (ages 0-5)	Number of families participating in SNAP					Percent of households with young children (0-5) participating in SNAP in SFY 2022
		SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022	
San Carlos Apache Region	**737**	**880**	**800**	**723**	**651**	**625**	**85%**
Arizona	345,601	151,816	140,056	132,466	131,063	128,460	37%

Sources: Arizona Department of Economic Security (2023). [Division of Benefits and Medical Eligibility dataset]. Unpublished data. & U.S. Census Bureau (2023). 2020 Decennial Census, DHC, Table P14 & P20.

Table 55. Children participating in SNAP, state fiscal years 2018 to 2022

Geography	Number of young children (ages 0-5) in the population	Number of children (0-5) participating in SNAP					Percent of young children (0-5) participating in SNAP in SFY 2022
		SFY 2016	SFY 2017	SFY 2018	SFY 2019	SFY 2020	
San Carlos Apache Region	**1,192**	**1,549**	**1,396**	**1,223**	**1,073**	**1,002**	**84%**
Arizona	480,744	229,275	211,814	198,961	194,771	190,968	40%

Sources: Arizona Department of Economic Security (2023). [Division of Benefits and Medical Eligibility dataset]. Unpublished data. & U.S. Census Bureau (2023). 2020 Decennial Census, DHC, Table P14 & P20.

Table 56. Lunches served through NSLP, 2019-20 to 2021-22

Geography	Number of sites			Number of lunches served		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
San Carlos Apache Region Schools	**7**	**3**	**7**	**114,089**	**36,360**	**125,625**
Rice Elementary School	1	1	1	84,899	84,712	31,698
San Carlos Middle School	1	1	1	33,395	12,522	86,965
San Carlos High School	1	0	1	27,173	0	8,850
San Carlos Alternative High School	1	0	1	4,273	0	1,296
Peridot Lutheran Elementary School	1	0	1	16,654	0	8,377
St. Charles School	1	0	1	18,132	0	5,775
Mt. Turnbull Academy	1	1	1	2,328	2,770	2,177
Mt. Turnbull Elementary School	1	1	1	12,134	21,068	12,185
Arizona schools	N/A	1,247	1,886	76,454,370	22,911,751	44,010,999

Source: Arizona Department of Education (2023). [Health and Nutrition Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Table 57. Lunches served through SFSP, 2019-20 to 2021-22

Geography	Number of sites			Number of lunches served		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Rice Elementary School	0	1	1	0	12,647	47,699
San Carlos Middle School	1	1	1	93,318	292,554	224,919
San Carlos High School	0	1	1	0	7,940	22,757
San Carlos Alternative High School	0	1	1	0	1,185	3,054
St. Charles School	0	1	1	0	24,168	12,125
Peridot Lutheran Elementary School	1	1	1	4,898	27,123	25,368
Our Savior's Lutheran Church	1	1	0	554	5,850	0
Mt. Turnbull Elementary School	0	1	1	0	11,773	19,476
Mt. Turnbull Academy	0	1	1	0	1,310	3,746
San Carlos Recreation and Wildlife Department	1	1	0	8,937	292	0
Tufa Stone Housing Authority	1	1	0	9,684	342	0
Globe Unified School District - Indian Hills Park Bus Route	1	1	1	25,136	18,612	22,600
Miami Bus 5 San Carlos/Apache Gold Casino - Miami USD	1	1	0	1,087	4,096	0
Arizona Schools	N/A	2,926	2,346	21,786,393	148,207,987	130,780,150

Source: Arizona Department of Education (2023). [Health and Nutrition Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

Table 58. Parents of children birth to age 5 who are or are not in the labor force, 2017-2021 ACS

Geography	Estimated number of children (birth to 5 years old) living with parent(s)	Living with two married parents, both in the labor force	Living with two married parents, one in the labor force and one not	Living with two married parents, neither in the labor force	Living with one parent, in the labor force	Living with one parent, not in the labor force
San Carlos Apache Region	**1,093**	**11%**	**11%**	**3%**	**47%**	**28%**
All Arizona Reservations	14,097	11%	14%	2.6%	38%	35%
Gila County	3,102	22%	23%	3%	36%	15%
Graham County	2,623	26%	32%	2%	28%	13%
Arizona	473,732	33%	27%	1%	30%	8%
United States	22,399,131	40%	25%	1%	26%	7%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B23008

Note: The labor force is all persons who are working (employed) or looking for work (unemployed). Persons not in the labor force are mostly students, stay-at-home parents, retirees, and institutionalized people. The term "parent" here includes step-parents. The five percentages in each row should sum to 100%, but may not because of rounding. Please note that due to the way the ACS asks about family relationships, children living with two unmarried, cohabitating parents are not counted as living with two parents (these children are counted in the 'one parent' category).

Table 59. Persons of all ages in households with and without computers and internet connectivity, 2017-2021 ACS

Geography	Estimated number of persons (all ages) living in households	Have a computer and internet	Have a computer but no internet	Do not have a computer
San Carlos Apache Region	**10,799**	**67%**	**9%**	**25%**
All Arizona Reservations	177,201	51%	23%	26%
Gila County	52,240	78%	12%	10%
Graham County	34,822	84%	10%	6%
Arizona	6,930,677	90%	6%	4%
United States	321,899,278	90%	6%	4%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B28005

Note: The three percentages in each row should sum to 100%, but may not because of rounding.

Table 60. Children birth to age 17 in households with and without computers and internet connectivity, 2017-2021

Geography	Estimated number of children (ages 0-17) living in households	Have a computer and internet	Have a computer but no internet	Do not have a computer
San Carlos Apache Region	**3,788**	**67%**	**6%**	**26%**
All Arizona Reservations	52,122	55%	24%	21%
Gila County	10,603	80%	13%	7%
Graham County	10,137	86%	8%	6%
Arizona	1,611,069	92%	6%	2%
United States	74,041,861	93%	5%	2%

Source: U.S. Census Bureau. (2022). American Community Survey five-year estimates 2017-2021, Table B28005

Note: The three percentages in each row should sum to 100%, but may not because of rounding.

Early Learning

Table 61. School enrollment for children ages 3 to 4, 2017-2021 ACS

Geography	Estimated number of children (3 or 4 years old)	Number and percent enrolled in school	
San Carlos Apache Region	**549**	**185**	**34%**
All Arizona Reservations	5,701	2,326	41%
Gila County	968	320	33%
Graham County	1,179	386	33%
Arizona	176,033	63,974	36%
United States	8,100,136	3,719,992	46%

Source: U.S. Census Bureau. (2023). American Community Survey five-year estimates 2017-2021, Table B14003

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

Table 62. Children receiving DES child care assistance, 2017 to 2022

Geography	Number of children receiving assistance						Percent of eligible children receiving assistance					
	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
San Carlos Apache Region	**27**	**21**	**19**	**1 to 9**	**1 to 9**	**1 to 9**	**84%**	**72%**	**95%**	**DS**	**100%**	**100%**
Gila County	72	57	50	64	70	51	91%	83%	94%	77%	92%	98%
Graham County	49	55	46	32	42	38	94%	93%	87%	80%	98%	93%
Arizona	16,922	19,813	23,155	19,909	22,359	20,099	93%	92%	92%	80%	88%	90%

Source: Arizona Department of Economic Security (2023). [Child Care Administration dataset]. Unpublished data.

Table 63. Eligible families not using DES child care assistance, 2017 to 2022

Geography	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
San Carlos Apache Region	18.8%	26.7%	DS	DS	0.0%	0.0%
Gila County	8.0%	16.7%	DS	21.3%	8.5%	2.5%
Graham County	2.9%	6.5%	DS	DS	3.1%	7.1%
Arizona	6.7%	7.6%	7.9%	18.3%	11.7%	9.2%

Source: Arizona Department of Economic Security (2023). [Child Care Administration dataset]. Unpublished data.

Table 64. Preschoolers with disabilities receiving services through Local Education Agency by type of disability, state fiscal years 2018-2022 combined

Geography	Total Preschoolers	Developmental Delay	Speech or Language Impairment	Preschool Severe Delay	Other Disability
San Carlos Apache Region schools	**DS**	**58%**	**23%**	**19%**	**<2%**
Off reservation schools serving San Carlos Apache Region students	DS	41%	39%	14%	6%
Gila County schools	DS	55%	30%	14%	<2%
Graham County schools	DS	44%	45%	11%	<2%
Arizona	47,581	42%	34%	21%	2%

Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: The "Other Disability" category includes children with hearing impairment, visual impairment, or deaf-blindness. Denominators in this table are suppressed when they could be used to calculate a count of less than 11 students in a disability category. Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5) and Mt Turnbull Elementary School (PS-6). The off-reservation schools with enrolled PS-3rd graders represented in this table are Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Table 65. Kindergarten to 3rd grade students enrolled in special education in public and charter schools, state fiscal years 2018 to 2022

	K-3rd grade students enrolled in special education				
Geography	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
San Carlos Apache Region schools	**104**	**109**	**100**	**74**	**57**
Off reservation schools serving San Carlos Apache Region students	109	95	85	78	71
Gila County schools	334	333	348	309	295
Graham County schools	263	290	288	274	330
Arizona schools	36,468	37,812	38,791	37,179	37,334

Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: See Appendix 4 for a list of off-reservation schools serving students from the region. Schools in the region with PS-3rd grade students include Rice Elementary School (PS-5) and Mt Turnbull Elementary School (PS-6). The off-reservation schools with enrolled PS-3rd graders represented in this table are Copper Rim Elementary School (PS-5) in Globe Unified District and Fort Thomas Elementary School (K-6) in Fort Thomas Unified District.

Table 66. Kindergarten to 3rd grade students enrolled in special education in public and charter schools by primary disability, state fiscal years 2018-2022 combined

Geography	Total K-3rd grade students	Speech or Language Impairment	Developmental Delay	Specific Learning Disability	Autism	Other Disability
San Carlos Apache Region schools	444	26%	49%	12%	9%	5%
Off reservation schools serving San Carlos Apache Region students	438	37%	36%	17%	4%	6%
Gila County schools	1,619	31%	41%	13%	7%	8%
Graham County schools	1,445	44%	16%	20%	12%	8%
Arizona	187,584	37%	25%	14%	10%	13%

Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

Note: The "Other Disabilities" category includes children with emotional disturbance, deafness, deaf-blindness, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairments such as chronic medical conditions that affect a child's ability to participate in the educational setting, traumatic brain injury, or visual impairment.

Child Health

Table 67. Births to mothers with gestational diabetes or pre-pregnancy obesity, 2020 to 2021

Geography	Calendar year	Number of births	Mother had gestational diabetes	Mother had pre-pregnancy obesity
San Carlos Apache Region	**2020**	**165**	**8%**	**48%**
	2021	**187**	**15%**	**47%**
All Arizona Reservations	2020	1,900		
	2021	*Data for All Arizona Reservations not available*		
Arizona	2020	76,781	10%	27%
	2021	77,857	10%	27%

Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Note: Mothers of twins are counted twice in this table. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations and does not include data on gestational diabetes or obesity. The Health status profile of American Indian in Arizona for 2021 has not yet been released.

Table 68. Confirmed and probable cases of infectious diseases in children birth to age 5, 2019 to 2022

Geography	Confirmed & probable RSV cases				Confirmed & probable Influenza cases			
	CY 2019	CY 2020	CY 2021	CY 2022	CY 2019	CY 2020	CY 2021	CY 2022
San Carlos Apache Region	**9**	**15**	**<6**	**17**	**15**	**10**	**0**	**11**
Arizona	4,840	4,459	4,935	9,606	6,459	6,094	508	7,334

Source: Arizona Department of Health Services (2023). [FTF VPD Flu RSV dataset]. Unpublished data.

Table 69. Non-fatal hospitalizations and emergency department visits due to unintentional injuries for children birth to age 5, 2018-2022 combined

Geography	Non-fatal inpatient hospitalizations for unintentional injuries	Non-fatal emergency department visits for unintentional injuries
San Carlos Apache Region	**23**	**162**
Arizona	2,811	160,742

Source: Arizona Department of Health Services (2023). [Hospital Discharge dataset]. Unpublished data.

Note: Data on hospitalizations were geocoded to FTF regions using the address provided by parents or caregivers at the time of hospitalization; however, in cases where the address provided was not valid, hospitalizations could not be assigned to a region. County of residence is captured separately from addresses, meaning that counts in the county often exceed those seen in a particular region because they include all hospitalizations regardless of address validity.

APPENDIX 2: METHODS AND DATA SOURCES

U.S. Census and American Community Survey Data. The U.S. Census[393] 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 2020 U.S. Census data are available by census block. There are about 108,000 inhabited blocks in Arizona, with an average population of 66 people each. Both the 2010 and 2020 Census data for the San Carlos Apache Region presented in this report are drawn from the Census Geography for the San Carlos Reservation. Please note that the 2020 reservation geography is slightly different than the geography of the First Things First region, which is based on the reservation geography as of 2015.

The American Community Survey (ACS)[394] 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. ACS data are available by census tract. Arizona is divided into about 1,750 census tracts, with an average of about 3,900 people in each. The ACS data for the San Carlos Apache Region presented in this report are drawn from the Census Geography for the San Carlos Reservation. 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 2017 to 2021. In general, the reliability of ACS estimates is greater for more populated areas. Statewide estimates, for example, are more reliable than county-level estimates.

Education Data from ADE. Education data from the Arizona Department of Education (ADE) included in this report were obtained through a custom tabulation of unredacted data files conducted by the vendor on a secure ADE computer terminal in the fall of 2023. The vendor worked with the regional director to create a list of all public and charter schools in the region based on the school's physical location within the region as well as local knowledge as to whether any schools located outside the region served a substantial number of children living within the region. This list was used to assign schools and districts to the region and to aggregate school-level data to the region-level. This methodology differs slightly from the methods that ADE uses to allocate school-level data to counties, so county and region totals may vary in some tables. Data were presented over time where available; however, due to changes in the ADE data system as well as the effects of the COVID-19 pandemic on data collection and definitions over the past three years, some indicators could not be presented as a time series.

Change Calculations. Unless otherwise specified, changes in counts of data over time (i.e., percent increase or decrease) are calculated by subtracting the earlier number (e.g., a 2010 count) from the later number (e.g. the 2020 count) and dividing the result by the earlier number (e.g. the 2010 count). This calculation provides the percent change between the most recent count and the prior count, relative to the prior count.

Data Availability. State agency data in this report were provided to FTF by agency staff through a data request process initiated in May 2023 and extending to January 2024. Wherever possible, data were requested for multiple years to allow for the visualization of trends as well as for the most recent year

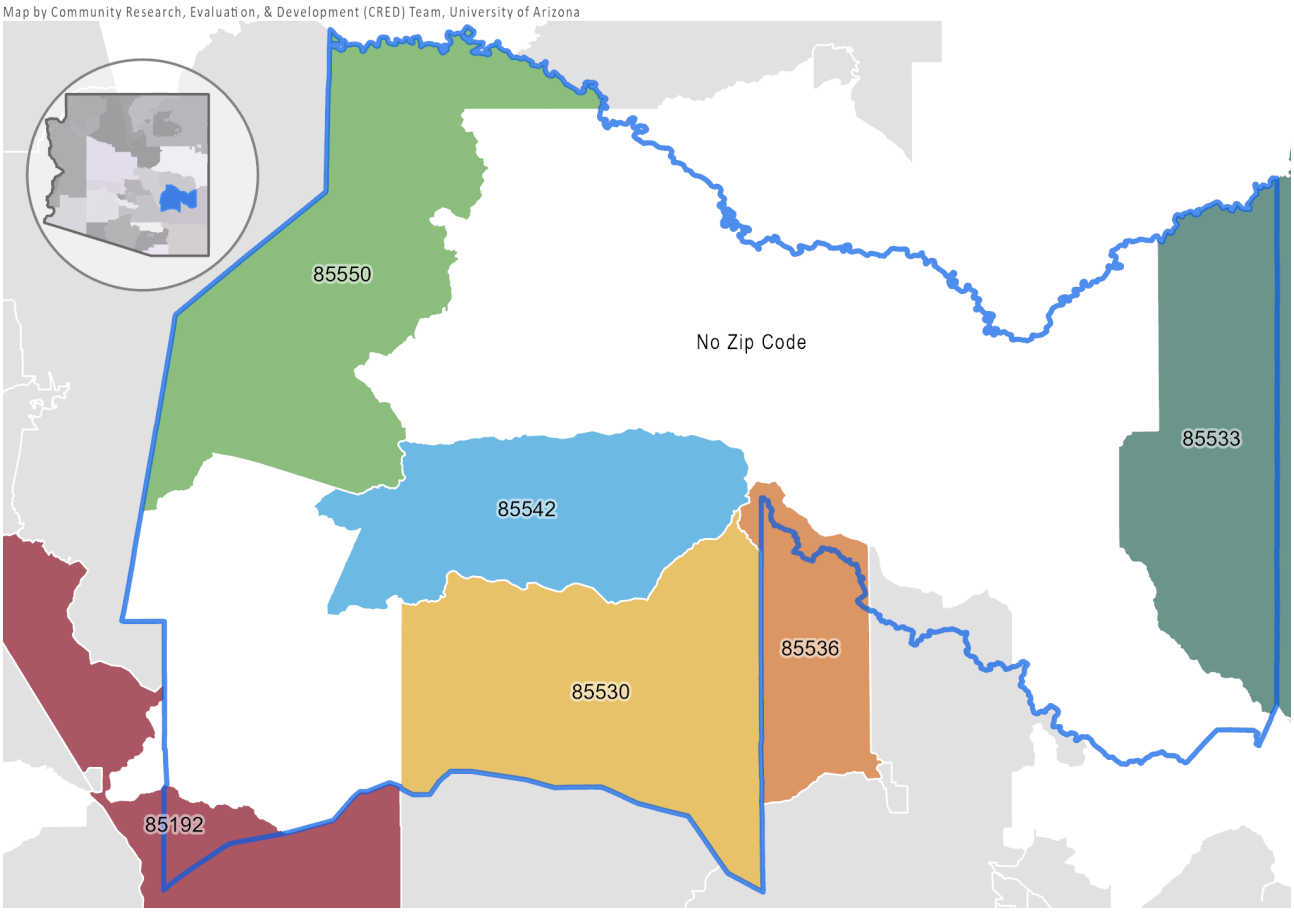
available. However, due to both the constraints of agency staff and agency-maintained datasets as well as the timing of requests, not all data were available on the same time and geographic scales. This report attempts to include the most recent and complete data available, with notes indicating where data were not available for particular time periods or geographies.

Data Suppression. To protect the confidentiality of program participants, the FTF Data Dissemination and Suppression Guidelines preclude our reporting of social service and early education programming data if the count is less than 10 and preclude our reporting data related to health or developmental delay if the count is less than 6. In addition, some data received from state agencies are suppressed according to their own guidelines. ADHS does not report counts between 1 and 5; DES does not report counts between 1 and 9; ADE does not report counts less than 11. Additionally, both ADE and DES require suppression of the second-smallest value or the denominator in tables where a reader might be able to use the numbers provided to calculate a suppressed value. Throughout this report, information which is not available because of suppression guidelines is indicated by entries of "1-5" or "1-9" or "<11" for counts, or "DS" (data suppressed) for percentages. Data are sometimes not available for particular regions, either because a 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" or a table row note that states "regional data not available."

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 or because the number was suppressed as a second-smallest value that could be used to calculate a suppressed value. 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 enrolled in Child-only Temporary Assistance for Needy Families Cash Assistance Program (TANF) and 12 children enrolled in a household with TANF, the entry in the table would read "13 to 21." This is because the suppressed number of children in Child-only TANF is between 1 and 9, so the possible range of values is the sum of the known number (12) and 1 on the lower bound to the sum of the known number (12) plus 9 on the upper bound. Ranges that include numbers below the suppression threshold of less than 6 or 10 may still be included if the upper limit of the range is above 6 or 10. Since a range is provided rather than an exact number, the confidentiality of program participants is preserved.

APPENDIX 3: ZIP CODES OF THE SAN CARLOS APACHE REGION

Figure 52. Zip Code Tabulation Areas (ZCTAs) in the San Carlos Apache Region



Source: Custom map by the Community Research, Evaluation, & Development (CRED) Team using shapefiles obtained from First Things First and the U.S. Census Bureau 2022 TIGER/Line Shapefiles (https://www.census.gov/cgi-bin/geo/shapefiles/index.php)

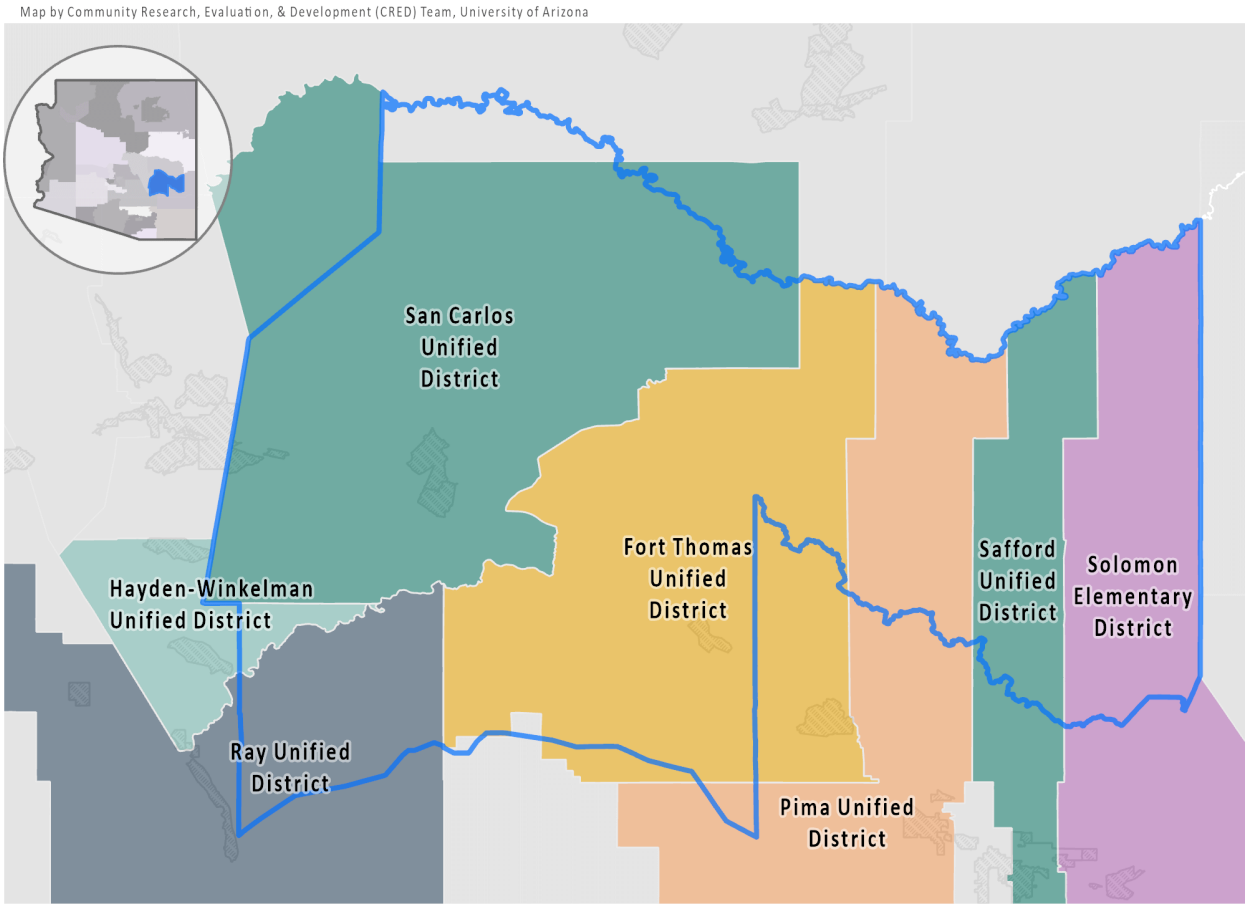
Table 70. Zip Code Tabulation Areas (ZCTAs) in the San Carlos Apache Region

Zip Code Tabulation Area (ZCTA)	Population (all ages)	Percent of this ZCTA's total population living in the San Carlos Apache Region	This ZCTA is shared with
San Carlos Apache Region	**10,251**		
85530	2,104	100.0%	
85533	2	0.1%	Graham/Greenlee Region
85542	3,172	100%	
85550	4,934	100.0%	

Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics, Table P1.

APPENDIX 4: SCHOOLS AND SCHOOL DISTRICTS OF THE SAN CARLOS APACHE REGION

Figure 53. School Districts in the San Carlos Apache Region



Source: Custom map by the Community Research, Evaluation, & 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)

Note: While Hayden-Winkelman Unified, Ray Unified, Pima Unified, Safford Unified and Solomon Elementary District all overlap the San Carlos Apache Region, none of these districts have schools located in the region, and none of the region's population resides in these districts.

Table 71. School Districts and Local Education Agencies (LEAs) in the San Carlos Apache Region

Name of District or Local Education Agency (LEA)	School Name	Number of schools	Grades Served
Schools in the San Carlos Apache Region		**10**	**PS-12**
San Carlos Unified District	Rice Elementary School	1	PS-5
San Carlos Unified District	San Carlos Middle School	1	6-8
San Carlos Unified District	San Carlos High School	1	9-12
San Carlos Unified District	San Carlos High School	1	9-12
San Carlos Unified District	San Carlos Alternative High School	1	9-12
Fort Thomas Unified District	Mt. Turnbull Elementary School	1	PS-6
Fort Thomas Unified District	Mt. Turnbull Academy	1	K-12
Gila County Regional School District	Biyaagozhoo Center	1	3-12
Gila Institute for Technology	GIFT-Mt. Turnbull Academy	1	9-12
Cobre Valley Institute of Technology District	CVIT - San Carlos High School	1	9-12
Off-reservation schools serving San Carlos Apache Region students		**6**	**PS-12**
Globe Unified District	Copper Rim Elementary School	1	PS-5
Globe Unified District	High Desert Middle School	1	6-8
Globe Unified District	Globe High School	1	9-12
Fort Thomas Unified District	Fort Thomas Elementary School	1	K-6
Fort Thomas Unified District	Fort Thomas High School	1	7-12
Destiny School, Inc.	Destiny School	1	K-8

Source: Arizona Department of Education (2023). [Oct 1 Enrollment Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

APPENDIX 5: DATA SOURCES

Arizona Department of Economic Security. (2023). 2022 Child Care Market Rate Survey Report. Retrieved from https://des.az.gov/sites/default/files/media/2022-Market-Rate-Survey.pdf

Arizona Department of Economic Security. (2023). [AzEIP Data]. Unpublished raw data received through the First Things First State Agency Data Request.

Arizona Department of Economic Security. (2023). [Child Care Division Data]. Unpublished raw data received through the First Things First State Agency Data Request.

Arizona Department of Economic Security. (2023). [DDD Data]. Unpublished raw data received through the First Things First State Agency Data Request.

Arizona Department of Economic Security. (2023). [Division of Benefits and Medical Eligibility data set]. Unpublished raw data received from the First Things First State Agency Data Request.

Arizona Department of Education (2023). [AzMERIT dataset]. Custom tabulation of unpublished data.

Arizona Department of Education. (2023). [Chronic absence dataset]. Custom tabulation of unpublished data.

Arizona Department of Education. (2023). [Graduation & dropout dataset]. Custom tabulation of unpublished data.

Arizona Department of Education. (2023). [Health & Nutrition dataset]. Custom tabulation of unpublished data.

Arizona Department of Education (2023). [Oct 1 enrollment dataset]. Custom tabulation of unpublished data.

Arizona Department of Education (2023). [Special Education dataset]. Custom tabulation of unpublished data.

Arizona Department of Health Services (2023). [Child unintentional injuries dataset]. Unpublished data received by request.

Arizona Department of Health Services. (2023). [Immunizations dataset]. Unpublished raw data received from the First Things First State Agency Data Request.

Arizona Department of Health Services. (2023). [Infectious disease dataset]. Unpublished raw data received from the First Things First State Agency Data Request.

Arizona Department of Health Services (2023). [Opioid and Neonatal Abstinence Syndrome dataset]. Unpublished data received by request.

Arizona Department of Health Services (2023). [WIC dataset]. Unpublished data received by request.

Arizona Department of Health Services, Bureau of Public Health Statistics. (2023). [Vital Statistics Dataset]. Unpublished data received from the First Things First State Agency Data Request.

Arizona Department of Health Services, Office of Disease Prevention and Health Promotion. (2022). Health Status Profile of American Indians in Arizona, 2018-2020 Reports. Retrieved from https://pub.azdhs.gov/health-stats/report/hspam/index.php

Arizona Department of Health Services, Office of Disease Prevention and Health Promotion. (2023). Arizona Health Status and Vital Statistics, 2016-2021 Annual Reports. Retrieved from https://pub.azdhs.gov/health-stats/report/ahs/index.php

Arizona Office of Economic Opportunity. (2023). Local area unemployment statistics (LAUS). Retrieved from https://www.azcommerce.com/oeo/labor-market/

First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

First Things First (2023). Quality First, a Signature Program of First Thing First. Unpublished data received by request.

Recht, H. (2023). censusapi: Retrieve Data from the Census APIs. R package version 0.8.0, https://github.com/hrecht/censusapi, https://www.hrecht.com/censusapi/

Walker, K., Herman, M. (2023). tidycensus: Load US Census Boundary and Attribute Data as 'tidyverse' and 'sf'-Ready Data Frames. R package version 1.5, https://walker-data.com/tidycensus/

U.S. Census Bureau. (2023). 2020 Decennial Census, Tables P1, P4, P11, P12A, P12B, P12C, P12D, P12E, P12F, P12G, P12H, P14, P20, P32, P41. Accessed via API using the TidyCensus and CensusAPI packages.

U.S. Census Bureau. (2012). 2010 Decennial Census, Tables P1, P14, P20. Accessed via API using the TidyCensus and CensusAPI packages.

U.S. Census Bureau. (2023). American Community Survey 5-Year Estimates, 2017-2021, Table B05009, B09001, B10002, B14003, B15002, B16001, B16002, B16005, B17001, B17002, B17006, B17022, B19126, B23008, B23025, B25002, B25106, B27001, B28005, B28008, B28010. Accessed via API using the TidyCensus and CensusAPI packages.

U.S. Census Bureau. (2023). 2022, 2020, & 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] Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: Coming of age. Annual review of public health, 32, 381-398.

[2] Ibid

[3] Maggi, S., Irwin, L. J., Siddiqi, A., & Hertzman, C. (2010). The social determinants of early child development: An overview. *Journal of paediatrics and child health*, *46*(11), 627-635.

[4] Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: coming of age. *Annual review of public health*, *32*, 381-398.

[5] Hertzman, C. (1999). The biological embedding of early experience and its effects on health in adulthood. *Annals of the New York Academy of Sciences*, *896*(1), 85-95.

[6] Karoly, L. A., Kilburn, M. R., & Cannon, J. S. (2006). *Early childhood interventions: Proven results, future promise*. Rand Corporation.

[7] World Health Organization. (2010). A conceptual framework for action on the social determinants of health. https://www.who.int/publications/i/item/9789241500852

[8] Lynch, E. E., Malcoe, L. H., Laurent, S. E., Richardson, J., Mitchell, B. C., & Meier, H. C. (2021). The legacy of structural racism: Associations between historic redlining, current mortgage lending, and health. *SSM-population health*, *14*, 100793.

[9] Walters, Beltran, R., Huh, D., & Evans-Campbell, T. (2010). Dis-placement and Dis-ease: Land, Place, and Health Among American Indians and Alaska Natives. In *Communities, Neighborhoods, and Health* (pp. 163–199). Springer New York. https://doi.org/10.1007/978-1-4419-7482-2_10

[10] Gracey, M., and King, M. 2009. "Indigenous health: Determinants and disease patterns." *Lancet*, 374: 65–75.

[11] Keller, S., Lancaster, V., & Shipp, S. (2017). Building capacity for data-driven governance: Creating a new foundation for democracy. *Statistics and Public Policy*, *4*(1), 1-11. https://doi.org/10.1080/2330443X.2017.1374897

[12] Capacity Building Center for States. (2019). *A data-driven approach to service array guide [revised].* Washington, DC: Children's Bureau, Administration for Children and Families, U.S. Department of Health and Human Services. Retrieved August 11, 2023 from https://capacity.childwelfare.gov/sites/default/files/media_pdf/data-driven-approach-cp-00016.pdf

[13] Kingsley, G. T., Coulton, C. J., & Pettit, K. L. (2014). *Strengthening communities with neighborhood data.* Washington, DC: Urban Institute. Retrieved August 2, 2023 from https://www.neighborhoodindicators.org/sites/default/files/publications/13805-urban_kingsley.pdf

[14] Ravaghi, H., Guisset, A. L., Elfeky, S., Nasir, N., Khani, S., Ahmadnezhad, E., & Abdi, Z. (2023). A scoping review of community health needs and assets assessment: Concepts, rationale, tools and uses. *BMC Health Services Research*, *23*(1), 44. https://doi.org/10.1186/s12913-022-08983-3

[15] Hong, K., Dragan, K., & Glied, S. (2019). Seeing and hearing: The impacts of New York City's universal pre-kindergarten program on the health of low-income children. *Journal of Health Economics*, *64*, 93-107. https://doi.org/10.1016/j.jhealeco.2019.01.004

[16] Bakken, L., Brown, N., & Downing, B. (2017). Early childhood education: The long-term benefits. *Journal of Research in Childhood Education*, *31*(2), 255-269. https://doi.org/10.1080/02568543.2016.1273285

[17] National Congress of American Indians. (2022, March 10). *American Indians and Alaska natives living on reservations have the highest 2020 census undercount.* Retrieved August 7, 2023 from

https://www.ncai.org/news/articles/2022/03/10/american-indians-and-alaska-natives-living-on-reservations-have-the-highest-2020-census-undercount

[18] Associated Press & Schneider, M. (2020, September 30). *Census takers: We're being told to finish early, cut corners.* WHYY. https://whyy.org/articles/census-takers-were-being-told-to-finish-early-cut-corners/

[19] Del Real, J. A. (2020, December 18). *When it comes to the census, the damage among immigrants is already done.* The New York Times. Retrieved August 7, 2023 from https://www.nytimes.com/2019/06/27/us/supreme-court-citizenship-census-immigrants.html

[20] Cohn, D., & Passel, J. S. (2022, June 8). *2020 census quality: Key facts.* Pew Research Center. Retrieved August 7, 2023 from https://www.pewresearch.org/short-reads/2022/06/08/key-facts-about-the-quality-of-the-2020-census/

[21] Schneider, M., & Fonseca, F. (2022, March 9). *Native Americans fret as report card released on 2020 census.* Associated Press News. Retrieved August 7, 2023 from https://apnews.com/article/covid-health-race-and-ethnicity-racial-injustice-native-americans-3f68d4d1e2b6c70223e99452a1a43be1

[22] Khubba, S., Heim, K., & Hong, J. (2022, March 10). *National census coverage estimates for people in the United States by demographic characteristics.* United States Census Bureau. Retrieved August 9, 2023 from https://www2.census.gov/programs-surveys/decennial/coverage-measurement/pes/national-census-coverage-estimates-by-demographic-characteristics.pdf

[23] United States Census Bureau. (2022, March 10). *Census Bureau releases estimates of undercount and overcount in the 2020 census.* Retrieved August 9, 2023 from https://www.census.gov/newsroom/press-releases/2022/2020-census-estimates-of-undercount-and-overcount.html

[24] United States Census Bureau. (2021, November 23). *Why we conduct the decennial census of population and housing*. Retrieved August 7, 2023 from https://www.census.gov/programs-surveys/decennial-census/about/why.html

[25] Dillingham, S. (2022b, March 22). *2020 census and tribal communities*. United States Census Bureau. Retrieved August 7, 2023 from https://www.census.gov/newsroom/blogs/director/2020/09/2020_census_and_trib.html

[26] Knudsen, E. I., Heckman, J. J., Cameron, J. L., & Shonkoff, J. P. (2006). Economic, neurobiological, and behavioral perspectives on building America's future workforce. *Proceedings of the National Academy of Sciences - PNAS, 103*(27), 10155–10162. https://doi.org/10.1073/pnas.0600888103

[27] Heckman, J. J., & Mosso, S. (2014). The economics of human development and social mobility. *Annual Review of Economics, 6*(1), 689–733. https://doi.org/10.1146/annurev-economics-080213-040753

[28] Centers of Disease Control and Prevention. (2023, September 18). *Minority health: Racism and health*. Retrieved September 21, 2023 from https://www.cdc.gov/minorityhealth/racism-disparities/index.html

[29] Williams, D. R., & Cooper, L. A. (2019). Reducing racial inequities in health: Using what we already know to take action. *International Journal of Environmental Research and Public Health*, *16*(4), 606. https://doi.org/10.3390/ijerph16040606

[30] Olivet, J., Wilkey, C., Richard, M., Dones, M., Tripp, J., Beit-Arie, M., Yampolskaya, S., & Cannon, R. (2021). Racial inequality and homelessness: Findings from the SPARC study. *The ANNALS of the American Academy of Political and Social Science, 693*(1), 82-100. https://doi.org/10.1177/0002716221991040

[31] Dean, J., & Cornell Chronicle. (2023, February 16). *'Staggering' disparities: Homelessness risk varies across race*. Cornell University News. Retrieved September 21, 2023 from https://news.cornell.edu/stories/2023/02/staggering-disparities-homelessness-risk-varies-across-race

[32] Lofthouse. (2019). Institutions and Economic Development on Native American Lands. *The Independent Review* , *24*(2), 227–248. Retrieved February 5, 2024 from https://www.independent.org/pdf/tir/tir_24_2_04_lofthouse.pdf

[33] Centers for Disease Control and Prevention. (2023, June 27). *Health Equity: Prioritizing minority mental health*. Retrieved September 21, 2023 from https://www.cdc.gov/healthequity/features/minority-mental-health/index.html

[34] Tai, D. B. G., Shah, A., Doubeni, C. A., Sia, I. G., & Wieland, M. L. (2020). The disproportionate impact of COVID-19 on racial and ethnic minorities in the United States. *Clinical Infectious Diseases, 72*(4), 703–706. https://doi.org/10.1093/cid/ciaa815

[35] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[36] United Nations Department of Economic and Social Affairs. (February 2023). Why Indigenous languages matter: The International Decade on Indigenous Languages 2022-2032. Future of the World Policy Brief No. 151. Retrieved February 5, 2024 from https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB151.pdf

[37] McCarty, T.L. (2021). The holistic benefits of education for Indigenous language revitalisation and reclamation (ELR^2). *Journal of Multilingual and Multicultural Development, 42*(10), 927-940. https://doi.org/10.1080/01434632.2020.1827647

[38] U.S. Department of Health & Human Services, Administration for Native Americans. (n.d.). *Native languages.* Retrieved February 5, 2024 from http://www.acf.hhs.gov/programs/ana/programs/native-language-preservationmaintenance

[39] First Things First (2023). *2023 Building brighter futures: Arizona's early childhood opportunities report*. Retrieved February 5, 2024 from https://www.firstthingsfirst.org/wp-content/uploads/2023/12/State-Needs-and-Assets-Report-2023.pdf

[40] Leggat-Barr, K., Uchikoshi, F., & Goldman, N. (2021). COVID-19 risk factors and mortality among Native Americans. *Demographic Research, 45*, 1185-1218. https://doi.org/10.1101/2021.03.13.21253515

[41] Akee, R., & Reber, S. (2022, March 9). *American Indians and Alaska Natives are dying of COVID-19 at shocking rates.* Brookings. Retrieved August 7, 2023 from https://www.brookings.edu/articles/american-indians-and-alaska-natives-are-dying-of-covid-19-at-shocking-rates/

[42] Healy, J., & Blue, V. J. (2021, January 12). *Tribal elders are dying from the pandemic, causing a cultural crisis for American Indians.* The New York Times. https://www.nytimes.com/2021/01/12/us/tribal-elders-native-americans-coronavirus.html

[43] Fonseca, F., & Sullivan, T. (2020, May 12). *'The grief is so unbearable': Virus takes toll on Navajo*. PBS NewsHour. Retrieved August 21, 2023, from https://www.pbs.org/newshour/health/the-grief-is-so-unbearable-virus-takes-toll-on-navajo

[44] 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://web.archive.org/web/20130228031031/https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/docs/benefits-of-being-bilingual.pdf

[45] 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

[46] Grote, K. S., Scott, R. M., & Gilger, J. (2021). Bilingual advantages in executive functioning: Evidence from a low-income sample. *First Language, 41*(6), 677–700. https://doi.org/10.1177/01427237211024220

[47] van den Noort, M., Struys, E., Bosch, P., Jaswetz, L., Perriard, B., Yeo, S., Barisch, P., Vermeire, K., Lee, S., & Lim, S. (2019). Does the bilingual advantage in cognitive control exist and if so, what are its modulating factors? A systematic review. *Behavioral Sciences, 9*(3), 27. http://dx.doi.org/10.3390/bs9030027

[48] Antoniou, M. (2019). The advantages of bilingualism debate. *Annual Review of Linguistics, 5*(1), 395–415. https://doi.org/10.1146/annurev-linguistics-011718-011820

[49] Administration for Children & Families. (2016, June 29). *Promoting the development of dual language learners: Helping all children succeed*. U.S. Department of Health and Human Services. Retrieved September 21, 2023 from https://www.acf.hhs.gov/archive/blog/2016/06/promoting-development-dual-language-learners

[50] Robbins, T., Stagman, S., & Smith, S. (2012, October). *Young children at risk: National and state prevalence of risk factors.* National Center for Children in Poverty. Retrieved September 21, 2023 from http://www.nccp.org/publication/young-children-at-risk/

[51] The National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the educational success of children and youth learning English: Promising futures* (R. Takanishi, & L. Menestrel, Eds.). Washington, DC: The National Academies Press. https://doi.org/10.17226/24677

[52] Administration for Children & Families. (2016, June 29). *Promoting the development of dual language learners: Helping all children succeed*. U.S. Department of Health and Human Services. Retrieved September 21, 2023 from https://www.acf.hhs.gov/archive/blog/2016/06/promoting-development-dual-language-learners

[53] Arizona Department of Education (2023). [PHLOTE Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team.

[54] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[55] Taylor, Z. E., & Conger, R. D. (2017). Promoting strengths and resilience in single-mother families. *Child Development, 88*(2), 350-358. https://doi.org/10.1111/cdev.12741

[56] Pilkauskas, N. V., Amorim, M., & Dunifon, R. E. (2020). Historical trends in children living in multigenerational households in the United States: 1870–2018. *Demography, 57*(6), 2269-2296. https://doi.org/10.1007/s13524-020-00920-5

[57] Gentles-Gibbs, N., & Zema, J. (2020). It's not about them without them: Kinship grandparents' perspectives on family empowerment in public child welfare. *Children and Youth Services Review*, *108*, 104650. https://doi.org/10.1016/j.childyouth.2019.104650

[58] Waldfogel, J., Craigie, T., & Brooks-Gunn, J. (2010). Fragile families and child wellbeing. *The Future of Children, 20*(2), 87–112. https://doi.org/10.1353/foc.2010.0002

[59] Musick, K., & Meier, A. (2010). Are both parents always better than one? Parental conflict and young adult well-being. *Social Science Research, 39*(5), 814–830. https://doi.org/10.1016/j.ssresearch.2010.03.002

[60] Liu, S. H., & Heiland, F. (2012). Should we get married? The effect of parents' marriage on out-of-wedlock children. *Economic Inquiry, 50*(1), 17–38. https://doi.org/10.1111/j.1465-7295.2010.00248.x

[61] Amato, P. R. (2005). The impact of family formation change on the cognitive, social, and emotional well-being of the next generation. *The Future of Children, 15*(2), 75-96. https://www.jstor.org/stable/3556564

[62] Irvin, K., Fahim, F., Alshehri, S., & Kitsantas, P. (2018). Family structure and children's unmet health-care needs. *Journal of Child Health Care, 22*(1), 57-67. https://doi.org/10.1177/1367493517748372

[63] Grafova, I. B., Monheit, A. C., & Kumar, R. (2022). Income shocks and out-of-pocket health care spending: Implications for single-mother families. *Journal of Family and Economic Issues, 43*(3), 489-500. https://doi.org/10.1007/s10834-021-09780-6

[64] Taylor, Z. E., & Conger, R. D. (2014). Risk and resilience processes in single-mother families: An interactionist perspective. In Sloboda, Z. & Petras, H. (Eds.), *Defining prevention science* (pp. 195-217). Springer, Boston, MA. https://doi.org/10.1007/978-1-4899-7424-2_9

[65] Cabrera, N. J., Volling, B. L., & Barr, R. (2018). Fathers are parents, too! Widening the lens on parenting for children's development. *Child Development Perspectives, 12*(3), 152-157. https://doi.org/10.1111/cdep.12275

[66] Coles, R. L. (2015). Single-father families: A review of the literature. *Journal of Family Theory & Review*, *7*(2), 144-166. https://doi.org/10.1111/jftr.12069

[67] Ellis, R. R., & Simmons, T. (2014). Coresident grandparents and their grandchildren: 2012. *Current Population Reports*, pp. 20-576. U.S. Census Bureau. Retrieved August 29, 2023 from https://www.census.gov/library/publications/2014/demo/p20-576.html

[68] Pilkauskas, N. V., Amorim, M., & Dunifon, R. E. (2020). Historical trends in children living in multigenerational households in the United States: 1870–2018. *Demography*, *57*(6), 2269-2296. https://doi.org/10.1007/s13524-020-00920-5

[69] Amorim, M., Dunifon, R., & Pilkauskas, N. (2017). The magnitude and timing of grandparental coresidence during childhood in the United States. *Demographic Research, 37*, 1695–1706. https://doi.org/10.4054/DemRes.2017.37.52

[70] Cohn, D., & Passel, J. S. (2018, April 5). *Record 64 million Americans live in multigenerational households*. Pew Research Center. Retrieved August 16, 2023 from https://www.pewresearch.org/short-reads/2018/04/05/a-record-64-million-americans-live-in-multigenerational-households/

[71] Cohn, D., Horowitz, J. M., Minkin, R., Fry, R., & Hurst, K. (2022, March 24). *Financial issues top the list of reasons U.S. adults live in multigenerational homes.* Pew Research Center. Retrieved August 16, 2023 from https://www.pewresearch.org/social-trends/2022/03/24/financial-issues-top-the-list-of-reasons-u-s-adults-live-in-multigenerational-homes/

[72] Mustillo, S., Li, M., & Wang, W. (2021). Parent work-to-family conflict and child psychological well-being: Moderating role of grandparent coresidence. *Journal of Marriage and Family, 83*(1), 27-39. https://doi.org/10.1111/jomf.12703

[73] 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 August 16, 2021 from http://scholarworks.wmich.edu/grandfamilies/vol3/iss1/4

[74] Harvey, H., & Dunifon, R. (2023). Why mothers double up: The role of demographic, economic, and family characteristics. *Journal of Marriage and Family, 85*(3), 845-868. https://doi.org/10.1111/jomf.12903

[75] Augustine, J. M., & Raley, R. K. (2013). Multigenerational households and the school readiness of children born to unmarried mothers. *Journal of Family Issues, 34*(4), 431–459. https://doi.org/10.1177/0192513X12439177

[76] Pilkauskas, N. V., Amorim, M., & Dunifon, R. E. (2020). Historical trends in children living in multigenerational households in the United States: 1870–2018. *Demography, 57*(6), 2269-2296. https://doi.org/10.1007/s13524-020-00920-5

[77] Livingston, G. (2018). *The changing profile of unmarried parents.* Pew Research Center. Retrieved August 16, 2021 from https://www.pewsocialtrends.org/2018/04/25/the-changing-profile-of-unmarried-parents/

[78] Vandivere, S., Yrausquin, A., Allen, T., Malm, K., & McKlindon, A. (2012, November 30). *Children in nonparental care: A review of the literature and analysis of data gaps.* U.S. Department of Health and Human Services. Retrieved August 16, 2021 from http://aspe.hhs.gov/basic-report/children-nonparental-care-review-literature-and-analysis-data-gaps

[79] Rubin, Springer, S. H., Zlotnik, S., Kang-Yi, C. D., Szilagyi, M., Forkey, H., Harmon, D., Jaudes, P., Jones, V. F., Lee, P., Nalven, L., Sagor, L., Schulte, E., & Zetley, L. W. (2017). Needs of kinship care families and pediatric practice. *Pediatrics, 139*(4). https://doi.org/10.1542/peds.2017-0099

[80] Dolbin-MacNab, M. L., & Stucki, B. D. (2015). *Grandparents raising grandchildren*. American Association for Marriage and Family Therapy. Retrieved August 29, 2023 from https://www.aamft.org/Consumer_Updates/grandparents.aspx

[81] Generations United (2011). *Family matters: Multigenerational families in a volatile economy*. Retrieved October 15, 2021 from https://www.gu.org/app/uploads/2018/05/SignatureReport-Family-Matters-Multigen-Families.pdf

[82] Baker, L. A., Silverstein, M., & Putney, N. M. (2008). Grandparents raising grandchildren in the United States: Changing family forms, stagnant social policies. *Journal of Societal & Social Policy*, *7*, 53. Retrieved August 29, 2023 from https://pubmed.ncbi.nlm.nih.gov/20585408/

[83] Chan, K.L., Chen, M., Lo, K.M.C, Chen, Q., Kelley, S., & Ip, P. (2019). The effectiveness of Interventions for grandparents raising grandchildren: A meta-analysis. *Research on Social Work Practice*, *29*(6), 607-617. https://doi.org/10.1177/1049731518798470

[84] 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. https://doi.org/10.2307/1131097

Robbins R., Robbins S., & Stennerson B. (2013). Native American family resilience. In: Becvar D. (Ed.) *Handbook of family resilience.* Springer, New York, NY. https://doi.org/10.1007/978-1-4614-3917-2_12

[85] Red Horse, J. (1997). Traditional American Indian family systems. *Families, Systems, & Health, 15*(3), 243-250. https://doi.org/10.1037/h0089828

[86] Conference on Research Issues. (1981). *The American Indian family: Strengths and stresses.* (F. Hoffman, Ed.). Isleta, NM: American Indian Social Research and Development Associates. Retrieved February 5, 2024 from https://catalog.princeton.edu/catalog/991565993506421

[87] Mutchler, J.E., Baker, L.A., Lee, S.(2007). Grandparents responsible for grandchildren in Native-American families. *Social Science Quarterly, 88*(4), 990. https://doi.org/10.1111/j.1540-6237.2007.00514.x

[88] Byers, L. (2010). Native American grandmothers: Cultural tradition and contemporary necessity. *Journal of Ethnic & Cultural Diversity in Social Work, 19*(4), 305-316. https://doi.org/10.1080/15313204.2010.523653

[89] National Academies of Sciences, Engineering, and Medicine. (2019). *A roadmap to reducing child poverty*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25246

[90] Ratcliffe, C., & McKernan, S. (2012). *Child poverty and its lasting consequences. Low-Income Working Families Series*. The Urban Institute. Retrieved August 17, 2023 from https://www.urban.org/sites/default/files/publication/32756/412659-Child-Poverty-and-Its-Lasting-Consequence.PDF

[91] Duncan, G., Ziol-Guest, K., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development, 81*(1), 306-325. Retrieved August 22, 2023 from https://doi.org/10.1111/j.1467-8624.2009.01396.x

[92] Murphey, D., & Redd, Z. (2014, January 8). *5 ways poverty harms children*. Child Trends. Retrieved August 21, 2023 from https://www.childtrends.org/publications/5-ways-poverty-harms-children

[93] Healthy People 2030. (n.d.) *Economic stability.* Office of Disease Prevention and Health Promotion. Retrieved August 16, 2023 from https://health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability

[94] Ascend at the Aspen Institute. (2019, April 1). *Family economic stability: Work supports and tax credits*. Robert Wood Johnson Foundation. Retrieved August 22, 2023 from https://www.rwjf.org/en/insights/our-research/2019/04/family-economic-stability.html

[95] Wagmiller, R., & Adelman, R. (2009). *Children and intergenerational poverty: The long-term consequences of growing up poor.* National Center for Children in Poverty. Retrieved August 22, 2023 from http://www.nccp.org/publication/childhood-and-intergenerational-poverty/

[96] Duncan, G., Ziol-Guest, K., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development, 81*(1), 306-325. Retrieved August 22, 2023 from https://doi.org/10.1111/j.1467-8624.2009.01396.x

[97] National Academies of Sciences, Engineering, and Medicine (2023). *Reducing intergenerational poverty*. Washington, DC: The National Academies Press. https://doi.org/10.17226/27058

[98] Office of Family Assistance. (2016). *TANF-ACF-IM-2016-03 (Strengthening TANF outcomes by developing two-generation approaches to build economic security).* U.S. Department of Health and Human Services. Retrieved August 18, 2023 from https://www.acf.hhs.gov/ofa/policy-guidance/tanf-acf-im-2016-03

[99] Cornell, S., & Kalt, J.P. (2010). American Indian self-determination: The political economy of a successful

policy. *JOPNA Working Papers*. Harvard University. Retrieved February 5, 2024 from http://nrs.harvard.edu/urn-3:HUL.InstRepos:4553307

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

[101] Ibid.

[102] Luby, J. L., Constantino, J. N., & Barch, D. M. (2022). Poverty and the developing brain. *Cerebrum*. Retrieved August 22, 2023 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9224364/pdf/cer-04-22.pdf

[103] Murphey, D., & Redd, Z. (2014, January 8). *5 Ways Poverty Harms Children.* Child Trends. Retrieved August 21, 2023 from https://www.childtrends.org/publications/5-ways-poverty-harms-children

[104] Hair, N. L., Hanson, J. L., Wolfe, B. L., & Pollak, S. D. (2015). Association of child poverty, brain development, and academic achievement. *JAMA Pediatrics*, *169*(9), 822–829. https://doi.org/10.1001/jamapediatrics.2015.1475

[105] Brooks-Gunn, J., & Duncan, G. (1997). The effects of poverty on children. *The Future of Children, 7(2)*, 55-71. https://doi.org/10.2307/1602387

[106] McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53(2*), 185-204. https://doi.org/10.1037/0003-066X.53.2.185

[107] Ratcliffe, C., & McKernan, S. (2012). *Child poverty and its lasting consequences*. *Low-Income Working Families Series*. The Urban Institute. Retrieved August 17, 2023 from https://www.urban.org/sites/default/files/publication/32756/412659-Child-Poverty-and-Its-Lasting-Consequence.PDF

[108] Duncan, G., Ziol-Guest, K., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development, 81*(1), 306-325. Retrieved August 22, 2023 from https://srcd.onlinelibrary.wiley.com/doi/full/10.1111/j.1467-8624.2009.01396.x

[109] Gupta, R. P., de Wit, M. L., & McKeown, D. (2007). The impact of poverty on the current and future health status of children. *Pediatrics & Child Health, 12*(8), 667-672. https://doi.org/10.1093/pch/12.8.667

[110] Jensen, S. K. G., Berens, A. E., & Nelson, C. A. (2017). Effects of poverty on interacting biological systems underlying child development. *The Lancet Child & Adolescent Health*, *1*(3), 225–239. https://doi.org/10.1016/S2352-4642(17)30024-X

[111] Brisson, D., McCune, S., Wilson, J. H., Speer, S. R., McCrae, J. S., & Calhoun, K. H. (2020). A systematic review of the association between poverty and biomarkers of toxic stress. *Journal of Evidence-Based Social Work*, *17*(6), 696-713. https://doi.org/10.1080/26408066.2020.1769786

[112] Crouch, Probst, J. C., Radcliff, E., Bennett, K. J., & McKinney, S. H. (2019). Prevalence of adverse childhood experiences (ACEs) among US children. Child Abuse & Neglect, 92, 209–218. https://doi.org/10.1016/j.chiabu.2019.04.010

[113] McEwen, & Gregerson, S. F. (2019). A Critical Assessment of the Adverse Childhood Experiences Study at 20 Years. *American Journal of Preventive Medicine*, *56*(6), 790–794. https://doi.org/10.1016/j.amepre.2018.10.01

[114] National Academies of Sciences, Engineering, and Medicine. (2019). A Roadmap to Reducing Child Poverty. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25246

[115] United States Government. (n.d.). *Welfare benefits or Temporary Assistance for Needy Families (TANF).* Retrieved September 27, 2023 from https://www.usa.gov/welfare-benefits

[116] Gall, A., Anderson, K., Howard, K., Diaz, A., King, A., Willing, E., Connolly, M., Lindsay, D., & Garvey, G. (2021). Wellbeing of Indigenous peoples in Canada, Aotearoa (New Zealand) and the United States: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(11), 5832. https://doi.org/10.3390/ijerph18115832

[117] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[118] Ibid.

[119] Economic Research Service, U.S. Department of Agriculture. (2021). *Definitions of Food Security.* Retrieved October 23, 2023 from https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/

[120] Bruening, M., Dinour, L. M., & Chavez, J. B. R. (2017). Food insecurity and emotional health in the USA: A systematic narrative review of longitudinal research. *Public Health Nutrition, 20*(17), 3200-3208. https://doi.org/10.1017/S1368980017002221

[121] Baer, T. E., Scherer, E. A., Fleegler, E. W., & Hassan, A. (2015). Food insecurity and the burden of health-related social problems in an urban youth population. *Journal of Adolescent Health, 57*(6), 601-607. https://doi.org/10.1016/j.jadohealth.2015.08.013

[122] Zaslow, M., Bronte-Tinkew, J., Capps, R., Horowitz, A., Moore, K. A., & Weinstein, D. (2009). Food security during infancy: implications for attachment and mental proficiency in toddlerhood. *Maternal and Child Health Journal*, *13*, 66-80. https://doi.org/10.1007/s10995-008-0329-1

[123] Kimbro, R. T., & Denney, J. T. (2015). Transitions into food insecurity associated with behavioral problems and worse overall health among children. *Health Affairs, 34*(11), 1949-1955. https://doi.org/10.1377/hlthaff.2015.0626

[124] Knowles, M., Rabinowich, J., Ettinger de Cuba, S., Cutts, D. B., & Chilton, M. (2016). "Do you wanna breathe or eat?": Parent perspectives on child health consequences of food insecurity, trade-offs, and toxic stress. *Maternal and Child Health Journal, 20*, 25-32. https://doi.org/10.1007/s10995-015-1797-8

[125] Johnson, A. D., & Markowitz, A. J. (2018). Food insecurity and family well-being outcomes among households with young children. *The Journal of Pediatrics, 196*, 275-282. https://doi.org/10.1016/j.jpeds.2018.01.026

[126] No Kid Hungry Center for Best Practices (2022). Supplemental Nutrition Assistance Program (SNAP) Overview. Retrieved December 2023 from https://bestpractices.nokidhungry.org/resource/supplemental-nutrition-assistance-program-snap-overview

[127] 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 September 27, 2023 from http://frac.org/pdf/snap_and_public_health_2013.pdf

[128] United States Department of Agriculture (2023). WIC program: Average monthly benefit per person. Retrieved December 12, 2023 from https://fns-prod.azureedge.us/sites/default/files/resource-files/25wifyavgfd-costs-12.pdf

[129] United States Department of Agriculture. (n.d.). *How to participate in summer meals*. Retrieved October 26, 2021, from https://fns-prod.azureedge.net/sites/default/files/resource-files/SFSP-Fact-Sheet.pdf

[130] United States Department of Agriculture (2022). *Child nutrition COVID-19 waivers*. Retrieved February 6, 2024 from https://www.fns.usda.gov/disaster-assistance/child-nutrition-covid-19-waivers

[131] Arizona Department of Education. (2021, June 14). *Introduction to the CACFP* [Video]. Vimeo. https://vimeo.com/562872764

[132] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[133] Healthy People 2030. (n.d.). *Social determinants of health*. Office of Disease Prevention and Health Promotion. Retrieved August 16, 2023 from https://health.gov/healthypeople/priority-areas/social-determinants-health

[134] Berger, R.P., Fromkin, J.B., Stutz, H., Makoroff, K., Scribano, P.V., Feldman, K., Tu, L.C., & Fabio, A. (2011). Abusive head trauma during a time of increased unemployment: A multicenter analysis. *Pediatrics*, *128*(4), 637-643. https://doi.org/10.1542/peds.2010-2185

[135] Isaacs, J. B. (2013, March 25). *Unemployment from a child's perspective*. Urban Institute. Retrieved September 14, 2021 from https://www.urban.org/research/publication/unemployment-childs-perspective

[136] National Center for Children in Poverty. (2014). *Arizona demographics for low-income children*. Retrieved September 20, 2023 fromhttp://www.nccp.org/profiles/AZ_profile_6.html

[137] Cornell, S., & Kalt, J.P. (2010). American Indian self-determination: The political economy of a successful

policy. *JOPNA Working Papers*. Harvard University. Retrieved February 5, 2024 from http://nrs.harvard.edu/urn-3:HUL.InstRepos:4553307

[138] Ascend at the Aspen Institute. (2019, April 1). *Family economic stability: Work supports and tax credits*. Robert Wood Johnson Foundation. Retrieved August 22, 2023 from https://www.rwjf.org/en/insights/our-research/2019/04/family-economic-stability.html

[139] Office of Family Assistance. (2016). *TANF-ACF-IM-2016-03 (Strengthening TANF outcomes by developing two-generation approaches to build economic security).* U.S. Department of Health and Human Services. Retrieved August 18, 2023 from https://www.acf.hhs.gov/ofa/policy-guidance/tanf-acf-im-2016-03

[140] Ascend at the Aspen Institute. (n.d.) *The 2Gen approach*. Retrieved August 22, 2023 from https://ascend.aspeninstitute.org/2gen-approach/#:~:text=Two%2Dgeneration%20(2Gen)%20approaches,one%20generation%20to%20the%20next.

[141] Pina, G., Moore, K. A., Sacks, V., & McClay, A. (2022, December 14). *Two-generation programs may have long-term benefits, according to simulation*. Child Trends. Retrieved August 22, 2023 from https://www.childtrends.org/publications/two-generation-programs-may-have-long-term-benefits-according-to-simulation

[142] Morgan, A., Champion, E., & Harrison E. (2022, January 7). *How two-generation programs can advance housing stability*. Urban Institute. Retrieved August 22, 2023 from https://www.urban.org/urban-wire/how-two-generation-programs-can-advance-housing-stability

[143] Children's Bureau, an Office of the Administration of Children & Families. (2023, March). *Two-generation approaches to supporting family well-being*. Child Welfare Information Gateway. Retrieved August 22, 2023 from https://www.childwelfare.gov/pubPDFs/bulletins-2gen.pdf

[144] Uchitelle, L. (2019, July 11). *Unemployment is low, but that's only part of the story*. Retrieved February 5, 2024 from https://www.nytimes.com/2019/07/11/business/low-unemployment-not-seeking-work.html

[145] McCoy-Roth, M., Mackintosh, B., & Murphey, D. (2012, February 15). When the bough breaks: The effects of homelessness on young children. *Child Trends, 3*(*1*). Retrieved September 14, 2021 from https://cms.childtrends.org/wp-content/uploads/2012/02/2012-08EffectHomelessnessChildren.pdf

[146] Gabriel, S., & Painter, G. (2017). *Housing affordability: Why does it matter, how should it be measured, and why is there an affordability problem?* American Enterprise Institute. Retrieved April 10, 2017 from https://www.aei.org/wp-content/uploads/2017/04/CHA-Panel-1.pdf

[147] Federal Interagency Forum on Child and Family Statistics. (2015). *America's children: Key national indicators for well-being, 2015.* Child Stats. Retrieved September 14, 2021 from https://www.childstats.gov/pdf/ac2015/ac_15.pdf

[148] Schwartz, M., & Wilson, E. (n.d.). *Who can afford to live in a home? A look at data from the 2006 American Community Survey.* United States Census Bureau. Retrieved September 14, 2021 from https://cdn2.hubspot.net/hubfs/4408380/PDF/General-Housing-Homelessness/who-can-afford.pdf

[149] Enterprise Community Partners. (2014). *Impact of affordable housing on families and communities: A review of the evidence base.* Homes for All San Mateo County. Retrieved August 21, 2023 from https://homeforallsmc.org/wp-content/uploads/2017/05/Impact-of-Affordable-Housing-on-Families-and-Communities.pdf.

[150] McCoy-Roth, M., Mackintosh, B., & Murphey, D. (2012). When the bough breaks: The effects of homelessness on young children. *Child Health, 3*(1). Retrieved September 20, 2023 from https://cms.childtrends.org/wp-content/uploads/2012/02/2012-08EffectHomelessnessChildren.pdf

[151] Kunesh, P. (Ed.). (2018). *Tribal leaders handbook on homeownership*. Federal Reserve Bank of Minneapolis and Enterprise Community Partners. Retrieved February 5, 2024 from https://www.minneapolisfed.org/~/media/files/community/indiancountry/resources-education/cicd-tribal-leaders-handbook-on-homeownership.pdf?la=en

[152] Center for Indian Country Development. (2018). *Tribal leaders handbook on homeownership*. Federal Reserve Bank of Minneapolis and Enterprise Community Partners. Retrieved February 5, 2024 from https://www.minneapolisfed.org/~/media/files/community/indiancountry/resources-education/cicd-tribal-leaders-handbook-on-homeownership.pdf?la=en

[153] Pindus, N., Kingsley, T., Biess, J., Levy, D., Simington, J., & Hayes, C. (2017). *Housing needs of American Indians and Alaska Natives in tribal areas: A report from the assessment of American Indian, Alaska Native, and Native Hawaiian housing needs: Executive summary.* US Department of Housing and Urban Development, Office of Policy Development and Research. Retrieved February 5, 2024 from https://www.huduser.gov/portal/publications/HNAIHousingNeeds.html

[154] Roller, Z., Gasteyer, S., Nelson, N., Lai, W., & Shingne, M.C. (2019). *Dig deep: Closing the water access gap in the United States*. DigDeep. Retrieved from https://www.digdeep.org/close-the-water-gap/

[155] Turcios, Y. (2023, March 22). *Digital access: A super determinant of health*. Substance Abuse and Mental Health Services Administration. Retrieved August 21, 2023 from https://www.samhsa.gov/blog/digital-access-super-determinant-health

[156] Rideout, V. J. & Katz, V. S. (2016). *Opportunity for all? Technology and learning in lower-income families. A report of the Families and Media Project.* The Joan Ganz Cooney Center at Sesame Workshop. Retrieved August 30, 2023 from https://files.eric.ed.gov/fulltext/ED574416.pdf

[157] U.S. Department of Commerce National Telecommunications and Information Administration (2023). *Tribal Broadband Connectivity Program*. Retrieved February 5, 2024 from https://www.ntia.gov/page/tribal-broadband-connectivity-program

[158] Herbert, C., Hermann, A., and McCue, D. (2018). Measuring housing affordability: Assessing the 30 percent of income standard. Cambridge, MA: Joint Center for Housing Studies of Harvard University. Retrieved September 14, 2021 from https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Herbert_Hermann_McCue_measuring_housing_affordability.pdf

[159] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[160] Ibid.

[161] Healthy People 2030. (n.d.). *Education Access and Quality*. Office of Disease Prevention and Health Promotion. Retrieved July 17, 2023 from https://health.gov/healthypeople/objectives-and-data/browse-objectives/education-access-and-quality

[162] National Research Council. (2012). *Key national education indicators: Workshop summary*. The National Academies Press. https://doi.org/10.17226/13453

[163] Healthy People 2020. (n.d.). *Adolescent health.* Office of Disease Prevention and Health Promotion. Retrieved July 17, 2023 from https://wayback.archive-it.org/5774/20220413181755/https://www.healthypeople.gov/2020/topics-objectives/topic/Adolescent-Health

[164] Cataldi, E. F., Bennett, C. T., & Chen, X. (2018). *First-generation students: College access, persistence, and postbachelor's outcomes.* National Center for Education Statistics. Retrieved September 20, 2023 from https://nces.ed.gov/pubs2018/2018421.pdf

[165] Child Trends Data Bank. (2014, July). *Parental education: Indicators on children and youth*. Retrieved September 7, 2021 from https://web.archive.org/web/20150525195005/http://www.childtrends.org/wp-content/uploads/2012/04/67-Parental_Education.pdf

[166] Rathbun, A., & McFarland, J. (2017). *Risk factors and academic outcomes in kindergarten through third grade*. National Center for Education Statistics. Retrieved September 7, 2021 from https://nces.ed.gov/programs/coe/pdf/coe_tgd.pdf

[167] The Annie E. Casey Foundation. (2013). *The first eight years: Giving kids a foundation for lifetime success*. Retrieved August 30, 2023 from http://www.aecf.org/m/resourcedoc/AECF-TheFirstEightYearsKCpolicyreport-2013.pdf

[168] DeAngelis, C. A., Holmes Erickson, H., & Ritter, G. W. (2020). What's the state of the evidence on pre-K programmes in the United States? A systematic review. *Educational Review*, *72*(4), 495-519. https://doi.org/10.1080/00131911.2018.1520688

[169] Allison, M. A., Attisha, E., Lerner, M., De Pinto, C. D., Beers, N. S., Gibson, E. J., Gorski, P., Kjolhede, C., O'Leary, S. C., Schumacher, H., & Weiss-Harrison, A. (2019). The link between school attendance and good health. *Pediatrics, 143*(2), e20183648. https://doi.org/10.1542/peds.2018-3648

[170] Allison, M. A., Attisha, E., Lerner, M., De Pinto, C. D., Beers, N. S., Gibson, E. J., Gorski, P., Kjolhede, C., O'Leary, S. C., Schumacher, H., & Weiss-Harrison, A. (2019). The link between school attendance and good health. *Pediatrics, 143*(2), e20183648. https://doi.org/10.1542/peds.2018-3648

[171] 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. https://doi.org/10.1177/0038040710383520

[172] Sugrue, E., Zuel, T., & LaLiberte, T. (2016). The ecological context of chronic school absenteeism in the elementary grades. *Children & Schools, 38*(3), 137-145. https://doi.org/10.1093/cs/cdw020

[173] Grace, S. (2019). Representative bureaucracy: Representation of American Indian teachers and their impact on American Indian student access and performance. *Boise State University Theses and Dissertations*, 1531. https://doi.org/10.18122/td/1531/boisestate

[174] United States Government Accountability Office. (2017, May 22). *Tribal transportation: Better data could improve road management and inform Indian student attendance strategies.* Retrieved February 6, 2024 from https://www.gao.gov/assets/gao-17-423.pdf

[175] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[176] Arizona Department of Education. (n.d.). *Assessments.* Retrieved August 20, 2021 from https://www.azed.gov/assessment

[177] Altavena, L. (2021, February 8). *Testing for Arizona students returns in April, with lots of unanswered questions*. AZ Central. Retrieved August 20, 2021 from https://www.azcentral.com/story/news/local/arizona-education/2021/02/08/arizona-students-take-standardized-tests-april-lots-questions-unanswered/4251118001/

[178] Arizona Department of Education. (2023). *Move on when reading*. Retrieved July 27, 2023 from http://www.azed.gov/mowr/

[179] Lesnick, J., Goerge, R. M., Smithgall, C., & Gwynne, J. (2010). *Reading on grade level in third grade: How is it related to high school performance and college enrollment?* Annie E. Casey Foundation. Retrieved September 20, 2023 from https://assets.aecf.org/m/resourcedoc/aecf-ReadingonGradeLevelLongAnal-2010.PDF

[180] Hernandez, J. D. (2011). *How third-grade reading skills and poverty influence high school graduation*. The Annie E. Casey Foundation. Retrieved September 23, 2023 from https://files.eric.ed.gov/fulltext/ED518818.pdf

[181] Jimenez, L., & Boser, U. (2021). *Future of testing in education: The way forward for state standardized tests.* Center for American Progress. Retrieved February 6, 2024 from https://files.eric.ed.gov/fulltext/ED617055.pdf

[182] Zajacova A., & Everett, B. G. (2013). The nonequivalent health of high school equivalents. *Social Science Quarterly, 95*(1), 221–238. https://doi.org/10.1111/ssqu.12039

[183] Blumenshine, P., Egerter, S., Barclay, C., Cubbin, C., & Braveman, P. (2010). Socioeconomic disparities in adverse birth outcomes. *American Journal of Preventive Medicine, 39*(3), 263–272. https://doi.org/10.1016/j.amepre.2010.05.012

[184] Prickett, K. C., & Augustine, J. M. (2015). Maternal education and investments in children's health. *Journal of Marriage and Family, 78*(1), 7–25. https://doi.org/10.1111/jomf.12253

[185] Augustine, J. M., Cavanagh, S. E., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage. *Social Forces, 88*(1), 1–29. https://doi.org/10.1353/sof.0.0233

[186] Peacock, S., Konrad, S., Watson, E., Nickel, D., & Muhajarine, N. (2013). Effectiveness of home visiting programs on child outcomes: A systematic review. *BMC Public Health, 13*(1). https://doi.org/10.1186/1471-2458-13-17

[187] Duncan, G. J., & Sojourner, A. (2013). Can intensive early childhood intervention programs eliminate Income-Based cognitive and achievement gaps? *Journal of Human Resources, 48*(4), 945–968. https://doi.org/10.3368/jhr.48.4.945

[188] Del Campo-Carmona, B. (2022, December 19). *Arizona's disconnected youth*. Making Action Possible for Southern Arizona. Retrieved August 1, 2023 from https://www.mapazdashboard.arizona.edu/article/arizonas-disconnected-youth

[189] Del Campo-Carmona, B. (2022, December 19). *Arizona's disconnected youth*. Making Action Possible for Southern Arizona. Retrieved August 1, 2023 from https://www.mapazdashboard.arizona.edu/article/arizonas-disconnected-youth

[190] Camilli, G., Vargas, S., Ryan, S., & Barnett, W. S. (2010). Meta-analysis of the effects of early education interventions on cognitive and social development. *Teachers College Record: The Voice of Scholarship in Education*, *112*(3), 579–620. https://doi.org/10.1177/016146811011200303

[191] Center on the Developing Child at Harvard University. (2016). From best practices to breakthrough impacts: A science-based approach to building a more promising future for young children and families. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf

[192] Center on the Developing Child at Harvard University. (2016). From best practices to breakthrough impacts: A science-based approach to building a more promising future for young children and families. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf

[193] Kuhl, P.K. (2011). Early language learning and literacy: Neuroscience implications for education. *Mind, Brain, and Education, 5*(3), 128-142. https://doi.org/10.1111/j.1751-228X.2011.01121.x

[194] Center on the Developing Child at Harvard University. (2016). From best practices to breakthrough impacts: A science-based approach to building a more promising future for young children and families. Retrieved August 30, 2023 from

https://harvardcenter.wpenginepowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf

[195] National Scientific Council on the Developing Child. (2020). Connecting the brain to the rest of the body: Early childhood development and lifelong health are deeply intertwined: Working paper No. 15. Center on the Developing Child at Harvard University. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf

[196] 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 August 20, 2021 from http://www.jstor.org/stable/3202474.

[197] Leggat-Barr, K., Uchikoshi, F., & Goldman, N. (2021). COVID-19 risk factors and mortality among Native Americans. *Demographic Research, 45*, 1185-1218. https://doi.org/10.1101/2021.03.13.21253515

[198] Center on the Developing Child at Harvard University. (2016). From best practices to breakthrough impacts: A science-based approach to building a more promising future for young children and families. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf

[199] National Scientific Council on the Developing Child. (2020). Connecting the brain to the rest of the body: Early childhood development and lifelong health are deeply intertwined: Working paper No. 15. Center on the Developing Child at Harvard University. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf

[200] Center on the Developing Child at Harvard University. (2010, July). *The foundations of lifelong health are built in early childhood.* Retrieved August 20, 2021 from http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf

[201] Ibid.

[202] National Scientific Council on the Developing Child. (2020). Connecting the brain to the rest of the body: Early childhood development and lifelong health are deeply intertwined: Working paper No. 15. Center on the Developing Child at Harvard University. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf

[203] Center on the Developing Child at Harvard University. (2010, July). *The foundations of lifelong health are built in early childhood.* Retrieved August 20, 2021 from http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf

[204] Ibid.

[205] Hao, W. (2022, August). *Investing in early childhood workforce recovery. Policy update. Vol. 29, No. 5*. National Association of State Boards of Education. Retrieved August 30, 2023 from https://eric.ed.gov/?id=ED623572

[206] Kashen, J., Cai, J., Brown, H., & Fremstad, S. (2022, March 21). *How states would benefit if congress truly invested in child care and pre-K*. Policy Commons. Retrieved August 13, 2023 from https://policycommons.net/artifacts/2287927/how-states-would-benefit-if-congress-truly-invested-in-child-care-and-pre-k/3048017/

[207] Fleming, C., Moorea, L., Sarchea, M., Charles, T., McNicholas, D., Rackliff, S., Redbird-Post, M., & Sprague, M. (2016, March). *Tribal grantee plans from the 2014-2015 child care development fund. A Report by The Child Care Community of Learning.* Centers for American Indian and Alaska Native Health at the University of Colorado School of Public Health. Retrieved February 6, 2024 from https://coloradosph.cuanschutz.edu/docs/librariesprovider205/trc/1-ccdf-2014-2015-report.pdf

[208] Malik, R., Hamm, K., Adamu, M., & Morrissey, T. (2016, October 27). Child care deserts: An analysis of child care centers by ZIP code in 8 states. *Center for American Progress.* Retrieved August 20, 2021 from https://www.americanprogress.org/issues/early-childhood/reports/2016/10/27/225703/child-care-deserts/

[209] Tanoue, K. H., DeBlois, M., Daws, J., & Walsh, M. (2017, September 14). *Child care and early education accessibility in Tucson (White Paper No. 5).* Making Action Possible for Southern Arizona. Retrieved October 12, 2023 from https://mapazdashboard.arizona.edu/article/child-care-and-early-education-accessibility-tucson

[210] Child Care Aware® of America. (2018). *Mapping the gap: Exploring the child care supply & demand in Arizona.* Retrieved August 20, 2021 from http://usa.childcareaware.org/wp-content/uploads/2017/10/Arizona-Infant-Toddler-Brief1.pdf

[211] Smith, L. K., Bagley, A., & Wolters, B. (2020, October). *Child care in 25 states: What we know and don't know (Rep.).* Bipartisan Policy. Retrieved August 20, 2021 from https://bipartisanpolicy.org/wp-content/uploads/2020/10/BPC_Working-Family-Solutions_FinalPDFV4.pdf

[212] Center for American Progress. (2018). *Child care access in Arizona*. Retrieved October 12, 2023 from https://childcaredeserts.org/2018/

[213] Center for American Progress. (2019). *Early learning factsheet 2019, Arizona.* Retrieved October 12, 2023 from https://americanprogress.org/wp-content/uploads/sites/2/2019/09/Arizona.pdf?_ga=2.124660044.738685272.1697189841-1575343709.1693426880

[214] Bipartisan Policy Center. (2020). *The supply of, potential need for, and gaps in child care in Arizona in 2019.* Child Care Gap. Retrieved August 20, 2021 from https://childcaregap.org/assets/onePagers/Arizona.pdf

[215] Lee, E. K., & Parolin, Z. (2021). The care burden during COVID-19: A national database of child care closures in the United States. *Socius, 7*. https://doi.org/10.1177/23780231211032028

[216] National Low Income Housing Coalition. (2021). *Out of Reach 2021 – Arizona*. Retrieved September 7, 2021 from https://reports.nlihc.org/sites/default/files/oor/files/reports/state/az-2021-oor.pdf

[217] Knueven, L., & Grace, M. (2020, August 6). *The average monthly mortgage payment by state, city, and year*. Business Insider. Retrieved September 7, 2021 from https://www.businessinsider.com/personal-finance/average-mortgage-payment

[218] Arizona Department of Economic Security. (n.d.). *Child care.* Retrieved October 12, 2023 from https://des.az.gov/services/child-and-family/child-care

[219] Walsh, M., Tanoue, K. H., & deBlois, M. (2018). *Relationship of economic independence and access to childcare for single moms (2018 research brief).* Women Giving. Retrieved October 12, 2023 from https://womengiving.org/wp-content/uploads/2022/01/WFSA-2018-Research-Brief.pdf

[220] Tanoue, K. H., deBlois, M., Daws, J., & Walsh, M. (2017). *Child care and early education accessibility in Tucson (White Paper No. 5).* Making Action Possible for Southern Arizona. Retrieved October 12, 2023 from *https://mapazdashboard.arizona.edu/article/child-care-and-early-education-accessibility-tucson*

[221] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[222] Ibid.

[223] Ibid.

[224] Ibid.

[225] Ibid.

[226] Ibid.

[227] The Annie E. Casey Foundation. (2013). *The first eight years: Giving kids a foundation for lifetime success.* Retrieved August 20, 2021 from http://www.aecf.org/m/resourcedoc/AECF-TheFirstEightYearsKCpolicyreport-2013.pdf

[228] White House Council of Economic Advisors. (2015, January). *The economics of early childhood investments.* Obama White House Archive. Retrieved August 20, 2021 from https://obamawhitehouse.archives.gov/sites/default/files/docs/early_childhood_report_update_final_non-embargo.pdf

[229] 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.* The Heckman Equation. Retrieved August 20, 2021 from https://heckmanequation.org/wp-content/uploads/2017/01/F_Heckman_AbecedarianHealth_062615.pdf

[230] National Scientific Council on the Developing Child. (2020). Connecting the brain to the rest of the body: Early childhood development and lifelong health are deeply intertwined: Working paper No. 15. Center on the Developing Child at Harvard University. Retrieved August 30, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf

[231] Hahn, R. A., & Barnett, W. S. (2023). Early childhood education: Health, equity, and economics. *Annual Review of Public Health*, *44*(1), 75–92. https://doi.org/10.1146/annurev-publhealth-071321-032337

[232] First Things First. (n.d.). *About Quality First*. Retrieved October 12, 2023 from https://www.firstthingsfirst.org/resources/quality-first/about-quality-first/

[233] Ibid.

[234] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[235] Prenatal-to-3 Policy Impact Center. (2022). *Prenatal-to-3 policy clearinghouse evidence review: Early intervention services (ER 11C.0922).* Retrieved August 30, 2023 from http://pn3policy.org/policy-clearinghouse/early-intervention-services

[236] Prenatal-to-3 Policy Impact Center. (2022). *Prenatal-to-3 policy clearinghouse evidence review: Early intervention services (ER 11C.0922).* Retrieved August 30, 2023 from http://pn3policy.org/policy-clearinghouse/early-intervention-services

[237] Hebbeler, K., Spiker, D., Bailey, D., Scarborough, A. A., Mallik, S., Simeonsson, R. J., Marnie, S., & Nelson, L. (2007, January). *Early intervention for infants and toddlers with disabilities and their families: Participants, services, and outcomes.* Research Connections. Retrieved August 30, 2023 from https://researchconnections.org/childcare/resources/13407

[238] Diefendorf, M., & Goode, S. (2005). *The long term economic benefits of high quality early childhood intervention programs.* National Early Childhood Technical Assistance Center. Retrieved August 20, 2021 from http://ectacenter.org/~pdfs/pubs/econbene.pdf

[239] Arizona Department of Economic Security. (n.d.). *Arizona early intervention program.* Retrieved October 12, 2023 from https://des.az.gov/AzEIP/

[240] Arizona Department of Economic Security. (n.d.). *About early intervention in Arizona.* Retrieved October 12, 2023 from https://des.az.gov/services/disabilities/early-intervention/about-early-intervention-arizona

[241] Arizona Department of Economic Security. (n.d.). *Developmental disabilities*. Retrieved October 12, 2023 from https://des.az.gov/ddd/

[242] Prenatal-to-3 Policy Impact Center. (2022). *Prenatal-to-3 state policy roadmap: Arizona.* Retrieved February 5, 2024 from https://pn3policy.org/pn-3-state-policy-roadmap-2021/az/early-intervention

[243] Prenatal-to-3 Policy Impact Center. (2022, September). *Prenatal-to-3 policy clearinghouse evidence review: Early intervention services (ER 11C.0922).* Retrieved August 31, 2023 from http://pn3policy.org/policy-clearinghouse/early-intervention-services

[244] Prenatal-to-3 Policy Impact Center, LBJ School of Public Affairs, & The University of Texas at Austin. (2021, January 6). *Why do we focus on the prenatal-to-3 age period? Understanding the importance of the earliest years*. Retrieved August 30, 2023 from https://pn3policy.org/resources/why-do-we-focus-on-the-prenatal-to-3-age-period-understanding-the-importance-of-the-earliest-years/#:~:text=Our%20health%20and%20wellbeing%20prenatally%20and%20during%20the,many%20families%20face%20substantial%20challenges%20during%20these%20years.

[245] Prenatal-to-3 Policy Impact Center. (2022). *Prenatal-to-3 policy clearinghouse evidence review: Early intervention services (ER 11C.0922).* Accessed August 30, 2023 from http://pn3policy.org/policy-clearinghouse/early-intervention-services

[246] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[247] The Future of Children. (2020). Three trimesters to three years: Promoting early development. *The Future of Children, 30*(2). Retrieved July 18, 2023 from https://futureofchildren.princeton.edu/sites/g/files/toruqf2411/files/foc_vol_30_no_2_compiled.pdf

[248] National Scientific Council on the Developing Child. (2020). Connecting the brain to the rest of the body: Early childhood development and lifelong health are deeply intertwined. Working Paper no. 15. Harvard University Center on the Developing Child. Retrieved July 18, 2023 from https://futureofchildren.princeton.edu/sites/g/files/toruqf2411/files/foc_vol_30_no_2_compiled.pdf

[249] Shonkoff, J. P., Boyce, W. T., Levitt, P., Martinez, F. D., & McEwen, B. (2021). Leveraging the biology of adversity and resilience to transform pediatric practice. *Pediatrics, 147*(2), e20193845. https://doi.org/10.1542/peds.2019-3845

[250] The Future of Children. (2020). Three trimesters to three years: Promoting early development. *The Future of Children, 30*(2). Retrieved July 18, 2023 from https://futureofchildren.princeton.edu/sites/g/files/toruqf2411/files/foc_vol_30_no_2_compiled.pdf

[251] Harvard University Center on the Developing Child. (2020). *An action guide for policymakers: Health and learning are deeply interconnected in the body*. Accessed July 18, 2023 from https://harvardcenter.wpenginepowered.com/wp-content/uploads/2020/10/2020_WP15_actionguide_FINAL.pdf

[252] Haas, S. A., Glymour, M. M., & Berkman, L. F. (2011). Childhood health and labor market inequality over the life course. *Journal of Health and Social Behavior, 52*(3), 289-313. https://doi.org/10.1177/0022146511410431

[253] Eunice Kennedy Shriver National Institute of Child Health and Human Development. (2017, January 31). *What is prenatal care and why is it important?* National Institutes of Health. Retrieved August 23, 2021 from https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo/prenatal-care

[254] 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*(1), S4. Retrieved August 23, 2021 from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2147600/

[255] Council on Children with Disabilities, Section on Developmental Behavioral Pediatrics, Bright Futures Steering Committee, & 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. https://doi.org/10.1542/peds.2006-1231

[256] 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. https://doi.org/10.17953/aicr.39.1.j1u030g668113403

[257] 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. https://doi.org/10.2105/ajph.94.1.53

[258] Tolbert, J., Drake, P., & Damico, A. (2022). *Key facts about the uninsured population*. KFF. Retrieved August 8, 2023 from https://www.kff.org/uninsured/issue-brief/key-facts-about-the-uninsured-population/

[259] Healthy People 2030. (n.d.). *Increase the proportion of people with health insurance – AHS-01*. Office of Disease Prevention and Health Promotion. Retrieved August 8, 2023 from https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality/increase-proportion-people-health-insurance-ahs-01

[260] Tolbert, J., Drake, P., & Damico, A. (2022). *Key facts about the uninsured population*. KFF. Retrieved August 8, 2023 from https://www.kff.org/uninsured/issue-brief/key-facts-about-the-uninsured-population/

[261] Ibid.

[262] Centers for Disease Control and Prevention. (2023, January 11). *Before pregnancy: Preconception health*. Retrieved August 9, 2023 from https://www.cdc.gov/preconception/overview.html#PrconceptionHealthCare

[263] Centers for Disease Control and Prevention. (2006, April 21). 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. *MMWR, 55*(RR-06), 1-23. Retrieved August 9, 2023 from https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm

[264] Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: A retrospective analysis of 28,729,765 U.S. deliveries over 8 years. *American Journal of Perinatology, 29*(10), 787–793. https://doi.org/10.1055/s-0032-1316439

[265] U.S. Department of Health and Human Services, Office of the Surgeon General. (2020). *The Surgeon General's call to action to improve maternal health*. Retrieved September 7, 2021 from https://www.hhs.gov/sites/default/files/call-to-action-maternal-health.pdf

[266] Osterman, M. J. K., & Martin, J. A. (2018, May 30). Timing and adequacy of prenatal care in the United States, 2016. *National Vital Statistics Reports*, *67*(3), 1–14. Retrieved August 9, 2023 from https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_03.pdf

[267] March of Dimes. (2023). *Maternity care desert: Data for Arizona. Maternity care desert: Arizona, 2020.* Retrieved August 17, 2023 from https://www.marchofdimes.org/peristats/data?top=23&lev=1&stop=641&reg=04&sreg=04&obj=9&slev=4

[268] March of Dimes. (2023). *Maternity care desert: Data for Arizona. Access to hospitals or birth centers: Arizona, 2019.* Retrieved August 17, 2023 from https://www.marchofdimes.org/peristats/data?top=23&lev=1&stop=644&reg=04&sreg=04&obj=9&slev=4

[269] March of Dimes. (2023). *Maternity care desert: Data for Arizona. Distribution of obstetric providers: Arizona, 2019.* Retrieved August 17, 2023 from https://www.marchofdimes.org/peristats/data?top=23&lev=1&stop=642&reg=04&sreg=04&obj=9&slev=4

[270] Fryer, K., Munoz, M. C., Rahangdale, L., & Stuebe, A. M. (2020). Multiparous Black and Latinx women face more barriers to prenatal care than White women. *Journal of Racial and Ethnic Health Disparities, 8*, 80-87. https://doi.org/10.1007/s40615-020-00759-x

[271] National Partnership for Women and Families. (2019, October). *American Indian and Alaska Native women's maternal health: Addressing the crisis*. Retrieved December 15, 2023 from https://nationalpartnership.org/wp-content/uploads/2023/02/american-indian-and-alaska.pdf

[272] Hill, L., Artiga, S., & Ranji, U. (2022, November 01). *Racial disparities in maternal and infant health: Current status and efforts to address them.* KFF. Retrieved December 15, 2023 from https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/

[273] U.S. Commission on Civil Rights. (2021, September 15). *Racial disparities in maternal health*. Retrieved November 15, 2023 from https://www.usccr.gov/reports/2021/racial-disparities-maternal-health

[274] Fryer, K., Munoz, M. C., Rahangdale, L., & Stuebe, A. M. (2020). Multiparous Black and Latinx women face more barriers to prenatal care than White women. *Journal of Racial and Ethnic Health Disparities, 8*, 80-87. https://doi.org/10.1007/s40615-020-00759-x

[275] March of Dimes. (2022). *Nowhere to go: Maternity care deserts across the U.S.* Retrieved August 3, 2023 from https://marchofdimes.org/sites/default/files/2022-10/2022_Maternity_Care_Report.pdf?mc_cid=87ad97824f&mc_eid=UNIQID

[276] Sequist, TD. (2021). Improving the health of the American Indian and Alaska Native Population. *JAMA,* 325(11),1035–1036. https://doi.org/10.1001/jama.2021.0521

[277] Office of the Assistant Secretary for Planning and Evaluation. (2022).
How increased funding can advance the mission of the Indian Health Service to improve health outcomes for American India ns and Alaska Natives (Report No. HP-2022-21). U.S. Department of Health and Human Services. Retrieved February 5, 2024 from https://aspe.hhs.gov/sites/default/files/documents/1b5d32824c31e113a2df43170c45ac15/aspe-ihs-funding-disparities-report.pdf

[278] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[279] Ibid.

[280] Artiga, S., Ubri, P., & Foutz J. (2017). *Medicaid and American Indians and Alaska Natives.* Retrieved December 27, 2023 from https://www.kff.org/medicaid/issue-brief/medicaid-and-american-indians-and-alaska-natives/

[281] Artiga, S., Ubri, P., & Foutz J. (2017). *Medicaid and American Indians and Alaska Natives.* Retrieved December 27, 2023 from https://www.kff.org/medicaid/issue-brief/medicaid-and-american-indians-and-alaska-natives/

[282] Centers for Disease Control and Prevention. (2021, November 15*). Reproductive health: Teen pregnancy. About teen pregnancy.* Retrieved August 9, 2023 from https://www.cdc.gov/teenpregnancy/about/index.htm

[283] Diaz, C., & Fiel, J. (2016). The effect(s) of teen pregnancy: Reconciling theory, methods, and findings. *Demography, 53*(1), 85-116. https://doi.org/10.1007/s13524-015-0446-6

[284] Youth.gov. (2016). *Pregnancy prevention: Adverse effects.* Retrieved September 10, 2021 from http://youth.gov/youth-topics/teen-pregnancy-prevention/adverse-effects-teen-pregnancy

[285] McClay, A., & Moore, K. A. (2022, November 22). Preventing births to teens is associated with long-term health and socioeconomic benefits, according to simulation. *Child Trends.* https://doi.org/10.56417/2270z3088p

[286] Hoffman, S. D., & Maynard, R. A. (Eds.). (2008). *Kids having kids: Economic costs and social consequences of teen pregnancy (2nd ed.).* Urban Institute Press. Retrieved February 6, 2024 from https://searchworks.stanford.edu/view/7778651

[287] 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.* National Institutes of Health. Retrieved September 10, 2021 from https://www.ncbi.nlm.nih.gov/books/NBK53017/pdf/Bookshelf_NBK53017.pdf

[288] Anderson, T. M., Lavista Ferres, J. M., Ren, S. Y., Moon, R. Y., Goldstein, R. D., Ramirez, J. M., & Mitchell, E. A. (2019). Maternal smoking before and during pregnancy and the risk of sudden unexpected infant death. *Pediatrics*, *143*(4), e20183325. https://doi.org/10.1542/peds.2018-332

[289] Centers for Disease Control and Prevention. (2022, November 28). *About opioid use during pregnancy.* Accessed September 8, 2023 from https://www.cdc.gov/pregnancy/opioids/basics.html

[290] Herron, J. L., & Venner, K. L. (2023). A systematic review of trauma and substance use in American Indian and Alaska Native individuals: Incorporating cultural considerations. *Journal of Racial and Ethnic Health Disparities, 10*, 603–632. https://doi.org/10.1007/s40615-022-01250-5

[291] Lechner, A., Cavanaugh, M., & Blyler, C. (2016, August 24). *Addressing trauma in American Indian and Alaska Native youth.* U.S. Department of Health and Human Services. Retrieved February 5, 2024 from https://aspe.hhs.gov/reports/addressing-trauma-american-indian-alaska-native-youth

[292] Centers for Disease Control and Prevention. (2022, July 14). *Pregnancy: Gestational diabetes and pregnancy*. Retrieved August 1, 2023 from https://www.cdc.gov/pregnancy/diabetes-gestational.html

[293] Daneshmand, S. S., Stortz, S., Morrisey, R., & Faksh, A. (2019). Bridging gaps and understanding disparities in gestational diabetes mellitus to improve perinatal outcomes. *Diabetes Spectrum, 32*(4), 317-323. https://doi.org/10.2337/ds19-0013

[294] 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. https://doi.org/10.1097/AOG.0000000000001241

[295] Tyrrell, J., Richmond, R. C., Palmer, T. M., Feenstra, B., Rangarajan, J., Metrustry, S., … Freathy, R. M. (2016). Genetic evidence for causal relationships between maternal obesity-related traits and birth weight. *JAMA, 315*(11), 1129-1140. https://doi.org/10.1001/jama.2016.1975

[296] Godfrey, K. M., Reynolds, R. M., Prescott, S. L., Nyirenda, M., Jaddoe, V. W., Eriksson, J. G., & Broekman, B. F. (2017). Influence of maternal obesity on the long-term health of offspring. *The Lancet: Diabetes & Endocrinology*, *5*(1), 53–64. https://doi.org/10.1016/S2213-8587(16)30107-3

[297] Hill-Briggs, F., Adler, N. E., Berkowitz, S. A., Chin, M. H., Gary-Webb, T. L., Navas-Acien, A., Thornton, P. L. & Haire-Joshu, D. (2021). Social determinants of health and diabetes: A scientific review. *Diabetes Care*, *44*(1), 258. https://doi.org/10.2337/dci20-0053

[298] Centers for Disease Control and Prevention. (2018, June 14). *More obesity in U.S. rural counties than in urban counties.* Retrieved August 3, 2023 from https://www.cdc.gov/media/releases/2018/s0614-obesity-rates.html

[299] Siega-Riz, A. M. (2012). Prepregnancy obesity: Determinants, consequences, and solutions. *Advances in Nutrition, 3*(1), 105-107. https://doi.org/10.3945/an.111.001081

[300] March of Dimes. (2022). *Nowhere to go: Maternity care deserts across the U.S.* Retrieved August 3, 2023 from https://marchofdimes.org/sites/default/files/2022-10/2022_Maternity_Care_Report.pdf?mc_cid=87ad97824f&mc_eid=UNIQID

[301] Ibid.

[302] The American College of Obstetricians and Gynecologists. (2019). Obstetric care consensus: Levels of maternal care. *Obstetrics & Gynecology, 134*(2), e41-e55. Retrieved August 3, 2023 from https://www.acog.org/clinical/clinical-guidance/obstetric-care-consensus/articles/2019/08/levels-of-maternal-care

[303] Bauman, B. L., Ko. J. Y., Cox, S. D'Angelo, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020) Vital Signs: Postpartum depressive symptoms and provider discussions about perinatal depression – United States, 2018. *Morbidity and Mortality Weekly Report, 69*(19), 575-581. Retrieved August 3, 2023 from https://www.cdc.gov/mmwr/volumes/69/wr/mm6919a2.htm

[304] Slomian, J., Honvo, G., Emonts, P., Reginster, J., & Bruyere, O. (2019). Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Health, 15*, 1745506519844044. https://doi.org/10.1177/1745506519844044

[305] Bauman, B. L., Ko, J. Y., Cox, S., D'Angelo, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020). Vital Signs: Postpartum depressive symptoms and provider discussions about perinatal depression – United States, 2018. *Morbidity and Mortality Weekly Report, 69*(19). Retrieved October 12, 2023 from https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6919a2-H.pdf

[306] Bauman, B. L., Ko. J. Y., Cox, S. D'Angelo, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020). Vital Signs: Postpartum depressive symptoms and provider discussions about perinatal depression – United States, 2018. *Morbidity and Mortality Weekly Report, 69*(19), 575-581. Retrieved August 3, 2023 from https://www.cdc.gov/mmwr/volumes/69/wr/mm6919a2.htm

[307] Thompson, V. (2023, April 17). *Medicaid coverage of maternal depression screenings during well-child visits: Case study of Alaska and Arizona*. National Academy for State Health Policy. Retrieved September 20, 2023 from https://nashp.org/Medicaid-coverage-of-maternal-depression-screenings-during-well-child-visits-case-study-of-alaska-and-arizona

[308] Ibid.

[309] Maxwell, D., Mauldin, R., Thomas, J., & Holland, V. (2022). American Indian motherhood and historical trauma: Keetoowah experiences of becoming mothers. *International Journal of Environmental Research and Public Health, 19*(17), 7088. https://doi.org/10.3390/ijerph19127088

[310] Ibid.

[311] First Things First. (2023). *2023 Building brighter futures: Arizona's early childhood opportunities report*. Retrieved February 6, 2024 from https://www.firstthingsfirst.org/wp-content/uploads/2023/12/State-Needs-and-Assets-Report-2023.pdf

[312] Bauman, B. L., Ko. J. Y., Cox, S. D'Angelo, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020). Vital Signs: Postpartum depressive symptoms and provider discussions about perinatal depression – United States, 2018. *Morbidity and Mortality Weekly Report, 69*(19), 575-581. Retrieved August 3, 2023 from https://www.cdc.gov/mmwr/volumes/69/wr/mm6919a2.htm

[313] Heck. (2021). Postpartum Depression in American Indian/Alaska Native Women: A Scoping Review. *MCN, the American Journal of Maternal Child Nursing*, *46*(1), 6–13. https://doi.org/10.1097/NMC.0000000000000671

[314] Institute of Medicine (US) Committee on Understanding Premature Birth and Assuring Healthy Outcomes. (2007). *Preterm birth: Causes, consequences, and prevention* (R. E. Behrman & A. S. Butler, Eds.). National Academies Press. https://doi.org/10.17226/11622

[315] Beam, A. L., Fried, I., Palmer, N., Agniel, D., Brat, G., Fox, K., Kohane, I., Sinaiko, A., Zupancic, J. A. F., & Armstrong, J. (2020). Estimates of healthcare spending for preterm and low-birthweight infants in a commercially insured population: 2008-2016. *Journal of Perinatology*, *40*(7), 1091–1099. https://doi.org/10.1038/s41372-020-0635-z

[316] Luu, T. M., Rehman Mian, M. O., & Nuyt, A. M. (2017). Long-term impact of preterm birth: Neurodevelopmental and physical health outcomes. *Clinics in Perinatology, 44*(2), 305–314. https://doi.org/10.1016/j.clp.2017.01.003

[317] Centers for Disease Control and Prevention. (2022, November 1). *Reproductive health: Preterm birth*. Retrieved August 8, 2023 from https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm

[318] Petrou, S., Sach, T., & Davidson, L. (2001). The long-term costs of preterm birth and low birth weight: Results of a systematic review. *Child: Care, Health and Development, 27*(2), 97–115. https://doi.org/10.1046/j.1365-2214.2001.00203.x

[319] Goldenberg, R. L., & Culhane, J. F. (2007). Low birth weight in the United States. *The American Journal of Clinical Nutrition, 85*(2), 584S–590S. https://doi.org/10.1093/ajcn/85.2.584S

[320] March of Dimes. (2021, June). *Low birthweight*. Retrieved August 8, 2023 from https://www.marchofdimes.org/find-support/topics/birth/low-birthweight

[321] Harrison, W., & Goodman, D. (2015). Epidemiologic trends in neonatal intensive care, 2007-2012. *JAMA Pediatrics*, *169*(9), 855-862. https://doi.org/10.1001/jamapediatrics.2015.1305

[322] Lean, R. E., Rogers, C. E., Paul, R. A., & Gerstein, E. D. (2018). NICU hospitalization: Long-term implications on parenting and child behaviors. *Current Treatment Options in Pediatrics*, *4*(1), 49–69. https://doi.org/10.1007/s40746-018-0112-5

[323] Meek, J., & Noble, L. (2022). Policy statement: Breastfeeding and the use of human milk. *Pediatrics, 150*(1), 1. https://doi.org/10.1542/peds.2022-057988

[324] Centers for Disease Control and Prevention. (2023, July 31). *Breastfeeding: Why it matters.* Accessed September 12, 2023 from https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html

[325] Committee on Practice and Ambulatory Medicine, Committee on Infectious Diseases, Committee on State Government Affairs, Council on School Health, & Section on Administration and Practice Management. (2016). Medical versus nonmedical immunization exemptions for child care and school attendance. *Pediatrics*, *138*(3), e20162145. https://doi.org/10.1542/peds.2016-2145

[326] Arizona Department of Health Services. (2023, July). *The Arizona immunization handbook for school and childcare programs*. Retrieved August 8, 2023 from https://azdhs.gov/documents/preparedness/epidemiology-disease-control/immunization/school-childcare/nofollow/school-childcare-immunization-guide.pdf

[327] Williams, E., Rudowitz, R., & Moreno, S. (2023). *Headed back to school in 2023: A look at children's routine vaccination trends.* KFF. Retrieved September 28, 2023 from https://www.kff.org/coronavirus-covid-19/issue-brief/headed-back-to-school-in-2023-a-look-at-childrens-routine-vaccination-trends/

[328] Lopes, L., Shumacher, S., Sparks, G., Presiado, M., Hamel, L., & Brodie, M. (2022). *KFF COVID-19 vaccine monitor: December 2022*. KFF. Retrieved September 28, 2023 from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-december-2022/

[329] Garg, I., Shekhar, R., Sheikh, A. B., & Pal, S. (2022). Impact of COVID-19 on the changing patterns of respiratory syncytial virus infections. *Infectious Disease Reports*, *14*(4), 558–568. https://doi.org/10.3390/idr14040059

[330] Mondal, P., Sinharoy, A., & Gope, S. (2022). The influence of COVID-19 on influenza and respiratory syncytial virus activities. *Infectious Disease Reports*, *14*(1), 134–141. https://doi.org/10.3390/idr14010017

[331] Centers for Disease Control & Prevention. (2023). *RSV in infants and young children*. Retrieved February 5, 2024 from https://www.cdc.gov/rsv/downloads/RSV-in-Infants-and-Young-Children.pdf

[332] Amelia Templeton, Oregon Public Broadcasting. (2023, November 9). *A new RSV shot could help protect babies this winter — If they can get it in time*. KFF Health News. https://kffhealthnews.org/news/article/a-new-rsv-shot-could-help-protect-babies-this-winter-if-they-can-get-it-in-time/

[333] Eisenstein, M. (2023). Vaccines could offer fresh hope against respiratory syncytial virus. *Nature*, *621*(7980), S52–S54. https://doi.org/10.1038/d41586-023-02956-0

[334] Centers for Disease Control & Prevention. (2023, Oct 23). Limited availability of Nirsevimab in the United States—Interim CDC recommendations to protect infants from Respiratory Syncytial Virus (RSV) during the 2023–2024 respiratory virus season. CDC Health Alert Network, CDCHAN-00499. Retrieved February 5, 2024 from https://emergency.cdc.gov/han/2023/han00499.asp

[335] Centers for Disease Control & Prevention. (2023). *Flu vaccines are important for children*. Retrieved February 5, 2024 from https://www.cdc.gov/flu/highrisk/children.htm

[336] Committee on Infectious Diseases. (2022). Recommendations for prevention and control of Influenza in children, 2022–2023. *Pediatrics*, *150*(4). https://doi.org/10.1542/peds.2022-059274

[337] Office of Head Start (2023). 2023 Program Information Report & 2019 Program Information Report. Retrieved on Dec 1, 2023 from https://hses.ohs.acf.hhs.gov

[338] Arizona Department of Health Services. (2020). *Number of deaths for selected leading causes of infant mortality by year*. *Population Health and Vital Statistics.* Retrieved October 11, 2021 from https://pub.azdhs.gov/health-stats/menu/info/trend/index.php?pg=infant-deaths

[339] Ely, D. M., & Driscoll, A. K. (2020, July 16). Infant mortality in the United States, 2018: Data from the period linked birth/infant death file. *National Vital Statistics Reports, 69*(7). Retrieved October 11, 2021 from https://www.cdc.gov/nchs/data/nvsr/nvsr69/NVSR-69-7-508.pdf

[340] Kochanek, K., Xu, J., & Arias, E. (2020, December). *Mortality in the United States, 2019 (No. 395).* Center for Disease Control and Prevention. Retrieved September 10, 2021 from https://www.cdc.gov/nchs/data/databriefs/db395-H.pdf

[341] Ely, D. M., & Driscoll, A. K. (2023). Infant mortality in the United States: Provisional data from the 2022 period linked birth/infant death file. Vital Statistics Rapid Release 33. Centers for Disease Control and Prevention. Retrieved February 5, 2024 from https://www.cdc.gov/nchs/data/vsrr/vsrr033.pdf

[342] Ibid.

[343] Landman, K. (November 9, 2023). *It's getting increasingly dangerous to be a newborn in the US.* Vox. Retrieved February 5, 2024 from https://www.vox.com/23952456/syphilis-mortality-death-infant-newborn-congenital-babies-prenatal-maternity-pregnancy-desert

[344] Bellazaire, A., & Skinner, E. (2019, July 3). *Preventing infant and maternal mortality: State policy options*. National Conference of State Legislatures. Retrieved October 12, 2021 from https://www.ncsl.org/research/health/preventing-infant-and-maternal-mortality-state-policy-options.aspx

[345] National Center for Health Statistics. (2023, July 25). *Child health.* Centers for Disease Control and Prevention. Retrieved September 12, 2023 from https://www.cdc.gov/nchs/fastats/child-health.htm

[346] Centers for Disease Control and Prevention. (2020, January 29). Vital signs: Child injury. Retrieved September 12, 2023 from https://www.cdc.gov/vitalsigns/childinjury/index.html

[347] Garnett, M. F., Spencer, M. R., & Hedegaard, H. (2021, October*). Urban-rural differences in unintentional injury death rates among children aged 0-17 years: United States, 2018-2019.* Centers for Disease Control and Prevention. Retrieved September 12, 2023 from https://www.cdc.gov/nchs/products/databriefs/db421.htm

[348] Sarche, M., & Spicer, P. (2008). Poverty and health disparities for American Indian and Alaska Native children: Current knowledge and future prospects. *Annals of the New York Academy of Sciences*, *1136*, 126–136. https://doi.org/10.1196/annals.1425.017

[349] DeGeorge, K. C., Neltner, C. E., & Neltner, B. T. (2020). Prevention of unintentional childhood injury. *American Family Physician, 102*(7), 411-417. Retrieved September 12, 2023 from https://pubmed.ncbi.nlm.nih.gov/32996759/

[350] Arizona Department of Health Services (2023). [Vital Statistics Mortality Report dataset]. Unpublished data.

[351] Centers for Disease Control and Prevention. (2023, June 29). *Fast facts: What are Adverse Childhood Experiences?* Retrieved July 18, 2023 from https://www.cdc.gov/violenceprevention/aces/fastfact.html

[352] Jones, C. M., Merrick, M. T., & Houry, D. E. (2020). Identifying and preventing Adverse Childhood Experiences: Implications for clinical practice. *JAMA*, *323*(1), 25–26. https://doi.org/10.1001/jama.2019.18499

[353] Merrick, M. T., Ports, K. A., Ford, D. C., Afifi, T. O., Gershoff, E. T., & Grogan-Kaylor, A. (2017). Unpacking the impact of adverse childhood experiences on adult mental health. *Child Abuse & Neglect*, *69*, 10-19. https://doi.org/10.1016/j.chiabu.2017.03.016

[354] Kalmakis, K. A., & Chandler, G. E. (2015). Health consequences of adverse childhood experiences: A systematic review. *Journal of the American Association of Nurse Practitioners*, *27*(8), 457-465. https://doi.org/10.1002/2327-6924.12215

[355] Mantina N, Celaya M, Indatwa A., Davis V., & Madhivanan P. (2021). *Adverse Childhood Experiences in Arizona.* Arizona Department of Health Services. Retrieved August 10, 2023 from https://www.azdhs.gov/documents/prevention/womens-childrens-health/assessment-evaluation/aces-brief-az-may-2021.pdf

[356] Evans, G., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives, 7*(1), 43-48. https://doi.org/10.111/cdep.12013

[357] Shonkoff, J., & Fisher, P. (2013). Rethinking evidence-based practice and two-generation programs to create the future of early childhood policy. *Development and Psychopathology, 25*, 1635-1653. https://doi.org/10.1017/S0954579413000813

[358] Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved October 12, 2023 from http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf

[359] 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 October 12, 2023 from http://www.p2presources.com/uploads/3/2/0/2/32023713/family_outcomes.pdf

[360] Magnuson, K. A., & Duncan, G. J. (2002). Parents in poverty. In M. H. Bornstein (Ed.), *Handbook of parenting: Social conditions and applied parenting* (pp. 95-121). Lawrence Erlbaum Associates Publishers. Retrieved October 12, 2023 from https://psycnet.apa.org/record/2002-02522-005

[361] Browne, C. (2014). *The strengthening families approach and protective factors framework: Branching out and reaching deeper.* Center for the Study of Social Policy. Retrieved October 12, 2023 from https://cssp.org/wp-content/uploads/2018/11/Branching-Out-and-Reaching-Deeper.pdf

[362] 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 Experiences levels. *JAMA Pediatrics, 173*(11), E193007. https://doi.org/10.1001/jamapediatrics.2019.3007

[363] Bethell, C. D., Gombojav, N., & Whitaker, R. C. (2019). Family resilience and connection promote flourishing among US children, even amid adversity. *Health Affairs*, *38*(5), 729-737. https://doi.org/10.1377/hlthaff.2018.05425

[364] Ibid.

[365] 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 February 7, 2024 from http://www.p2presources.com/uploads/3/2/0/2/32023713/family_outcomes.pdf

[366] 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. https://doi.org/10.1037/0012-1649.43.6.1428

[367] Bernstein, S., West, J., Newsham, R., & Reid, M. (2014). Kindergartners' skills at school entry: An analysis of the

ECLS-K. *Mathematica Policy Research.* Retrieved February 7, 2024 from https://www.mathematica.org/publications/kindergartners-skills-at-school-entry-an-analysis-of-the-eclsk

[368] Ibid.

[369] Ibid.

[370] 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. https://doi.org/10.3390/ijerph15020188

[371] U.S. Department of Education. (2022). *2022 Reading State Snapshot Report, Arizona*. Retrieved February 5, 2024 from https://nces.ed.gov/nationsreportcard/subject/publications/stt2022/pdf/2023010AZ4.pdf

[372] Reach Out and Read. (n.d.). *Programs near you.* Retrieved February 5, 2024 from http://www.reachoutandread.org

[373] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[374] Young, N.K., Boles, S.M., & Otero, C. (2007). Parental Substance Use Disorders and child maltreatment: Overlap, gaps, and opportunities. *Child Maltreatment, 12*(2), 137-149. https://doi.org/10.1177/1077559507300322

[375] Smith, V., & Wilson. R. (2016). Families affected by parental substance use. *Pediatrics, 138*(2). https://doi.org/10.1542/peds.2016-1575

[376] Straussner, S., & Fewell, C. (2018). A review of recent literature on the impact of parental Substance Use Disorders on children and the provision of effective services. *Current Opinion in Psychiatry, 31*(4), 363-367. https://doi.org/10.1097/YCO.0000000000000421

[377] Smith, V., & Wilson. R. (2016). Families affected by parental substance use. *Pediatrics, 138*(2). https://doi.org/10.1542/peds.2016-1575

[378] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[379] First Things First (2023). 2023 San Carlos Apache Tribe Community Resource Guide. Retrieved from https://files.firstthingsfirst.org/regions/Publications/Resource%20Guide%20-%202023%20-%20San%20Carlos%20Apache%20Tribe.pdf

[380] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[381] Ibid.

[382] Children's Bureau. (April 2021). *The Indian Child Welfare Act: A primer for child welfare professionals*. Office of Administration for Children and Families. Retrieved February 5, 2024 from https://cwig-prod-prod-drupal-s3fs-us-east-1.s3.amazonaws.com/public/documents/icwa.pdf?VersionId=7yuNb.FbjYhQIyZp2QWJ768uU0UEzamk

[383] Orrantia, R.M., Lidot, T., & Echohawk, L. (October 2020). *Our children, our sovereignty, our choice: ICWA guide for tribal government and leaders.* Capacity Building Center for Tribes. Retrieved February 5, 2024 from https://tribalinformationexchange.org/files/products/ICWAGuide2020FINAL01062021.pdf

[384] Children's Bureau. (April 2021). *The Indian Child Welfare Act: A primer for child welfare professionals*. Office of Administration for Children and Families. Retrieved February 5, 2024 from https://cwig-prod-prod-drupal-s3fs-us-east-1.s3.amazonaws.com/public/documents/icwa.pdf?VersionId=7yuNb.FbjYhQIyZp2QWJ768uU0UEzamk

[385] Fort, K. E. (2023). After Brackeen: Funding Tribal Systems. *Family Law Quarterly*, *56*(2/3), 191-230. Retrieved February 7, 2024 from https://ssrn.com/abstract=4404078

[386] United States Supreme Court. (2023). *Haaland v. Brackeen, 599 U.S.* Retrieved February 5, 2024 from https://www.supremecourt.gov/opinions/22pdf/21-376_7l48.pdf

[387] National Institute for Child Welfare Association. (October 2023). *Child and family policy update: Uniform law commission considers developing uniform state ICWA law.* Retrieved February 5, 2024 from https://www.nicwa.org/policy-update/

[388] Children's Defense Fund. (2020, February). *Implementing the Family First Prevention Services Act: A technical guide for agencies, policymakers and other stakeholders*. Retrieved September 10, 2021 from https://www.childrensdefense.org/wp-content/uploads/2020/07/FFPSA-Guide.pdf

[389] Arizona Department of Child Safety. (2023, March 31). *Semi-annual child welfare report Mar 2023*. Retrieved October 12, 2023 from https://dcs.az.gov/content/semi-annual-child-welfare-report-mar-2023

[390] Around Him, D., Williams, S.C., Martinez, V., and Jake, L. (2023). Relative foster care is increasing among American Indian and Alaska Native children in foster care. *Child Trends*. https://doi.org/10.56417/4808o7175w

[391] First Things First (2022). First Things First San Carlos Apache Regional Needs and Assets Report. Retrieved from https://files.firstthingsfirst.org/regions/Publications/2022-RNA-SAN-CARLOS-APACHE-FINAL-06.30.2022.pdf

[392] Ibid.

[393] U.S. Census Bureau. (May, 2000). Factfinder for the Nation. Retrieved from http://www.census.gov/history/pdf/cff4.pdf

[394] U.S. Census Bureau. (2017). American Community Survey Information Guide. Retrieved from https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf