

2024

NEEDS AND ASSETS REPORT



 **FIRST THINGS FIRST**

Navajo Nation Region

NAVAJO NATION REGIONAL PARTNERSHIP COUNCIL 2024 NEEDS AND ASSETS REPORT

Funded by the
First Things First Navajo Nation Regional Partnership Council

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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 Navajo Nation 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 Navajo Nation 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 Navajo Nation 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

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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 Navajo Nation Region.

Lastly, we want to acknowledge the current and past members of the FTF Navajo Nation 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.

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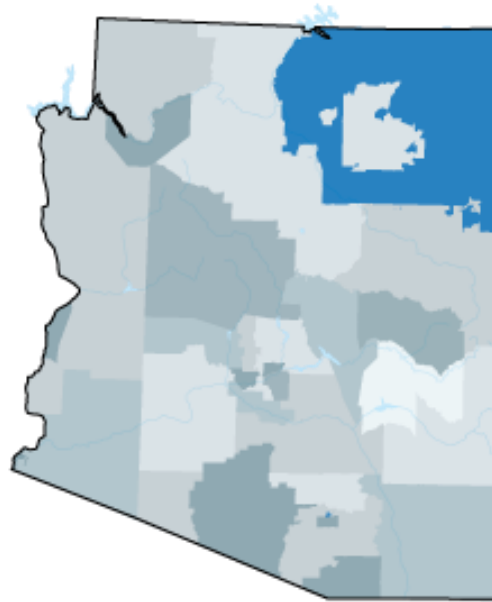
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EXECUTIVE SUMMARY



The Navajo Nation 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 designated region or elect to be designated as a separate region. The Navajo Nation Region was one of 10 Tribes that chose to be designated as its own region. This decision must be ratified every two years, and the Navajo Nation has opted to continue to be designated as its own region. The Navajo Nation is a sovereign nation that extends into the states of Arizona, New Mexico and Utah, covering 27,000 square miles. The Navajo Nation is home to the Navajo people, also known as Diné, *The People*. Window Rock is the capital of the Navajo Nation from which three branches of government administer the Navajo Tribal Code. Local governmental authority lies with 110 Chapters in which local business is conducted and tribal voting occurs. The boundaries of the First Things First Navajo Nation Region mirror the Arizona-only portion of the Navajo Nation.

Population Characteristics. According to the 2020 U.S. Census, the total population of the Navajo Nation Region was 94,511, of whom 7,832 were young children (birth to age 5). Nearly one-fifth of the 5,088 households in the region (18%) had one or more young children. This proportion of households with young children in the region (18%) matched that in the entire Navajo Nation (18%) and was substantially higher than the proportion in Arizona (13%). According to the Census, the overall population of the Navajo Nation Region fell by 7% between 2010 and 2020. This is larger than the decrease seen across all Arizona reservations (-3%) and the entire Navajo Nation (-5%). The population of young children (birth to age 5) decreased even more substantially by 33%, again a larger decrease than the -26% seen across all Arizona reservations and -31% in the entire Navajo Nation.

Nationwide, 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%). The COVID-19 pandemic had substantial impacts on 2020 Census data collection in the Navajo Nation. One way to understand potential undercounting of young children in the Navajo Nation Tribe Region is to compare 2020 Census data on the birth to 5-years-old population to Arizona Department of Health Services (ADHS) data on births from 2015 to 2020. Census estimates are relatively close to birth counts, with 7,236 total births between 2015 and 2020 compared to an estimated population of 7,332 young children in the Census. This suggests that young children may not have been too severely undercounted, but it does not account for families with young children who move back to the region.

Almost all of the population (97%) in the Navajo Nation 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 non-Hispanic White (3%), Multiracial (2%), Hispanic or Latino (1%), Black or African American (1%) or Asian or Pacific Islander (1%) in 2020. These breakdowns were similar for young children, with even higher portions identified as American Indian (99%), and slightly higher proportions identified as Multiracial (3%) or Hispanic or Latino (2%) when compared to the overall population. More than two out of every three individuals ages 5 and older (67%) in the Navajo Nation Region speak a language other than English or Spanish at home (most likely a Native North American language), a much higher proportion than seen across all Arizona reservations (50%) and Arizona (6%). Very few individuals report speaking Spanish at home (1%), and about a third 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 half of the region proficiently bilingual or multilingual (50%). However, twice the proportion of individuals report speaking another language at home and not speaking English “very well” (18%) than in Arizona overall (8%). About one in every five households in the Navajo Nation Region (20%) are considered limited-English-speaking, meaning no one over the age of 13 in the household speaks English very well. This is a larger proportion than seen across all Arizona reservations (12%), indicating a need for bilingual or multilingual staff and resources to support families whose first language is not English.

During the 2021-22 school year, 712 preschool to 12th grade students (6%) enrolled in ADE schools in the Navajo Nation Region were considered English Language Learners, as were 278 students enrolled in off-reservation schools that enroll Navajo Nation student (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, there were more than 1,400 students with reported Navajo language use at home in 2021-22. More than half of these students attended schools in the Navajo Nation Region (n=848), and overall 8% of students in regional schools and 3% of students in off-reservation schools reported Navajo language use at home. In recent years, the number of students with reported Navajo language use at home has increased substantially, from 376 in regional schools in 2017-18 to a high of 977 in 2020-21. However, it is important to note that these data do not indicate that all of these students spoke Navajo. Some may have been active Navajo speakers, while for others it may mean that some adults in the child’s home spoke Navajo but the child did not. Data from the Navajo Nation Department of Diné Education (DoDE) reported in the 2022 Regional Needs and Assets report showed that very few students were deemed

‘fluent’ on the Oral Diné Language Assessment (n=46 on the post-test in 2017-18, the last year of available data, out of 2,299 students tested).

According to the American Community Survey, nearly two out of every three young children (birth to age 5) in the Navajo Nation Region live in a household with one unmarried parent (65%), which is a larger proportion than across Arizona (37%). About a quarter of young children live with two married parents (26%), while smaller shares live with relatives other than parents (such as grandparents, aunts and uncles) (7%) or non-relatives (2%). Almost half of young children (44%) in the region lives in a grandparent’s household, which is similar to that seen across all Arizona reservations (43%). In contrast, 13% 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 2,728 grandparents in the Navajo Nation Region are responsible for their grandchildren under 18 years old. A parent is also present in most of these households (only 31% without the child’s parent). The majority of these grandparents are female (66%), and 42% are in the labor force, meaning that they may need child care for their grandchildren while they are working. More than a third (38%) 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 Navajo Nation 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 (\$57,800) of all family types, but this is substantially lower than seen statewide (\$100,000). The notably lower median annual income of single-male-headed families with children (\$29,000) and single-female-headed families with children (\$22,100) in the region points to the additional financial stress experienced by the single-parent-led households in the region.

More than one-third (37%) of the overall population and nearly half (46%) of young children (birth to age 5) in the Navajo Nation Region live in poverty, which is more than twice the poverty rates for Arizona as a whole (13% and 20%, respectively), but similar to rates seen in all Arizona reservations (37% and 48%, respectively). The majority (68%) of young children in the Navajo Nation 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 quarter (27%) of young children in the region that live in “deep poverty” (defined as below 50% FPL), triple 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 Navajo Nation is one of six tribes in Arizona that operate a Tribal Temporary Assistance for Needy Families (TANF) program, known as the Navajo Nation Department for Self Reliance (NNDSR). Between federal fiscal year (FFY) 2019 and 2020, the average monthly number of children birth to age 5 served by NNDSR increased from 1,886 to 2,153. However, the number of children birth to 5 served by NNDSR fell in the latter half of 2020 following the onset of the COVID-19 pandemic.

Supplemental Nutrition Assistance Program (SNAP) participation among young children (birth to age 5) in the Navajo Nation Region has declined steadily from 7,813 in SFY 2018 to 5,397 in SFY 2022, a 30% decrease. This parallels the downward trend seen statewide for SNAP participation among young children. The Navajo Nation WIC program receives funding directly from the USDA and is housed within the Navajo Department of Health. According to the 2022 Regional Needs and Assets Report, the Navajo Nation WIC program operates 12 service unit clinics, including both stand-alone clinics and clinics housed within health care facilities, in addition to satellite clinics that serve more remote populations. In 2020, a total of 8,450 individuals were enrolled in the program, including 1,788 women (21% of WIC participants), 1,635 infants (19%) and 5,027 children (ages 2-4; 59%). WIC participation rates were lower in the Navajo Nation WIC program than in the Arizona WIC program administered by the Arizona Department of Health Services. In 2020, 82% of the enrolled population, specifically 82% of women, 87% of infants and 80% of children, were actively receiving benefits during the calendar year, while rates in the same year in the Arizona WIC program all exceeded 90%.

From 2019-20 to 2021-22, the total number of school lunches served through school nutrition programs in the Navajo Nation 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 the Summer Food Service Program (SFSP) year-round, the number of lunches served through SFSP more than quintupled between 2019-20 and 2020-21, peaking at over 4,000,000 lunches served. Conversely, lunch service through the 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. In this case, baseline refers to the data from 2019-2020. Lunches served through the Child and Adult Care Food Program (CACFP) at Navajo Nation Head Start programs declined from around 40,000 in 2019-20 to just under 20,000 in 2021-22 but increased fourfold between 2020-21 and 2021-22 to nearly 85,000 lunches served. 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.

The ACS estimates that the average unemployment rate for the Navajo Nation Region between 2017 to 2022 was 13%. This is more than double the unemployment rate for Arizona as a whole (6%) but slightly lower than the rate in the entire Navajo Nation (15%) and all Arizona reservations (14%). 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 (42%) is slightly lower than that seen across all Arizona reservations (45%) and the entire Navajo Nation (44%) and substantially lower than the Arizona labor force participation rate

(61%). This means that under half of working-age teens and adults in the Navajo Nation Region are working (36%) or actively looking for work (6%), while the remaining 58% are not (which includes students, retirees, stay-at-home parents and others). Nearly two-thirds (61%) of young children (birth to age 5) in the Navajo Nation Region live in a household where at least one parent is in the labor force, compared to 90% of young children statewide. About half of young children in the region (46%) 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 12% of households in the Navajo Nation 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%). 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 as per the federal definition in public schools in the region increased six fold from 41 in 2019-20 to 246 in 2021-22. The number of students experiencing homelessness in off-reservation public schools that serve Navajo Nation students declined slightly over the same period, from 62 in 2019-20 to 54 in 2021-22.

Less than a third (31%) of households in the Navajo Nation Region have both a computer (i.e., a desktop, laptop, tablet or smartphone) and broadband internet connectivity. This proportion is lower than that in all Arizona reservation (44%) and less than half the proportion of households in Arizona overall (88%). At the individual level, 39% of individuals in the Navajo Nation Region have access to both a computer and internet in their household. Access is slightly higher for children birth to age 17 (43%), but this is still substantially lower than the 55% of children with access in all Arizona reservations and 92% in Arizona statewide.

Educational Indicators. The K-12 educational system in the Navajo Nation Region is intricate and comprised of many educational systems with oversight from different entities. Grant schools, private schools, charter schools, parochial schools, Bureau of Indian Education (BIE) schools and schools managed by ADE all operate within the region. The Navajo Nation Department of Diné Education (DODE), which is the central administrative education agency within the Executive Branch of the Navajo Nation, authorizes and renews grants and contracts for 29 Grant schools, 18 of which are in the state of Arizona. DODE also works collaboratively with BIE to address needs within the 12 BIE schools within the Arizona part of the Navajo Nation and with State Education Agencies in Arizona, Utah and New Mexico to advocate for Navajo students attending public schools. There are 11 Arizona public school districts with 49 total public schools within the Navajo Nation Region, and students also attend public schools that are outside but near the region, such as schools in Page, Flagstaff or Winslow. Students in the region also attend private schools, and five private schools are located within the region (i.e., in the Arizona part of the Navajo Nation).

According to data provided by the DODE Office of Educational Research and Statistics for the 2022 Regional Needs and Assets Report, in school year 2020-21 there were 31,227 total children enrolled in

every grade in the educational system within the Nation's boundaries. An additional 44,187 Navajo children were enrolled in public and charter schools outside of the Navajo Nation in the states of Arizona, New Mexico and Utah as well as in Residential Halls. Data on enrollment in BIE and grant schools shows that the total number of students in grant schools has declined slightly, from 7,055 in 2018-19 to 6,071 in 2020-21, while enrollment in BIE schools has remained relatively consistent around 6,000 students. In the 2021-22 school year, 3,136 students were enrolled in preschool through 3rd grade in Arizona public and charter schools within the Navajo Nation Region, and an additional 152 American Indian students were enrolled in off-reservation public and charter schools known to serve Navajo Nation students.

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 public and charter schools in the Navajo Nation Region, at 19% in 2019-20, and like in statewide schools, chronic absence rates have risen sharply, climbing to 59% in 2021-22. Rates increased even more dramatically in off-reservation schools, rising from 9% in 2019-20 to 66% in 2021-22.

In the 2021-22 school year, only 17% of students in ADE public and charter schools in the Navajo Nation Region achieved a passing score on the 3rd grade English Language Arts (ELA) assessment, including 13% meeting expectations and 3% exceeding expectations. This is slightly higher than the passing rates for American Indian students in off-reservation schools and in Arizona schools (both 16%), but much lower than the passing scores for students of all races and ethnicities in Arizona (41%). In regional ADE schools, ELA passing rates more than doubled between 2020-21 and 2021-22, going from 7% to 17%. 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. Compared to ELA passing rates, an even smaller proportion of students at ADE school in the Navajo Nation Region passed the 3rd grade Math assessment in 2021-22 (13%). This is lower than the passing rates for American Indian 3rd graders in off-reservation schools and all Arizona schools (both 16%). Passing rates for the 3rd grade math assessment were very low for both ADE schools in the region (5%) and American Indian students in off-reservation schools (5%) in 2020-21, the first year of the AZM2 assessment, but these passing rates did triple in 2021-22. However, even with these improvements, passing rates for students in the region (13%), American Indian students in off-reservation schools (16%) and American Indian students across Arizona (16%) remain far below statewide passing rates for math (40%).

Assessment results for 2018-19 were also available from BIE School Report Cards for BIE and Grant schools in the region, as reported in the 2022 Regional Needs and Assets Report. These results show that across all BIE and grant school in the region, 15% of students achieved a passing score in Reading/Language Arts, and 11% had passing scores in Math. Assessment data specific for 3rd grade students in Grant schools on the Navajo Nation Region were received from the Navajo Nation DODE, Office of Educational Research and Statistics for the 2022 Regional Needs and Assets Report. Passing rates for 3rd grade students in both English Language Arts (8%) and Math (9%) were lower than those seen in the overall BIE assessment results.

Both four- and five-year graduation rates in ADE schools in the Navajo Nation Region were consistently

higher than graduation rates for American Indian students statewide. In 2022, 74% of Navajo Nation Region students in these schools graduated in four years, compared to 65% statewide), and in 2021, 78% of students graduated within five years compared to 70% statewide. Graduation rates were even higher for American Indian students enrolled in off-reservation schools that enroll Navajo Nation students. In 2022, 90% of American Indian student in these off-reservation schools graduated in four years, and 88% graduated within five years in 2021. In 2021-22, the 7th-12th grade dropout rate (9%) was the same for Navajo Nation ADE schools as it was for American Indian throughout Arizona. Dropout rates for American Indian students in off-reservation schools were substantially lower that year (4%). Dropout rates for students in Navajo Nation ADE schools and for American Indian students statewide have increased substantially from 2019-20 to 2021-22, increasing from 3% to 9% in the region and 5% to 9% statewide.

Among adults in the Navajo Nation Region, 77% have at least a high school education. This is the same proportion as across all Arizona reservations (77%) but lower than that seen statewide (89%). While educational attainment generally looks similar between the Navajo Nation Region and all Arizona reservations, 10% of adults in the region have a bachelor's degree or higher and 8% have an associate's degree, compared to 9% and 7%, respectively, in all Arizona reservations. Compared with all adults, mothers giving birth in 2020 and 2021 in the region were less likely to have less than a high school education (15% and 16% respectively, compared with 23% of all adults).

Early Learning. According to the 2022 Regional Needs and Assets Report, early childhood care and education opportunities in the Navajo Nation Region include: Navajo Head Start and Early Head Start programs; the BIE Family and Child Education (FACE) program; school-based preschool programs; center and home-based child care services under the Navajo Nation Department for Child Care and Development (DCCD) and informal care through family and friends. Navajo Head Start administers two programs: Head Start and Early Head Start (EHS). Navajo Head Start provides services to young children across five Head Start districts: (1) Shiprock, (2) Crownpoint, (3) Window Rock, (4) Chinle and (5) Kayenta/Tuba City. As of 2022, there were 85 total Navajo Head Start Centers in operation, with 80 Head Start classrooms and 5 EHS classrooms. In fiscal year (FY) 2023, the Navajo Nation Head Start program enrolled 643 three-year-olds and 500 four-year-olds as well as a few five-year-olds, for a total of 1,146 cumulatively enrolled children, slightly less than the 1,313 funded slots. The cumulative number of children enrolled was slightly lower than the 1,203 children enrolled in FY 2019, the last year before the onset of the COVID-19 pandemic. In contrast, participation in EHS has remained very steady; 64 children were cumulatively enrolled in the program in FY 2023, very similar to the 63 children enrolled in FY 2019.

BIE sponsors the Family and Child Education (FACE) program for American Indian families in 15 BIE schools across Arizona, including eight in the Navajo Nation Region. FACE has both center- and home-based components, as well as programming to specifically support children and their caregivers. The eight programs within the Navajo Nation Region reached a total of 790 adults and children in both the home-based and center-based components. The center-based components served 123 adults and 117 children, while the home-based component reached 289 adults and 303 children.

There are 15 school-based preschool programs in the region, 14 of which participate in Quality

First. One of these programs is based at a private school, while the other 14 are located within public schools. As of January 2024, these programs had a capacity to enroll 797 preschool-age children. Quality First, funded by First Things First, supports child care centers and preschools to help improve the quality of their programs through nurturing every child's emotional, social and academic development. Quality First participants are provided support through coaching, technical assistance and additional funding.

According to the 2022 Regional Needs and Assets Report, Navajo Nation DCCD, which is housed under the Navajo Nation Division of Family & Children Services, provides child care services for parents and families who are working toward self-sufficiency through tribal child care centers or private providers. Young children can receive child care through either licensed center-based or home-based providers or through unlicensed home-based providers, usually a relative of the child who can be reimbursed for providing care at home. In FY 2020, 605 total children birth to age 13 received child care through DCCD. More than two-thirds of these children (65%; n=396) were young children birth to age 5. Most young children receiving child care services from Navajo Nation DCCD (83%) were enrolled in licensed center-based care, with much smaller proportions enrolled in licensed home-based care (12%) or unlicensed care by a relative (9%).

As of 2023, there were 25 child care providers participating in Quality First in the Navajo Nation. This includes nearly all of the school-based preschool programs in the region), as well as most tribal child care centers and several privately-operated child care centers. The majority of child care providers in the region (92%) 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%). Due to this high prevalence of quality providers, most children who are enrolled in a Quality First center (86%) are enrolled in a provider with a 3- to 5-star rating. Almost half of children enrolled in Quality First providers (n=202; 43%) receive Quality First scholarships, again a much higher rate than seen statewide, where about 11% of enrolled children receive scholarship.

The Navajo Nation Growing in Beauty program is the Arizona Early Intervention Program (AzEIP) provider for the Navajo Nation Region. Growing in Beauty conducts screenings and developmental evaluations, including vision and hearing, to help children access early intervention services. Growing in Beauty's mission is to "assure that all Diné children with a developmental delay or disability, between the ages of birth to five, grow into beautiful individuals," and it simultaneously honors the Navajo culture and language throughout its work with families. The program helps families understand key principles of early intervention. In the Navajo Nation Region, most children birth to age 2 are referred to AzEIP through health care providers, though the pattern of referrals has shifted in recent years. In FFY 2022, the largest share of referrals originated from a physician (74%). Compared to the state, there are very few self-referrals by parents or family members of the child; only 3% of referrals originated with parents or family members in FFY 2022 in the region compared to 21% statewide. In the region, 20% of children (birth to age 2) who were referred to AzEIP in FFY 2022 were found eligible and received services, about the same as seen in Arizona overall (21%). A much smaller share of assessed children was found not eligible (3%) compared to the state (22%). Two-thirds of children in the region referred to AzEIP (66%) are either in families where a service coordinator could not make contact (29%) or where families did not proceed with screening for eligibility (37%); much higher than the 33%

statewide. In 2022, the number of children birth to age 2 receiving services from AzEIP increased for the first time since 2018, rising to 59 children receiving services as of Oct 1, 2022 from a five-year low of 38 in October 2021. Fewer than 10 children received services from the Division of Developmental Disabilities (DDD) in any year between SFY 2019 and 2022.

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 has fallen steadily in the region over the past five years, declining by 61% from 57 in SFY 2019 to 22 in SFY 2022. Based on the population of children birth to age 2 in the region per the 2020 Census, this suggests that only 0.6% of children in the region may be receiving AzEIP services, a substantially lower proportion than the 2.6% of children statewide. In 2022, a total of 291 students in preschool through 3rd grade in ADE schools in the Navajo Nation Region were enrolled in special education. This includes 44 preschoolers, 45 kindergarteners, 61 1st graders, 62 2nd graders and 79 3rd graders. A small number of 2nd and 3rd grade children were enrolled in special education in off-reservation ADE schools serving Navajo Nation students. Similar to trends seen in early intervention, the number of preschoolers with disabilities served by a local educational agency (LEA) in SFY 2022 (n=44) has been on a substantial decline since SFY 2019, falling by more 50% in four years. Of the preschoolers with disabilities receiving services through LEAs in 2022, 36% were diagnosed with a developmental delay, 34% with a speech or language delay, 20% with a preschool severe delay and 9% with other disabilities. The proportion of preschoolers with a developmental delay is lower than that seen statewide (43%), and other disability much higher (3% statewide).

The number of kindergarten through 3rd grade students enrolled in special education has also declined steadily from SFY 2018 (n=396) to SFY 2022 (n=247). In 2022, nearly half of these students were diagnosed with a developmental delay (45%), 26% a speech or language impairment, 10% a specific learning disability, 8% autism and 11% another disability. In a reversal of the preschool pattern, the proportion of children diagnosed with a developmental delay was higher for students in the region (45%) than Arizona overall (27%). In off-reservation ADE schools, most children enrolled in special education had a speech or language impairment (36%) or developmental disability (45%).

Maternal & Children's Health. According to the 2022 FTF Navajo Nation Regional Needs and Assets Report, families in the Navajo Nation Region can access health care through facilities operated by Indian Health Services (IHS) and tribally-operated hospitals and clinics. The Navajo Area IHS provides health care services to American Indians who reside in the Four Corners area of the Southwest, including parts of Arizona, New Mexico and Utah.

Health care in the Navajo Area is provided through in-patient, outpatient, and community health programs based in six hospitals, seven health centers, and 15 health stations. 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. Under the leadership of tribal health corporations, the Navajo Nation manages three tribally-operated health care facilities in Arizona under P.L. 93-638 ("638") contracts: Tsehootsooi Medical Center in Fort Defiance, Tuba City Regional Health Care Corporation in Tuba City and Winslow Indian Health Care Corporation in Winslow.

Health insurance coverage plays an important role in access to health care. In the Navajo Nation Region, the proportion of young children birth to age 5 who do not have health insurance increased from an estimate 17% according to the 2012-2016 American Community Survey (ACS) to 28% in the 2017-2021 ACS. 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. Members of the Navajo Nation with or without health insurance may access health care services at tribally-operated or IHS facilities. However, despite the apparent decrease in young children with health insurance, most births in the Navajo Nation Region were covered by the Arizona Health Care Cost Containment System (AHCCCS) in 2020 (80%) and 2021 (83%), which is higher than AHCCCS coverage across all Arizona reservations in 2020 (71%) and Arizona overall (48% and 46%, respectively). Only 5% of births in 2020 and 6% in 2021 were covered by IHS, compared to

16% on all Arizona reservations. Between 2018 and 2022, the proportion of births in the Navajo Nation Region paid for by AHCCCS remained consistently higher than 80%, while proportion of births paid for by IHS varied from 1% to 7%.

In 2021, just over 60% of the 1,005 births in the Navajo Nation Region were to mothers who began prenatal care in the first trimester, while about one in 10 (10%) births were to mothers who had fewer than five prenatal visits, and another 4% 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 Navajo Nation Region were slightly less likely to have inadequate or late prenatal care than those in all reservation in the state. However, the region still 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 declined from a high of 12.0% in 2020 to a low of 7.6% in 2022, a positive improvement though this rate is still above the statewide rate of 4.7% in 2022. Similarly, the share of births with no prenatal care fell from a peak of 5.6% in 2019 to 2.8% in 2022, just above the statewide rate of 2.3%. Between 2018 and 2022, the proportion of births in the Navajo Nation Region to mothers who began prenatal care in the first trimester decreased from 65% in 2018 to 60% in 2022, lower than the statewide rate of 71%.

In 2020 and 2021, 7-8% of births in the Navajo Nation Region were to mothers younger than age 20 and 2-3% were to mothers younger than 18. Both of these percentages were lower 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 slightly less 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 (6.5-9.0%) than in the state (4.6%-5.8%). However, in an encouraging trend, the percentage of births to mothers younger than 18 fell to a five-year low of only 1.3% in 2022, very similar to the 1.1% statewide. The share of mothers giving birth who smoked cigarettes during pregnancy was much smaller in the region in 2020 (1.1%) than in all Arizona reservations (11.1%) and Arizona overall (3.6%). The Navajo Nation Region has met the Healthy People 2030 target of no more than 4.3% of women using tobacco during pregnancy for all years between 2018 and 2022, even with a slight uptick in smoking during pregnancy from 2021 (0.9%) to 2022 (1.5%). Between 2018 and 2022, 59 newborns were hospitalized because of maternal drug use during pregnancy in the Navajo Nation Region. Based on the total number of births, this equates to only

3.3 newborns hospitalized per 100 births, much lower than the 3 newborns hospitalized per 100 live births in the state.

Between 2018 and 2022, rates of pre-pregnancy obesity and gestational diabetes in the Navajo Nation Region steadily increased. Pre-pregnancy obesity increased from about one in three births in 2018 (30.4%) to nearly half of all births in 2022. Gestational diabetes followed a similar pattern, increasing from 16.9% of births in 2018 to 28.1% of births in 2022. In 2021, the latest year that can be compared with the state, the Navajo Nation Region had substantially higher rates of both pre-pregnancy obesity (47.4% compared with 27.1%) and gestational diabetes (28.1% compared with 9.9%).

In 2021, higher proportions of the babies born were preterm (12.7%) in the Navajo Nation Region than in Arizona overall (10.0%), but the proportion of low birth weight births (8.5%) 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 low-birthweight (8.1%) and preterm (11.2%) in 2020 were also slightly lower in the region than across all Arizona reservations (8.9% and 12.6%, respectively). Between 2018 and 2021, the proportion of low birth weight births had been steadily increasing in the region, from a low of 6.4% in 2018 to 8.5% in 2021, but in 2022, the rate of low birth weight births fell to 7.6% in the region, dipping below the statewide rate (7.8%) for the first time in four years. The Healthy People 2030 target for the percentage of preterm births is 9.4% or lower. In 2018, the Navajo Nation Region met this target, but since 2018, preterm birth rates have been well above 9.4%, meaning the region has not met this target. However, like low birth weight birth trends, the percentage of preterm births fell for the first time in four years to 11.1% in 2022 from a high of 12.7% in 2021.

According to data from the 2020 Navajo Nation Maternal and Child Health Needs Assessment that was included in the 2022 Regional Needs and Assets Report, about two in five infants (44%) who were enrolled in the Navajo Nation WIC program were breastfed either partially (23%) or fully (21%) between 2016 and 2018. By comparison, during the same period, only 30% of infants in the Arizona WIC program were breastfed partially (20%) or fully (10%). Data from the Navajo Nation WIC program in 2019 indicated that 85% of infants were ever breastfed or given human milk at birth or after, 42% were breastfed for at least six months, and 29% for at least a full year. Approximately one in 10 infants (11%) were exclusively breastfed for six months or more.

Childhood immunizations protect against many diseases, including diphtheria, tetanus and pertussis (DTaP); polio; and measles, mumps and rubella (MMR). According to data from the 2020 Navajo Nation Maternal and Child Health Needs Assessment that was included in the 2022 Regional Needs and Assets Report, 57% of children ages 19 to 35 months were up-to-date on all early childhood immunizations in the Navajo IHS Area, meeting the national IHS target of 45.6% or more. In the 2022-23 school year, immunization rates for children enrolled in child care or preschool in the Navajo Nation Region (DTaP 95.3%; Polio 96.4%; MMR 96.8%) were higher than statewide child care immunization rates (DTaP 90.6%; Polio 92.2%; MMR 93.0%). The immunization rate in the region met the Healthy People 2030 DTaP immunization target of 90%. Vaccine uptake is generally good in the region, with no children in child care or preschool (0.0%) exempt from every required vaccine, compared to 4% statewide. Similarly, kindergarten immunization rates in schools in the region (DTaP 97.8%; Polio 98.3%; MMR 96.3%) were also higher than statewide rates (DTaP 89.6%; Polio 90.3%; MMR 89.9%)

in the 2022-23 school year. Immunization rates in regional schools met the Healthy People 2030 kindergarten MMR immunization target of 95% or more, unlike schools statewide, where only 89.9% of kindergarteners had complete MMR immunizations. Personal belief exemption rates and rates of exemptions from all required vaccines (0.2% for both) were again substantially lower than rates in Arizona overall (7.3% and 4.6%, respectively). 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 only 39 RSV cases. However, in 2022, there were 540 cases of RSV and 377 cases of influenza in young children in the region, the highest numbers seen in 4 years. Similar increases were seen in cases statewide, though without the 2021 dip in RSV cases.

The infant mortality rate in the Navajo Nation Region 2019-2021 (6.8 deaths per 1,000 live births) was higher than Arizona's (5.4), and both failed to meet the Healthy People 2030 target of 5.0 or fewer. The types of unintentional injuries leading to non-fatal emergency department visits among young children (birth to age 4) are similar in the Navajo Nation Region to the state as a whole. Between 2016 and 2020, the majority of emergency department visits among young children in the region were due to falls (n=465), with smaller numbers due to being struck by or against an object (n=185), natural or environmental reasons (n=85), or other causes (n=140). However, the types of unintentional injuries leading to non-fatal hospitalizations for young children in the region were substantially different than the pattern seen statewide. Fire or hot objects (n=22) were the leading cause of hospitalization due to unintentional injury in the Navajo Nation Region, followed by poisoning (n=10) and motor vehicle traffic injuries (n=10). By contrast, falls led to the most hospitalization for unintentional injuries across Arizona, followed by poisoning. Motor vehicle injuries ranked 5th among statewide causes. There were 80 deaths of children birth to age 17 in the Navajo Nation Region between 2018 and 2021. A quarter of these deaths (25%) were due to accidents, nearly one in five were due to intentional self-harm or suicide (19%), and 13% were due to congenital malformations. The proportion of child deaths due to self-harm or suicide were three times higher in the region than in Arizona overall (6%).

Family Support and Literacy. According to the 2022 First Things First (FTF) Navajo Nation Regional Needs and Assets Report, the FTF Navajo Nation Regional Partnership Council helps to fund the Growing in Beauty program, which is operated by the Navajo Nation Office of Special Education and Rehabilitation. The program provides home visits to pregnant women and families with children ages birth to 5 using the Parents as Teachers model, and also incorporates Diné cultural practices into early literacy and language activities. In 2020, 159 families with 199 children birth to age 5 participated in the program, and 20 families graduated from the program.

Child welfare services in the Navajo Nation Region are overseen by the Navajo Nation Division for Children and Family Services - Department of Family Services. In 2020 there were 706 substantiated cases of child abuse or neglect for children birth to age 17, a decrease from 1,017 in 2019. According to the 2022 Regional Needs and Assets Report, ICWA cases in the Navajo Nation are overseen by the Navajo Indian Child Welfare Act Program, part of the Navajo Nation Division for Children & Family Services. In 2020, the largest number of ICWA placements were in the state of Arizona, with 241 cases involving 476 children birth to age 17. Key informants in the 2022 report indicated that ICWA cases are

dispersed throughout the state, but the largest number are located in the Phoenix area, followed by the Flagstaff area. In 2020, 93 children in ICWA placements were reunited with their parents, 55 were adopted or taken under legal guardianship by a relative, and 14 were adopted into non-relative Navajo homes.

In 2020, there were 9,499 children birth to age 17 in out-of-home care under the Department of Family Services. The majority of these children (n=6,466) were placed with relatives, 746 were placed with their parents, 709 in contracted foster homes, 456 in contracted group homes, and 959 in Navajo Nation licensed foster homes. Key informants in the 2022 Regional Needs and Assets Report noted that most children placed with relatives or with their parents live in the Navajo Nation, while contracted foster homes and group homes are all located outside the Navajo Nation, some in bordering towns and some further from the Nation. In 2020, there were 22 total non-relative foster care homes licensed by the Navajo Nation Department of Family Services, 12 on-reservation and 10 off-reservation. These homes had a total availability of 55 beds, 30 in on-reservation homes and 25 in off-reservation home,

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 Navajo Nation Region. Of note, the data in this report may cover the timespan when the Navajo Nation had encountered the COVID-19 pandemic. During this time the Navajo Nation, as a sovereign nation, enacted policies such as curfews, lockdowns and limiting outside visitors for the protection of the Diné people. These policies may have resulted in limitations in data collection during that time.

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 Navajo Nation Regional Needs and Assets Report.

In most tables in this report, the top rows of data correspond to the FTF Navajo Nation Region. Not all data are available at the FTF regional level because not all data sources analyze their data based on FTF regional boundaries. When available, the next row shows data for the Navajo Nation as a whole. 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: ADDITIONAL DATA TABLES.

THE NAVAJO NATION REGION

Naabeehó Bináhásdzo

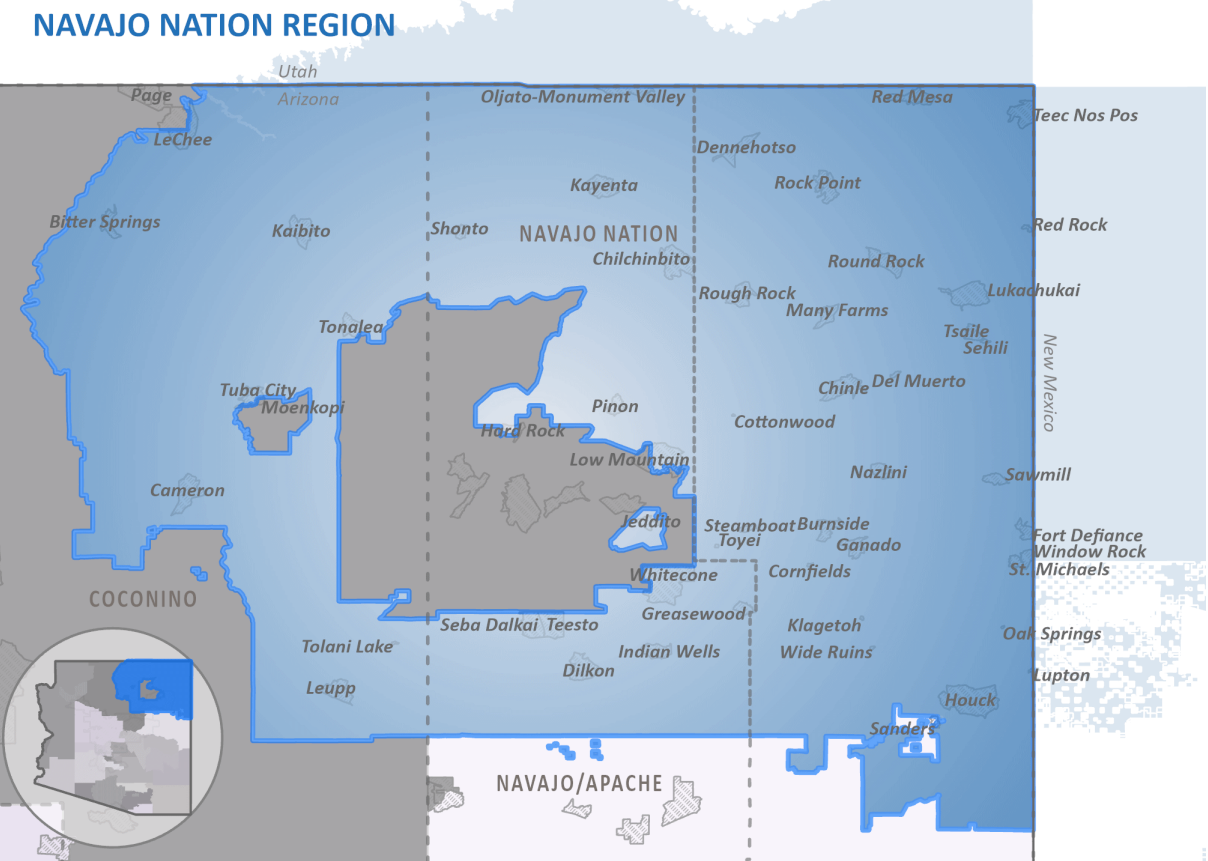
The First Things First regional boundaries were initially established in 2007, creating 31 regions which were designed to (a) reflect the view of families in terms of where they access services, (b) coincide with existing boundaries or service areas of organizations providing early childhood services, (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 Navajo Nation Region was one of 10 Tribes that chose to be designated as its own region. This decision must be ratified every two years, and the Navajo Nation has opted to continue to be designated as its own region.

The Navajo Nation is a sovereign nation that extends into the states of Arizona, New Mexico and Utah, covering 27,000 square miles. The Navajo Nation is home to the Navajo people, also known as Diné, *The People*. Window Rock is the capital of the Navajo Nation from which three branches of government administer the Navajo Tribal Code. Local governmental authority lies with 110 Chapters in which local business is conducted and tribal voting occurs. The boundaries of the First Things First Navajo Nation Region mirror the Arizona-only portion of the Navajo Nation. Figure 1 shows the geographical area covered by the Navajo Nation 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 Navajo Nation Region

Map by Community Research, Evaluation, & Development (CRED) Team, University of Arizona



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



POPULATION CHARACTERISTICS

Diné T'áá Altso Yaahalne'igíí

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 Navajo Nation Region is faring

- According to the 2020 U.S. Census, the total population of the Navajo Nation Region was 94,511, of whom 7,832 were young children (birth to age 5). Nearly one-fifth of the 5,088 households in the region (18%) had one or more young children. This proportion of households with young children in the region (18%) matched that in the entire Navajo Nation (18%) and was substantially higher than the proportion in Arizona (13%) (Table 1).
- According to the Census, the overall population of the Navajo Nation Region fell by 7% between 2010 and 2020. This is larger than the decrease seen across all Arizona reservations (-3%) and the entire Navajo Nation (-5%). The population of young children (birth to age 5) decreased even more substantially by 33%, again a larger decrease than the -26% seen across all Arizona reservations and -31% in the entire Navajo Nation (Table 2 & Figure 2).
- 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). The COVID-19 pandemic had substantial impacts on 2020 Census data collection in the Navajo Nation.³⁵
- One way to understand potential undercounting of young children in the Navajo Nation Region is to compare 2020 Census data on the birth to 5-years-old population to Arizona Department of Health Services (ADHS) data on births from 2015 to 2020. Census estimates are relatively close to birth counts, with 7,236 total births between 2015 and 2020 compared to an estimated

population of 7,332 young children in the Census (Figure 3). This suggests that young children may not have been too severely undercounted, but it does not account for families with young children who move back to the region. According to the 2022 First Things First (FTF) Navajo Nation Regional Needs and Assets Report, key informants in the region noted that there had been an increase in families moving back to the reservation, which could bring more young children who would not be reflected in regional birth counts.³⁶

- Almost all of the population (97%) in the Navajo Nation 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 non-Hispanic White (3%), Multiracial (2%), Hispanic or Latino (1%), Black or African American (1%) or Asian or Pacific Islander (1%) in 2020 (
- Figure 4). These breakdowns were similar for young children, with even higher portions identified as American Indian (99%), and slightly higher proportions identified as Multiracial (3%) or Hispanic or Latino (2%) 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)	
Navajo Nation Region	94,511	7,332	28,856	5,088	18%
Navajo Nation (entire)	165,158	12,692	49,878	8,916	18%
All Arizona Reservations	173,499	15,140	50,362	10,167	20%
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%

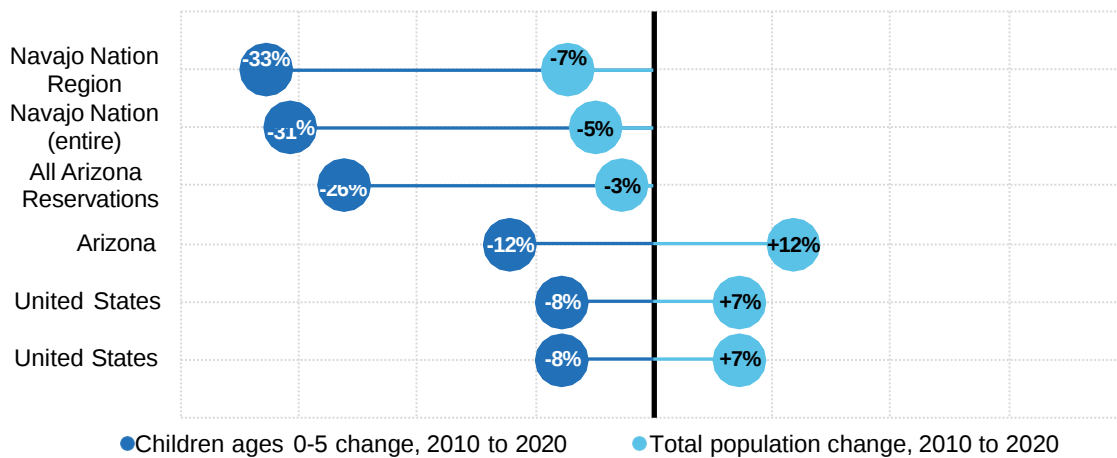
Source: U.S. Census Bureau. (2023). 2020 Decennial Census, Demographic & Housing Characteristics (DHC), Tables P1, P14, P20 & HCT3

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
Navajo Nation Region	101,835	94,511	-7%	10,894	7,332	-33%
Navajo Nation (entire)	173,667	165,158	-5%	18,335	12,692	-31%
All Arizona Reservations	173,499	178,131	-3%	15,140	20,511	-26%
Arizona	7,151,502	6,392,017	+12%	480,744	546,609	-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.

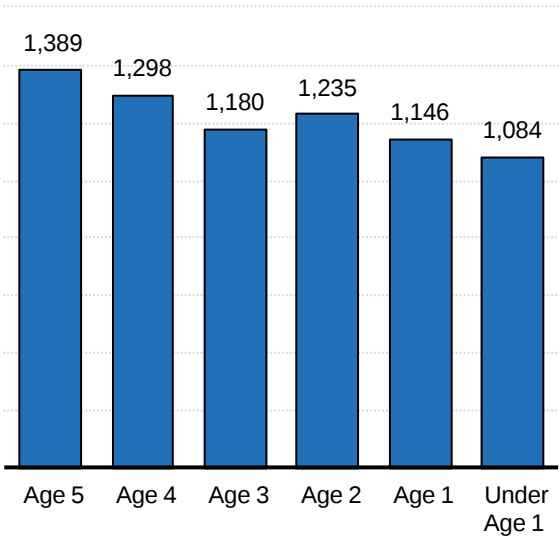
Figure 2. Change in the total population and population of children ages 0-5, 2010 to 2020
Census



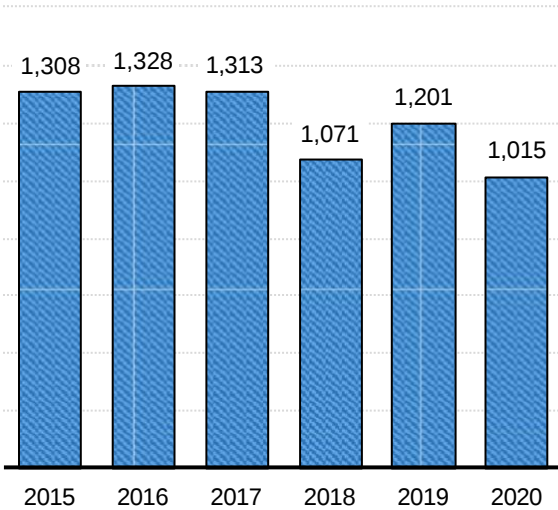
Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics (DHC), Tables P1, P14, HCT3. U.S. Census Bureau (2010). 2010 Decennial Census, Summary File 1, Tables P1, P14, P20.

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

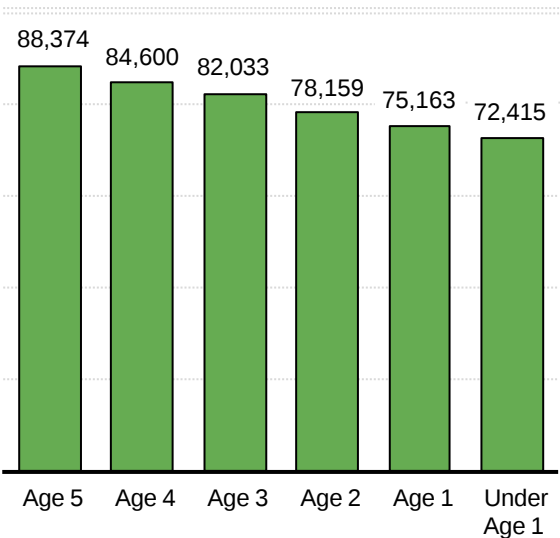
Children by age, Navajo Nation Region



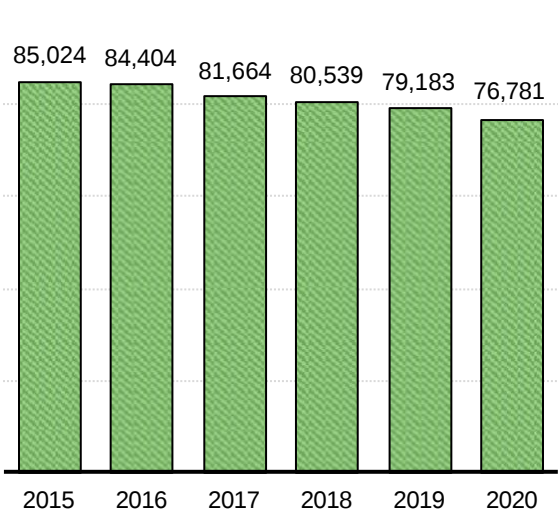
Births by year, Navajo Nation Region



Children by age, Arizona



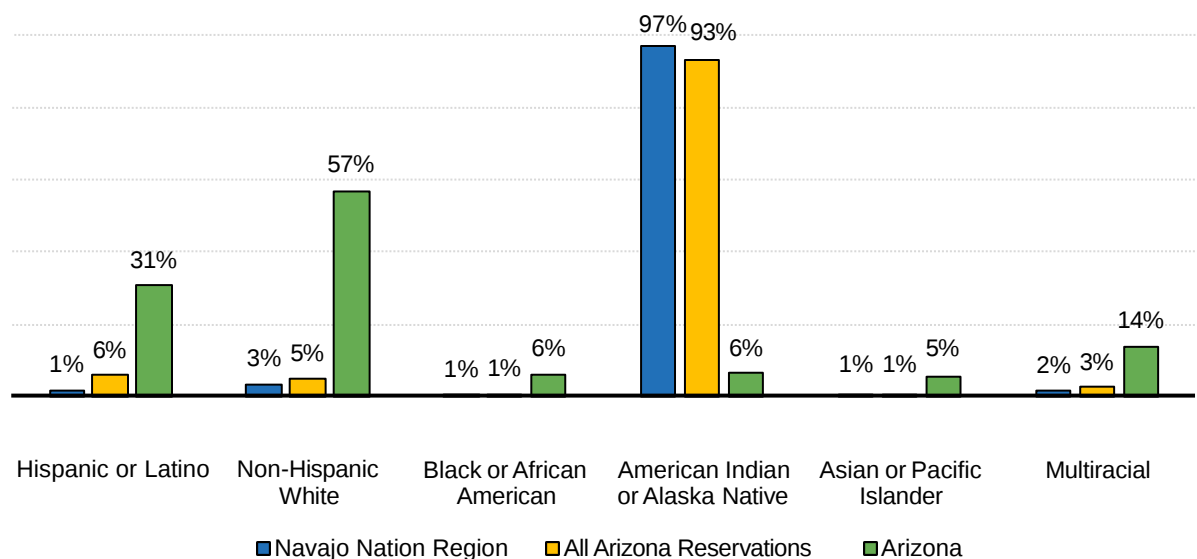
Births by year, Arizona



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.

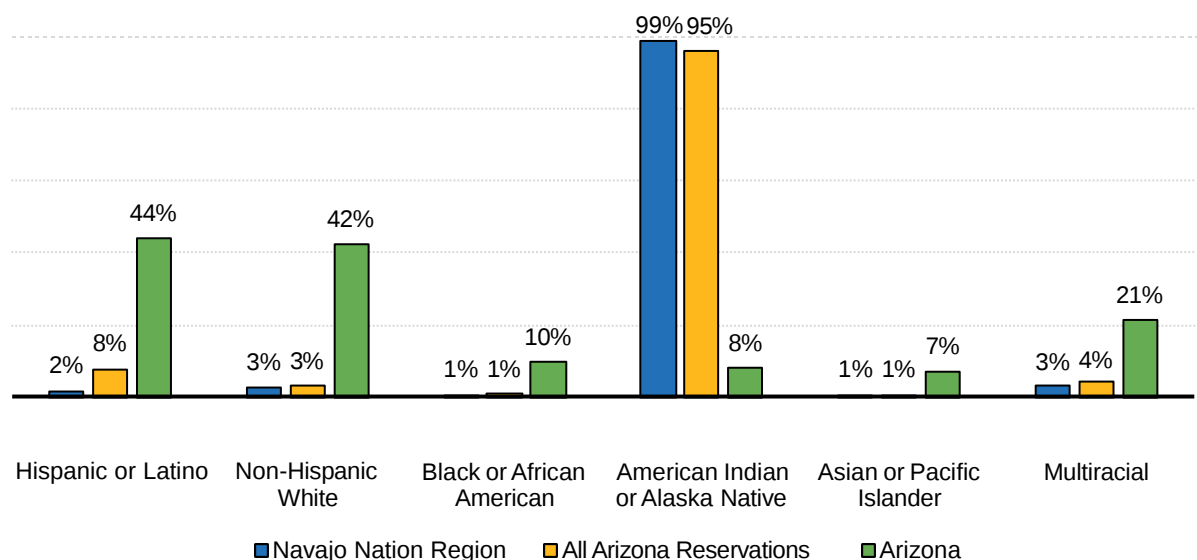
Figure 4. Race and ethnicity of the population of all ages, 2020 Census



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.^{37, 38, 39} 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 Navajo speakers declined by an estimated 13% (from over 90,000 to about 78,000), and the population of speakers of Native North American languages other than Navajo declined by an estimated 27% (from over 30,000 to about 22,500).⁴⁰ This decrease reflects the devastating losses that Native communities experienced during the COVID-19 pandemic.^{41,42} These deaths, especially among Native elders, signify a loss of life and of traditional knowledge, cultural history and language.^{43,44} 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.^{45, 46, 47, 48, 49} 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.^{50, 51} 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.^{52, 53}

How the Navajo Nation Region is faring

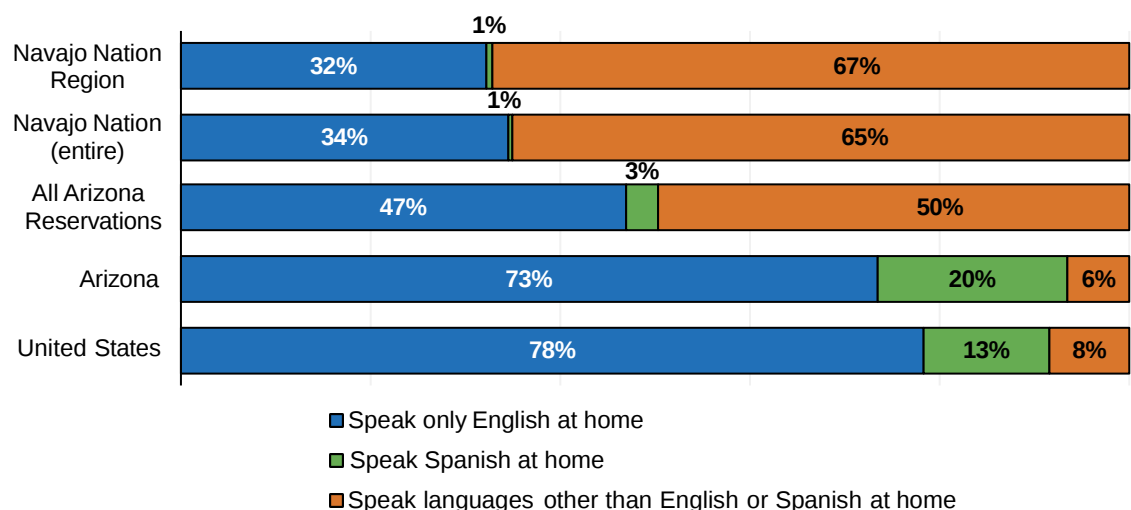
- More than two out of every three individuals ages 5 and older (67%) in the Navajo Nation Region speak a language other than English or Spanish at home (most likely a Native North American language), a much higher proportion than seen across all Arizona reservations (50%) and Arizona (6%). Very few individuals report speaking Spanish at home (1%), and about a third 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,”ⁱ with half of the region proficiently bilingual or multilingual (50%). However, a twice the proportion of individuals report speaking another language at home and not speaking English “very well” (18%) than in Arizona overall (8%) (Figure 7).
- About one in every five households in the Navajo Nation Region (20%) are considered limited-English-speaking, meaning no one over the age of 13 in the household speaks English very well

ⁱ “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>

(Figure 8). This is a larger proportion than seen across all Arizona reservations (12%), indicating a need for bilingual or multilingual staff and resources to support families whose first language is not English.^{54, 55}

- During the 2021-22 school year, 712 preschool to 12th grade students (6%) enrolled in ADE schools in the Navajo Nation Region were considered English Language Learners, as were 278 students enrolled in off-reservation schools that enroll Navajo Nation student (4%) (Table 3).
- 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, there were more than 1,400 students with reported Navajo language use at home in 2021-22. More than half of these students attended schools in the Navajo Nation Region (n=848), and overall 8% of students in regional schools and 3% of students in off-reservation schools reported Navajo language use at home (Table 4).
- In recent years, the number of students with reported Navajo language use at home has increased substantially, from 376 in regional schools in 2017-18 to a high of 977 in 2020-21 (Figure 9). However, it is important to note that these data do not indicate that all of these students spoke Navajo. Some may have been active Navajo speakers, while for others it may mean that some adults in the child's home spoke Navajo but the child did not.⁵⁶ Data from the Navajo Nation Department of Diné Education (DoDE) reported in the 2022 Regional Needs and Assets report showed that very few students were deemed 'fluent' on the Oral Diné Language Assessment (n=46 on the post-test in 2017-18, the last year of available data, out of 2,299 students tested).⁵⁷

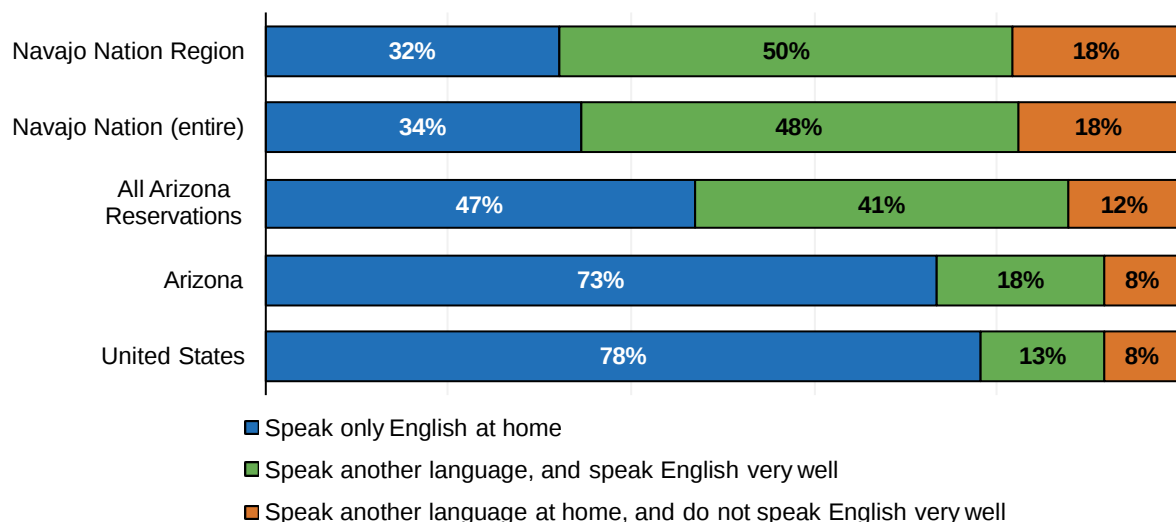
Figure 6. Language spoken at home (by persons ages 5 and older), 2017-2021 ACS



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%).

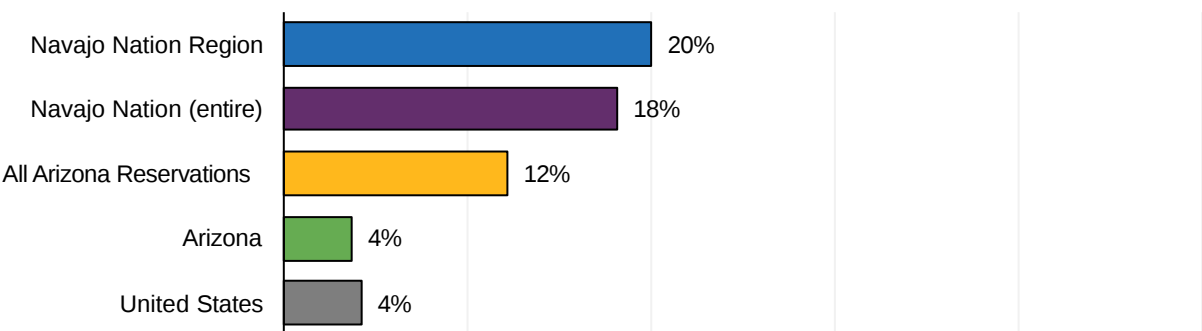
Figure 7. English-language proficiency (for persons ages 5 and older), 2017-2021 ACS



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 3. 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
Navajo Nation ADE school	969	712	8%	6%
Off-reservation ADE schools serving Navajo Nation students	277	278	5%	4%
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 Navajo Nation students included in this report are as follows: Sinagua Middle School and Flagstaff High School in Flagstaff Unified District; Page Middle School, Page High School and Sand & Sage Academy in Page Unified District; Holbrook Junior High School and Holbrook High School in Holbrook Unified District; and Sanders Elementary School and Valley High School in Sanders Unified District. 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>

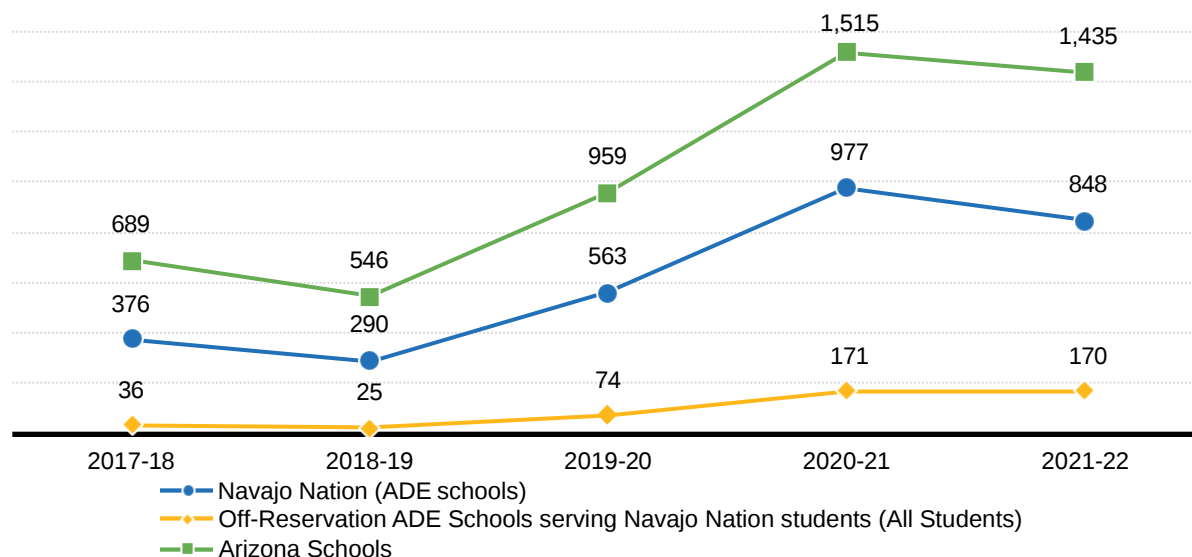
Table 4. ADE Primary home language survey data, 2020-21 to 2021-22

Geography	Number of students in households where Navajo is spoken		Percent of students in households where Navajo is spoken	
	2020-21	2021-22	2020-21	2021-22
Navajo Nation ADE school	977	848	8%	8%
Off-reservation ADE schools serving Navajo Nation students	171	170	3%	3%
Arizona schools	1,515	1,435	<2%	<2%

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

Notes: The Primary Home Language survey is completed by parents or caregivers of a student when they first enroll in school. The survey asks what language is spoken at home most of the time, what language the student speaks most of the time, and what language the student first spoke or understood. The selected off-reservation schools serving Navajo Nation students included in this report are as follows: Sinagua Middle School and Flagstaff High School in Flagstaff Unified District; Page Middle School, Page High School and Sand & Sage Academy in Page Unified District; Holbrook Junior High School and Holbrook High School in Holbrook Unified District; and Sanders Elementary School and Valley High School in Sanders Unified District.

Figure 9. Number of students in Navajo-speaking homes (ADE schools), 2017-18 to 2021-22



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

Notes: The Primary Home Language survey is completed by parents or caregivers of a student when they first enroll in school. The survey asks what language is spoken at home most of the time, what language the student speaks most of the time, and what language the student first spoke or understood.

Family and household composition

Young children in Arizona come from households with many potential compositions, each of which has possible implications for child development.^{58, 59, 60} For example, families with two married parents tend to offer stability that promotes child well-being.^{61, 62, 63} 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.^{64, 65, 66, 67, 68, 69, 70} 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.^{71, 72, 73, 74} These living arrangements can offer financial and social benefits but also specific stressors, such as managing conflicts in parenting styles and family roles.^{75, 76, 77, 78, 79} 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.^{80, 81, 82} 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.^{83, 84, 85, 86}

Though varying from one community to another, multigenerational households and kinship care are common in Native communities.^{87, 88} 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.⁸⁹ Grandparents are often central to these households and care situations, in many cases sharing and strengthening Native language, history and culture.^{90, 91}

How the Navajo Nation Region is faring

- Nearly two out of every three young children (birth to age 5) in the Navajo Nation Region live in a household with one unmarried parentⁱⁱ (65%), which is a larger proportion than across Arizona (37%). About a quarter of young children live with two married parents (26%), while smaller shares live with relatives other than parents (such as grandparents, aunts and uncles) (7%) or non-relatives (2%) (Table 5).
- Almost half of young children (44%) in the region lives in a grandparent's household, which is similar to that seen across all Arizona reservations (43%) (Figure 10). Note that this includes all multigenerational households; the grandparent in these households may or may not be

ⁱⁱ 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 Navajo Nation Region, 26% 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, 31% were living in households led by an unmarried (and not cohabitating) mother, 14% were living in households led by cohabitating parents and 9% were living in households led by an unmarried (and not cohabitating) father.

responsible for raising the child, and the child's parent(s) may or may not also be living in the household.

- In contrast, 13% of grandparents in the region are living with grandchildren (birth to age 17) without a parent also present in the household (Figure 11). 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 2,728 grandparents in the Navajo Nation Region are responsible for their grandchildren under 18 years old. A parent is also present in most of these households (only 31% without the child's parent). The majority of these grandparents are female (66%), and 42% are in the labor force, meaning that they may need child care for their grandchildren while they are working. More than a third (38%) 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).

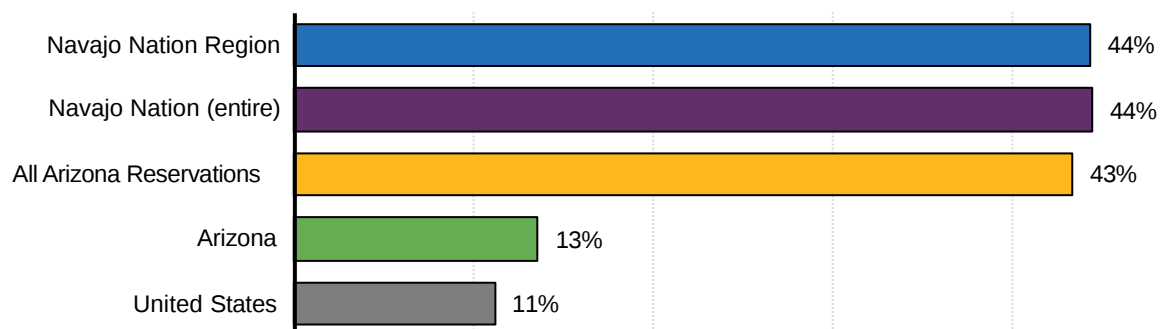
Table 5. Living arrangements for children birth to age 5, 2017-2021 ACS

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
Navajo Nation Region	7,784	26%	65%	7%	2%
Navajo Nation (entire)	12,826	26%	65%	7%	1%
All Arizona Reservations	15,661	25%	65%	8%	2%
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).

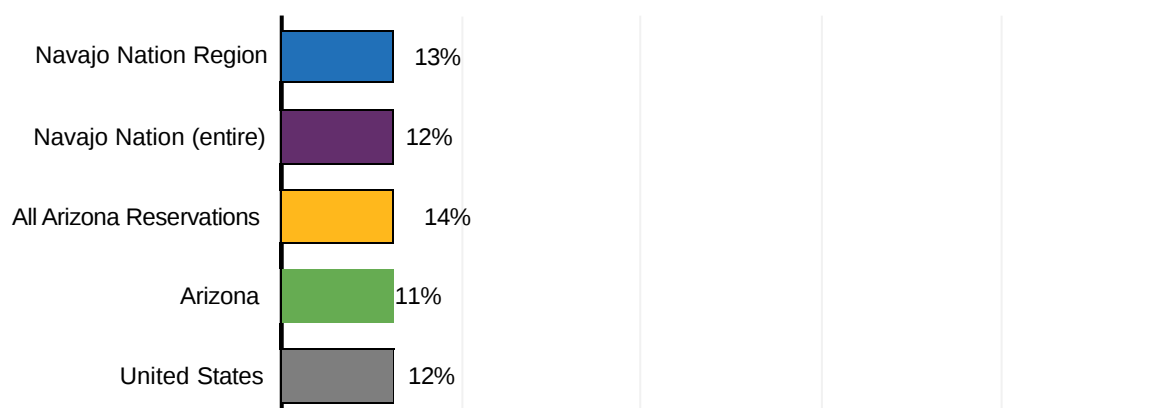
Figure 10. Grandchildren birth to age 5 living in a grandparent's household, 2020 Census



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 11. 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
Navajo Nation Region	2,728	31%	54%	66%	28%	42%	38%
Navajo Nation (entire)	4,509	30%	53%	66%	27%	41%	39%
All Arizona Reservations	5,828	30%	49%	67%	18%	44%	36%
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

Na'iini' Naalkaah

ECONOMIC CIRCUMSTANCES

Why it Matters

A family's economic stability impacts children's well-being and predicts a variety of health outcomes.⁹² 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.^{93, 94, 95, 96, 97} The challenges they face may continue into adulthood, and such difficulties can be passed on to the next generation.^{98, 99, 100} 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.¹⁰¹ 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.ⁱⁱⁱ

Economic circumstances in tribal communities have been shaped by a long history of inequitable policies and federal investment.^{102, 103} 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.¹⁰⁴

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.^{105, 106, 107} 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.^{108, 109, 110, 111, 112, 113, 114} 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.^{115, 116} 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.¹¹⁷

ⁱⁱⁱ 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)^{iv} 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.¹¹⁸ In recognition of tribal sovereignty, federally recognized tribes have the option to administer their own TANF programs.

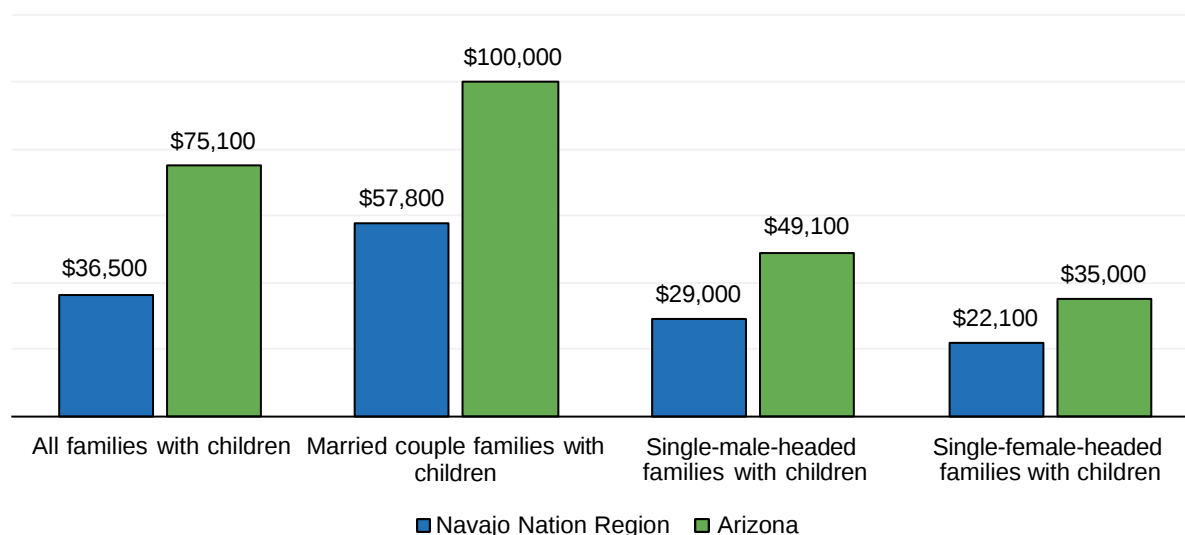
How the Navajo Nation Region is faring

- Across all household types for which data are available, the median family income for all families with children (birth to age 17) in the Navajo Nation 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 (\$57,800) of all family types, but this is substantially lower than seen statewide (\$100,000). The notably lower median annual income of single-male-headed families with children (\$29,000) and single-female-headed families with children (\$22,100) in the region points to the additional financial stress experienced by the single-parent-led households in the region (Figure 12).
- More than one-third (37%) of the overall population and nearly half (46%) of young children (birth to age 5) in the Navajo Nation Region live in poverty, which is more than twice the poverty rates for Arizona as a whole (13% and 20%, respectively), but similar to rates seen in all Arizona reservations (37% and 48%, respectively) (Figure 13).
- According to American Community Survey five-year estimates, rates of poverty among young children in the Navajo Nation Region have decreased (-6%) in recent years, from 52% in 2012-2016 to 46% in 2017-2021. Poverty rates declined similarly all Arizona reservations (-6%), Arizona (-8%) and the U.S. (-6%) during the same time period (Figure 14).
- The majority (68%) of young children in the Navajo Nation 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 15).
- Over a quarter (27%) of young children in the region that live in “deep poverty” (defined as below 50% FPL), triple the proportion in the state as a whole (9%) (Figure 15). 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.¹¹⁹

^{iv} For more information see: <https://www.acf.hhs.gov/ofa/programs/temporary-assistance-needy-families-tanf> and <https://des.az.gov/ca>

- The Navajo Nation is one of six tribes in Arizona that operate a Tribal TANF program, known as the Navajo Nation Department for Self Reliance (NNSDR). Between federal fiscal year (FY) 2019 and 2020, the average monthly number of children birth to age 5 served by NNSDR increased from 1,886 to 2,153 (Table 7). However, the number of children birth to 5 served by NNSDR fell in the latter half of 2020 following the onset of the COVID-19 pandemic (Figure 16). According to key informants consulted in the 2022 Regional Needs and Assets Report, the closure of tribal departments, shelter-in-place orders and limited staff availability at the start of the pandemic greatly affected how NNSDR was able to operate in the second half of 2020.¹²⁰

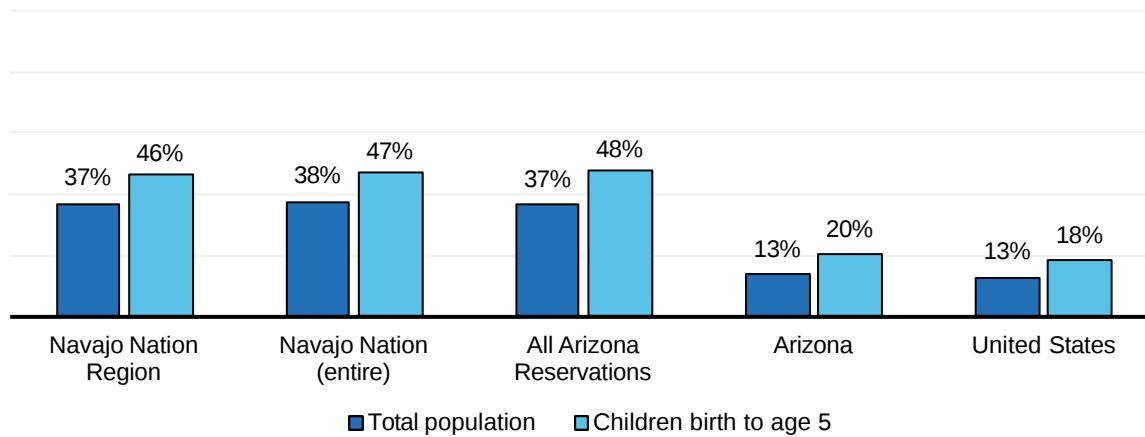
Figure 12. Median family income for families with children birth to age 17, 2017-2021 ACS



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.

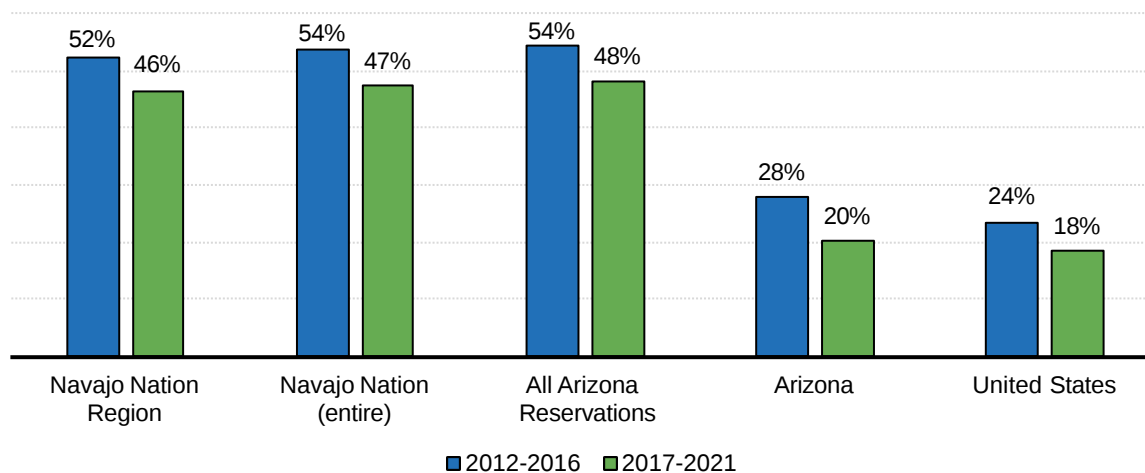
Figure 13. Rates of poverty for persons of all ages and for children birth to age 5, 2017-2021 ACS



Source: U.S. Census Bureau. (2020). 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.

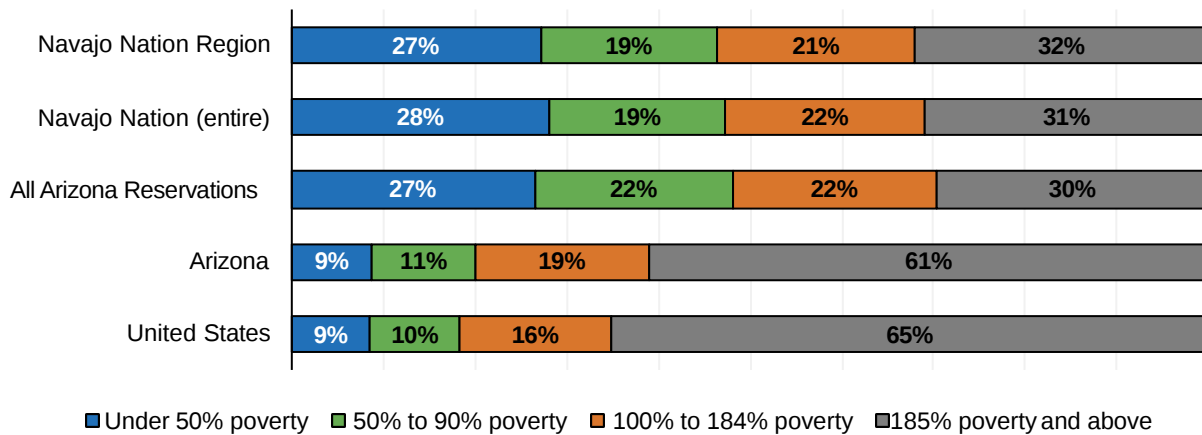
Figure 14. Rates of poverty for children birth to age 5, 2012-2016 and 2017-2021 ACS



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.

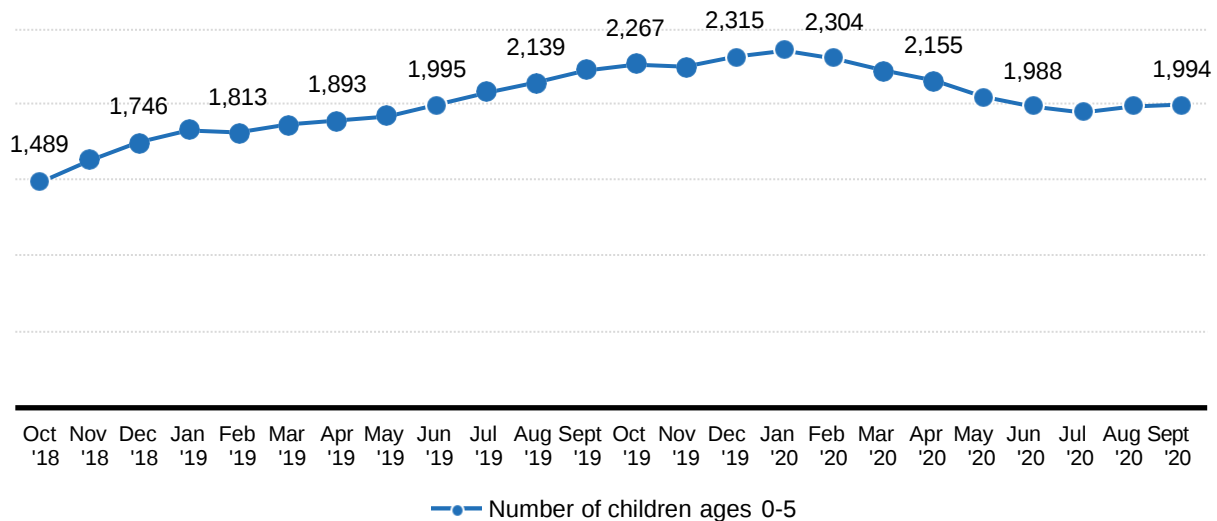
Figure 15. Children birth to age 5 living at selected poverty thresholds, 2017-2021 ACS



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 16. Children ages birth to 5 served by the Navajo Nation Department for Self Reliance (Tribal TANF) by month, FFY 2019 to FFY 2020



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Note: Data reflect children served by NNSR in the entire Navajo Nation, not just the First Things First Navajo Nation Region.

Table 7. Children served by the Navajo Nation Department for Self Reliance (Tribal TANF) by age, FFY 2019 & FFY 2020

	Average monthly number of children (FY 2019)	Percent of children (FY 2019)	Average monthly number of children (FY 2020)	Percent of children (FY 2020)
Ages 0-5	1,886	32%	2,153	33%
Ages 6-10	1,811	31%	2,043	31%
Ages 11-15	1,663	28%	1,840	28%
Ages 16-18	490	8%	565	9%
Total (0-17)	5,851	100%	6,601	100%

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Note: Data reflect children served by NNDSR in the entire Navajo Nation, not just the First Things First Navajo Nation Region.

Food security

Many families struggle with consistent access to “enough food for an active, healthy life,” a problem known as food insecurity.¹²¹ 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.^{122, 123, 124, 125, 126, 127}

The Supplemental Nutrition Assistance Program (SNAP; also referred to as “nutrition assistance” and “food stamps”),^v 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.¹²⁸ The SNAP program has been shown to reduce hunger and improve access to healthy food options among those who utilize it.¹²⁹

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC)^{vi} 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.¹³⁰

^v For more information see: <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program> and <https://des.az.gov/na>

^{vi} For more information see: <https://www.fns.usda.gov/wic> and <https://www.azdhs.gov/prevention/azwic/>

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)^{vii}, 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.¹³¹ 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 to NSLP for many schools.¹³² The Child and Adult Care Food Program (CACFP),^{viii} 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.¹³³

How the Navajo Nation Region is faring

- Since state fiscal year (SFY) 2018, SNAP participation among young children (birth to age 5) in the Navajo Nation Region has declined steadily from 7,813 in SFY 2018 to 5,397 in SFY 2022, a 30% decrease (Figure 17). This parallels the downward trend seen statewide for SNAP participation among young children.
- The Navajo Nation WIC program receives funding directly from the USDA and is housed within the Navajo Department of Health. According to the 2022 Regional Needs and Assets Report, the Navajo Nation WIC program operates 12 service unit clinics, including both stand-alone clinics and clinics housed within health care facilities, in addition to satellite clinics that serve more remote populations.¹³⁴
- In 2020, a total of 8,450 individuals were enrolled in the program, including 1,788 women (21% of WIC participants), 1,635 infants (19%) and 5,027 children (ages 2-4; 59%) (Figure 18). WIC participation rates were lower in the Navajo Nation WIC program than in the Arizona WIC program administered by the Arizona Department of Health Services. In 2020, 82% of the enrolled population, specifically 82% of women, 87% of infants and 80% of children, were actively receiving benefits during the calendar year, while rates in the same year in the Arizona WIC program all

^{vii} For more information see: <https://www.azed.gov/hns/sfsp>

^{viii} For more information see: <https://www.azed.gov/hns/cacfp>

exceeded 90% (Figure 19). However, 2020 participation rates were higher than 2019 rates for all groups, and key informants interviewed in the 2022 Regional Needs and Assets Report noted that the offering of drive-through and phone-based appointments by the Navajo Nation WIC program may have made participation easier for mothers and their children.¹³⁵

- From 2019-20 to 2021-22, the total number of school lunches served through school nutrition programs in the Navajo Nation 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 quintupled between 2019-20 and 2020-21, peaking at over 4,000,000 lunches served (Figure 17). 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 at Navajo Nation Head Start programs declined from around 40,000 in 2019-20 to just under 20,000 in 2021-22 but increased fourfold between 2020-21 and 2021-22 to nearly 85,000 lunches served. 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.

Figure 17. Number of children birth to age 5 and households with children birth to age 5 participating in SNAP, state fiscal years 2018 to 2022

Navajo Nation Region

Arizona

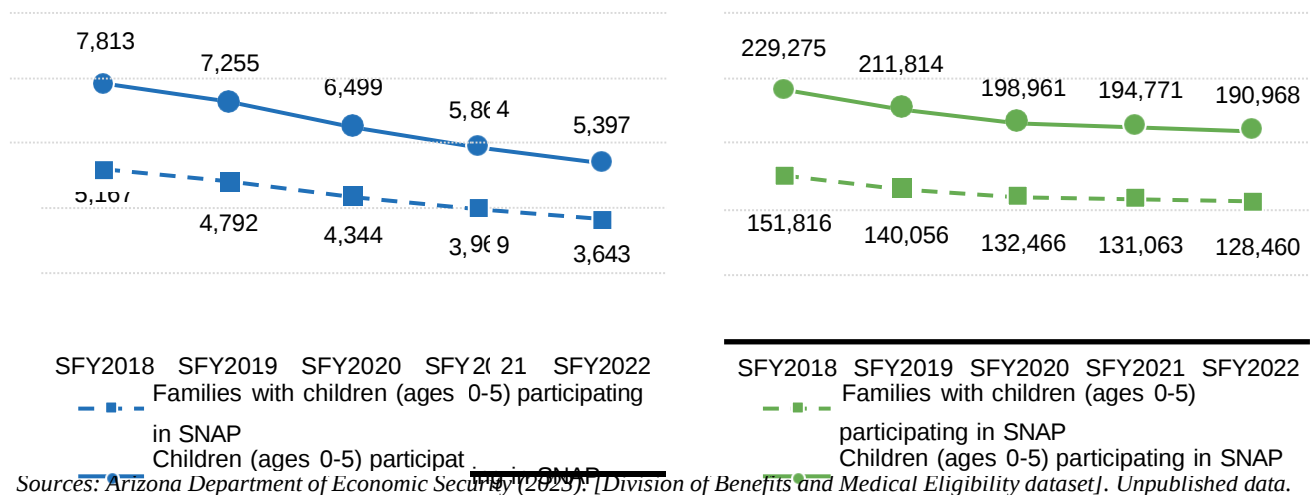
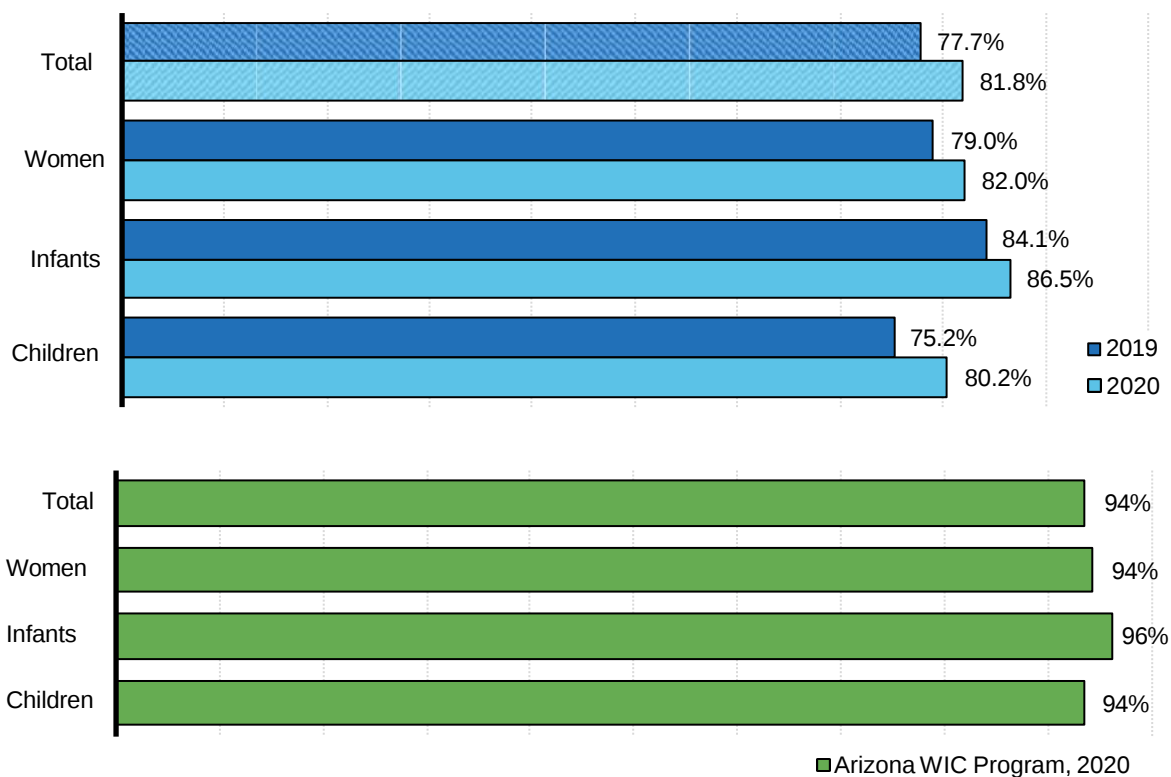


Figure 18. Enrollment in the Navajo Nation WIC Program, 2019 & 2020



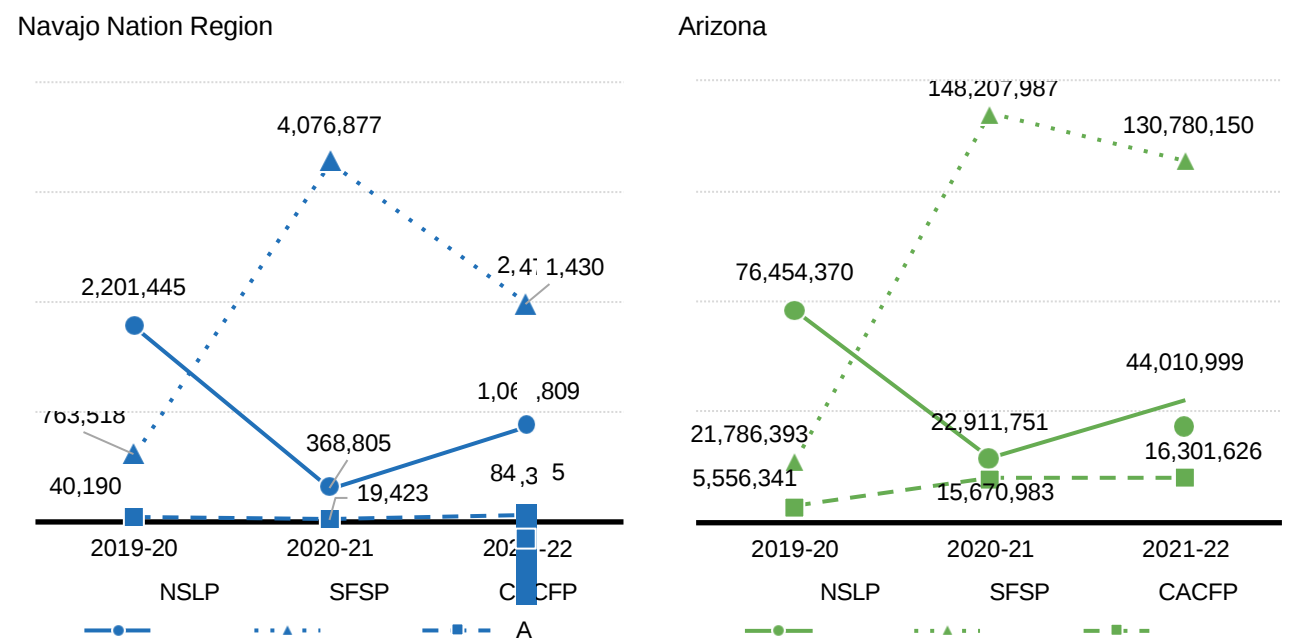
Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Figure 19. Navajo Nation WIC participation rates, 2019 to 2020, compared to Arizona WIC participation rates in 2020



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.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
Navajo Nation Head Start programs	38	40	34	40,190	19,423	84,335
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^{ix} can impact families in ways that affect children's health and well-being.¹³⁶ 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.^{137, 138} Children with parents who have lost their jobs may also experience poorer school performance and behavioral issues, resulting in grade repetition, suspension or expulsion.¹³⁹ 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.¹⁴⁰

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.^{141, 142, 143} These programs have the goal of decreasing the intergenerational effects of poverty by building parental capacity and protective factors within families.^{144, 145, 146}

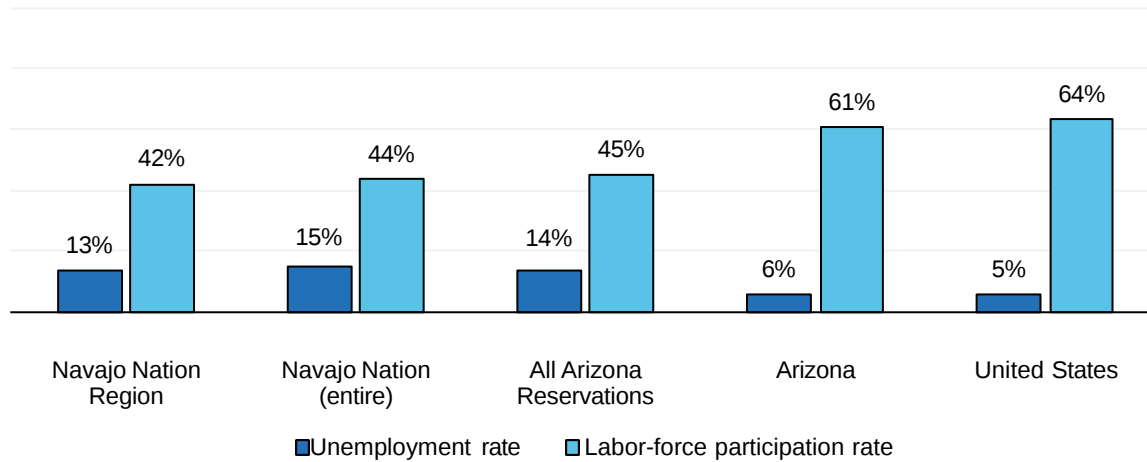
How the Navajo Nation Region is faring

- 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.¹⁴⁷ The ACS estimates that the average unemployment rate for the Navajo Nation Region between 2017 to 2022 was 13%. This is more than double the unemployment rate for Arizona as a whole (6%) but slightly lower than the rate in the entire Navajo Nation (15%) and 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 (42%) is slightly lower than that seen across all Arizona reservations (45%) and the entire Navajo Nation (44%) and substantially lower than the Arizona labor force participation rate (61%). This means that under half of working-age teens and adults in the Navajo Nation Region are working (36%) or actively looking for work (6%), while the remaining 58% are not (which includes students, retirees, stay-at-home parents and others) (Figure 21 & Table 9).
- Nearly two-thirds (61%) of young children (birth to age 5) in the Navajo Nation Region live in a household where at least one parent is in the labor force, compared to 90% of young children

^{ix} 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.

statewide. About half of young children in the region (46%) 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.

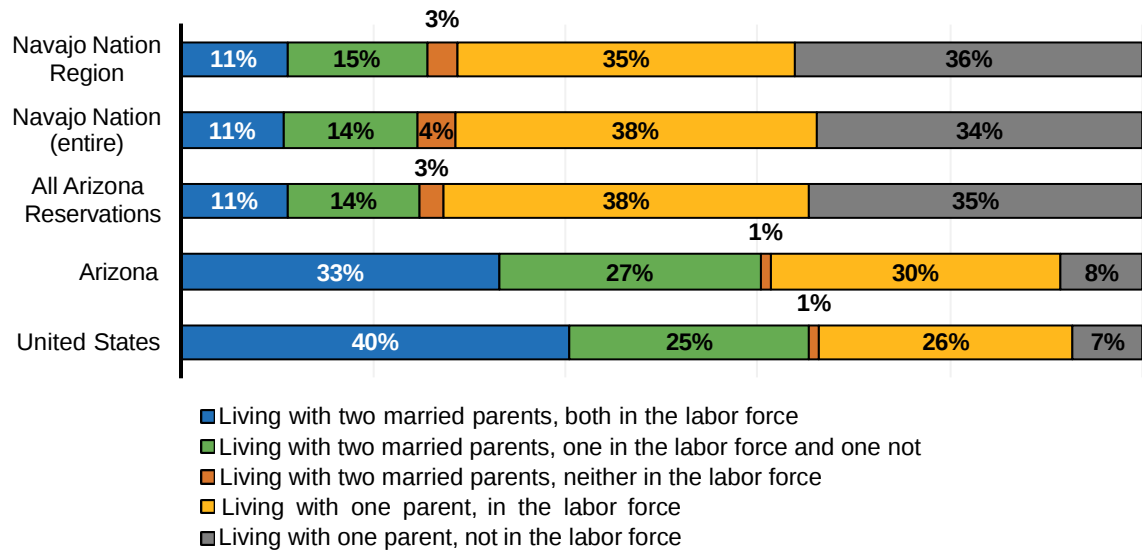
Table 9. Unemployment and labor-force participation for the adult population (ages 16 and older), 2017-2021 ACS

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
Navajo Nation Region	72,640	13%	42%	36%	6%	0.0%	58%
Navajo Nation (entire)	129,966	15%	44%	37%	6%	0.0%	56%
All Arizona Reservations	132,731	14%	45%	39%	6%	0.0%	55%
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.^{148, 149, 150} High relative housing costs leave inadequate funds for other necessities, such as food and utilities.¹⁵¹ 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.^{152, 153}

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.¹⁵⁴ 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.¹⁵⁵ The most common housing challenges on tribal lands include overcrowding and physical housing problems such as insufficient kitchen, plumbing, electrical, heating and cooling utilities.¹⁵⁶ 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.¹⁵⁷

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.¹⁵⁸ 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.¹⁵⁹ 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.^{x, 160}

How the Navajo Nation Region is faring

- Housing is considered to be affordable for families if it costs less than 30% of annual household income.¹⁶¹ According to recent ACS estimates, only 12% of households in the Navajo Nation 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).
- 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 per the federal definition in public schools in the region increased sixfold from 41 in 2019-20 to 246 in 2021-22 (Table 11). The number of students experiencing homelessness in off-reservation public schools that serve Navajo Nation students declined slightly over the same period, from 62 in 2019-20 to 54 in 2021-22.
- Less than a third (31%) of households in the Navajo Nation Region have both a computer (i.e., a desktop, laptop, tablet or smartphone) and broadband internet connectivity. This proportion is lower than that in all Arizona reservation (44%) and less than half the proportion of households in Arizona overall (88%) (Table 12).
- At the individual level, 39% of individuals in the Navajo Nation Region have access to both a computer and internet in their household. Access is slightly higher for children birth to age 17

^x For more information, please see <https://internetforall.gov/program/digital-equity-act-programs> and <https://www.ntia.gov/page/tribal-broadband-connectivity-program>

(43%), but this is still substantially lower than the 55% of children with access in all Arizona reservations and 92% 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
Navajo Nation Region	28,406	12%	21,576	10%	6,830	18%
Navajo Nation (entire)	48,978	13%	37,453	11%	11,525	19%
All Arizona Reservations	52,248	13%	35,840	12%	16,408	16%
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
Navajo Nation ADE schools	41	175	246	<2%	<2%	2%
Off-reservation ADE schools serving Navajo Nation students	62	41	54	<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>

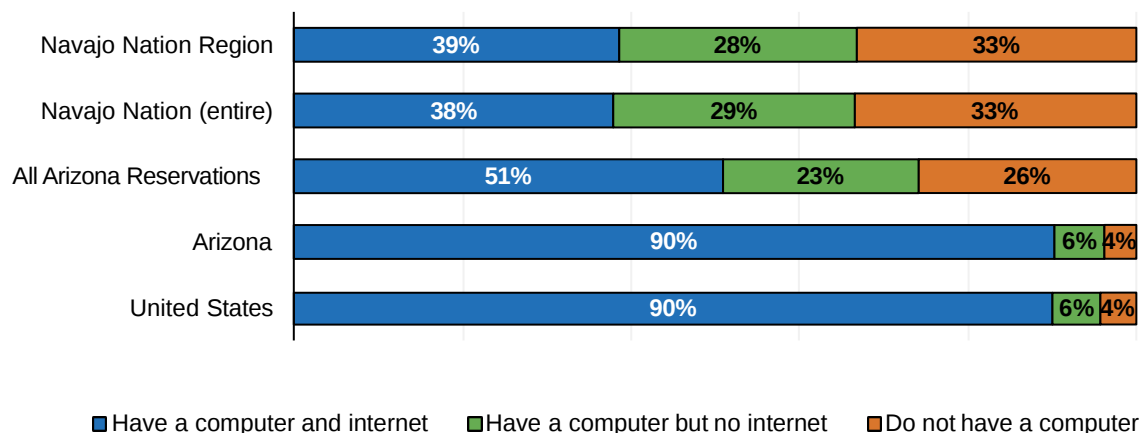
Table 12. Households with a computer and broadband internet connectivity, 2017-2021 ACS

Geography	Estimated number of households	Number and percent of households with a computer and broadband internet connectivity	
Navajo Nation Region	28,406	8,926	31%
Navajo Nation (entire)	48,978	15,315	31%
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.

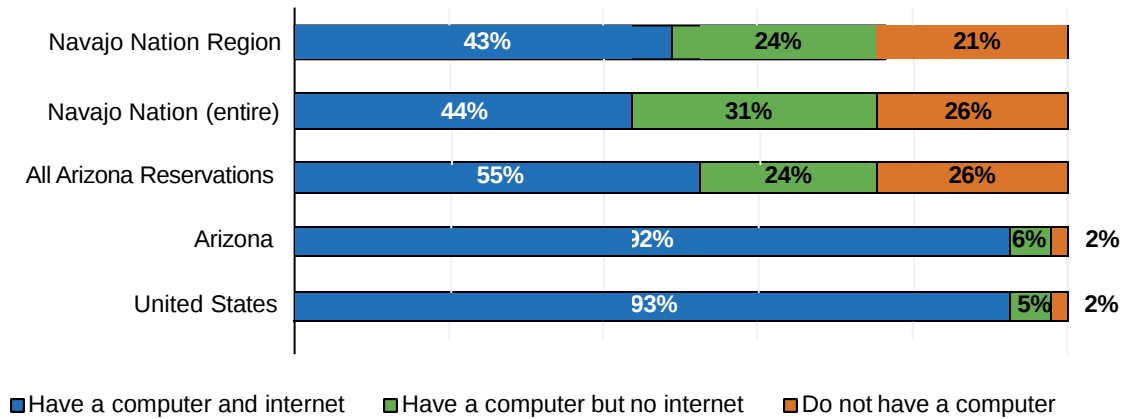
Figure 23. Persons of all ages in households with and without computers and internet connectivity, 2017-2021 ACS



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

'Ihoo'aah Bee 'Ida'neel'aqahígíí

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.¹⁶² 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.^{163, 164} 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.^{165, 166, 167} High-quality early learning experiences also set a strong foundation for children's learning in kindergarten, elementary school and beyond.¹⁶⁸ When children participate in high-quality early education, they are more likely to perform better in reading and math in later grades.¹⁶⁹ 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.¹⁷⁰ 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.^{171, 172} 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).^{173, 174, 175}

How the Navajo Nation Region is faring

- The K-12 educational system in the Navajo Nation Region is comprised of grant schools,^{xi} Bureau of Indian Education (BIE) schools and schools managed by the Arizona Department of Education (ADE). The Navajo Nation Department of Diné Education (DODE), which is the central administrative education agency within the Executive Branch of the Navajo Nation, authorizes and renews grants and contracts for 29 Grant schools, 18 of which are in the state of

^{xi} Schools that are tribally controlled under P.L. 93-638 Indian Self Determination Contracts or P.L. 100-297 Tribally Controlled Grant Schools Act. 57

Arizona. DODE also works collaboratively with BIE to address needs within the 12 BIE schools within the Arizona part of the Navajo Nation and with State Education Agencies in Arizona, Utah and New Mexico to advocate for Navajo students attending public schools. There are 11 Arizona public school districts with 49 total public schools within the Navajo Nation Region, and students also attend public schools that are outside but near the region, such as schools in Page, Flagstaff or Winslow. Students in the region also attend private schools, and five private schools are located within the region (i.e., in the Arizona part of the Navajo Nation).¹⁷⁶

- According to data provided by the DODE Office of Educational Research and Statistics for the 2022 Regional Needs and Assets Report, in school year 2020-21 there were 31,227 children enrolled in all grades in all types of schools within the Nation's boundaries. An additional 44,187 Navajo children were enrolled in public and charter schools outside of the Navajo Nation in the states of Arizona, New Mexico and Utah as well as in Residential Halls (Table 13).
- Data on enrollment in BIE and grant schools shows that the total number of students in grant schools has declined slightly, from 7,055 in 2018-19 to 6,071 in 2020-21, while enrollment in BIE schools has remained relatively consistent around 6,000 students (Figure 25).
- In the 2021-22 school year, 3,136 students were enrolled in preschool through 3rd grade in Arizona public and charter schools within the Navajo Nation Region, and an additional 152 American Indian students were enrolled in off-reservation public and charter schools known to serve Navajo Nation students (Table 14). Overall, between 700 and 800 students were enrolled in each grade between kindergarten and 3rd grade, and 146 students were enrolled in preschool (including students enrolled in special education).
- 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 public and charter schools in the Navajo Nation Region, at 19% in 2019-20, and, like in statewide schools, chronic absence rates have risen sharply, climbing to 59% in 2021-22. Rates increased even more dramatically in off-reservation schools, rising from 9% in 2019-20 to 66% in 2021-22 (Figure 26).

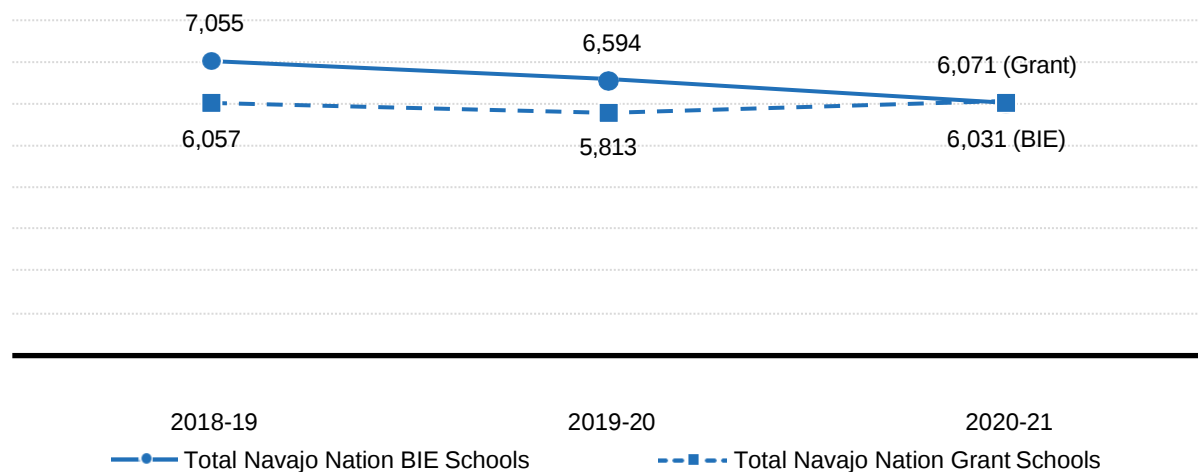
Table 13. Navajo Nation students enrolled in schools by state and type, 2020-21

	On Navajo Nation	Off Navajo Nation	Total (On + Off)
Arizona public & charter schools	12,104	14,380	26,484
New Mexico public & charter schools	5,978	27,550	33,528
Utah public schools	1,043	1,886	2,929
BIE Schools	6,148	0	6,148
Grant Schools	5,954	0	5,954
Residential Halls	0	371	371
Total	31,227	44,187	75,414

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Note: Off-Navajo Nation students include schools in the Flagstaff, Holbrook, Page and Winslow Unified School Districts. For a detailed list of the schools included in each district please see additional tables included in Appendix 1.

Figure 25. Enrollment in BIE and Grant Schools in Navajo Nation, 2018-19 to 2020-21



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 14. Preschool to 3rd grade students enrolled in public and charter schools, 2021-22

Geography	Preschool	Kindergarten	1st Grade	2nd Grade	3rd Grade
Navajo Nation (ADE Schools)	146	717	782	750	741
Off-reservation schools serving Navajo Nation students (<i>American Indian students only</i>)	<11	33	34	37	42
Arizona schools (<i>American Indian students only</i>)	541	2,924	3,042	3,130	3,221
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: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

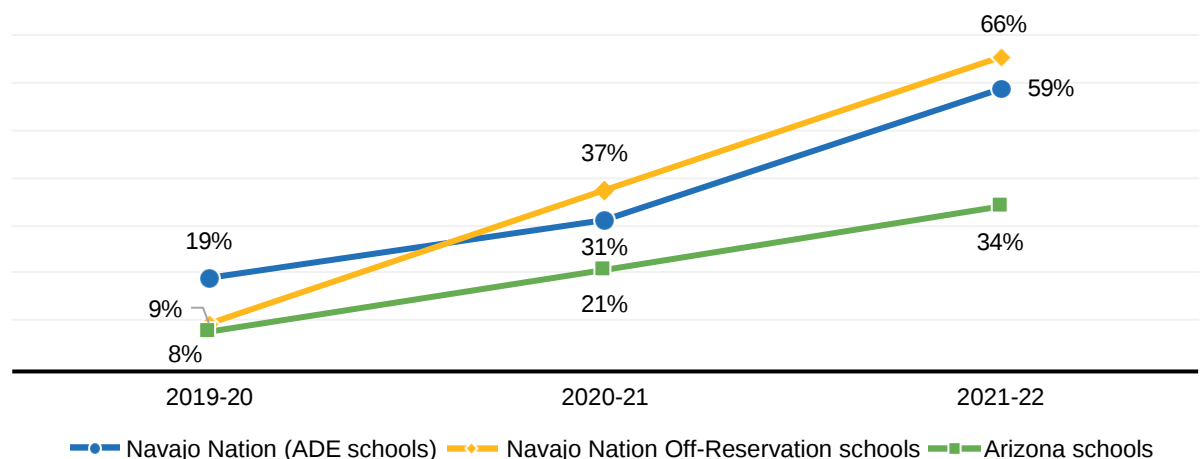
Table 15. Kindergarten to 3rd grade students with chronic absences, 2019-20 to 2021-22

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
Navajo Nation (ADE Schools)	608	782	1,436	19%	31%	59%
Navajo Nation Off-Reservation ADE schools	17	55	99	9%	37%	66%
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. The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Figure 26. Kindergarten to 3rd grade students with chronic absences, 2019-20 to 2021-22



Source: Navajo Nation Department of Dine Education, Office of Educational Research and Statistics (2021). [Enrollment dataset]. Unpublished tribal data received by request.

Note: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

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).^{xii,177,178} 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.^{xiii, 179} 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.¹⁸⁰ Poor reading skills are associated with a six-fold

^{xii} In 2022, AzM2 was replaced by Arizona's Academic Standards Assessment (AASA).

^{xiii} 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.

increase in the likelihood of dropping out of high school compared to proficient readers.¹⁸¹ 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.¹⁸²

How the Navajo Nation Region is faring

- In the 2021-22 school year, only 17% of students in ADE public and charter schools in the Navajo Nation Region achieved a passing score on the 3rd grade English Language Arts (ELA) assessment, including 13% meeting expectations and 3% exceeding expectations. This is slightly higher than the passing rates for American Indian students in off-reservation schools and in Arizona schools (both 16%), but much lower than the passing scores for students of all races and ethnicities in Arizona (41%) (Table 16).
- In regional ADE schools, ELA passing rates more than doubled between 2020-21 and 2021-22, going from 7% to 17%. 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 27). 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, an even smaller proportion of students at ADE school in the Navajo Nation Region passed the 3rd grade Math assessment in 2021-22 (13%). This is lower than the passing rates for American Indian 3rd graders in off-reservation schools and all Arizona schools (both 16%) (Table 17).
- Passing rates for the 3rd grade math assessment were very low for both ADE schools in the region (5%) and American Indian students in off-reservation schools (5%) in 2020-21, the first year of the AZM2 assessment, but these passing rates did triple in 2021-22. However, even with these improvements, passing rates for students in the region (13%), American Indian students in off-reservation schools (16%) and American Indian students across Arizona (16%) remain far below statewide passing rates for math (40%) (Figure 28).
- Assessment results for 2018-19 were also available from BIE School Report Cards for BIE and Grant schools in the region, as reported in the 2022 Regional Needs and Assets Report.¹⁸³ These results show that across all BIE and grant school in the region, 15% of students achieved a passing score in Reading/Language Arts, and 11% had passing scores in Math. In 2020, the BIE published a new Standards, Assessments and Accountability Systems Final Rule, which means that BIE will use a single unified assessment in all BIE-funded schools nationwide.¹⁸⁴ Prior to 2020, BIE-funded schools in Arizona had used the same assessment as Arizona public schools. Starting in school year 2020-21, BIE approved Pearson as the vendor for the new unified assessment for ELA and mathematics in grades 3-8 and 11.¹⁸⁵
- Assessment data specific for 3rd grade students in Grant schools on the Navajo Nation Region were received from the Navajo Nation Department of Dine Education, Office of Educational

Research and Statistics for the 2022 Regional Needs and Assets Report. In 2018-19 Grant schools utilized the Partnership for Assessment of Readiness for College and Careers (PARCC) test to evaluate student performance.¹⁸⁶ Passing rates for 3rd grade students in both English Language Arts (8%) and Math (9%) were lower than those seen in the overall BIE assessment results.

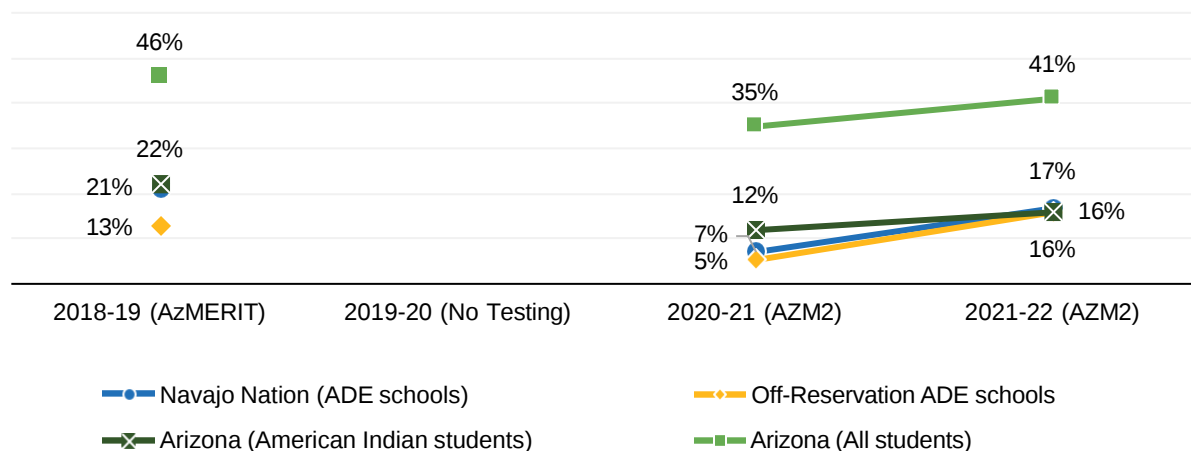
Table 16. Assessment results: Third Grade English Language Arts, 2021-22

Geography	Students Tested	Falls Far Below	Approaches	Meets	Exceeds	Passing
Navajo Nation (ADE schools)	DS	75%	8%	13%	3%	17%
Navajo Nation Off-reservation ADE schools (American Indian students only)	DS	79%	5%	13%	3%	16%
Arizona schools (American Indian students only)	3,100	74%	10%	13%	3%	16%
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: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Figure 27. 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: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

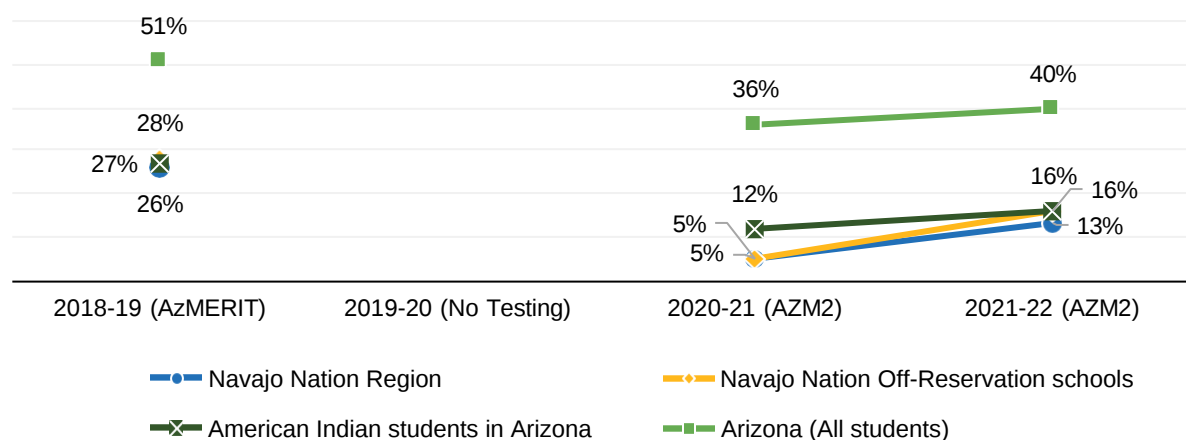
Table 17. Assessment results: Third Grade Math, 2021-22

Geography	Students Tested	Falls Far Below	Approaches	Meets	Exceeds	Passing
Navajo Nation (ADE schools)	N/A	59%	27%	12%	<2%	13%
Navajo Nation Off-reservation ADE schools (American Indian students only)	N/A	61%	24%	13%	3%	16%
Arizona schools (American Indian students only)	3,100	57%	27%	13%	3%	16%
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: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Figure 28. 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: The only off-reservation schools with enrolled 3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Table 18. Math and Reading/Language Arts assessment results at Arizona Navajo Nation BIE schools, 2018-19

	Students tested	Minimally proficient	Partially proficient	Proficient	Highly proficient	Passing
Reading/Language Arts	3,648	59%	26%	14%	1%	15%
Math	3,628	68%	22%	10%	0%	11%

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Note: BIE schools represented on this table include: Black Mesa Community School, Cottonwood Day School, Chilchinbeto Community School, Crystal Boarding School, Dennehotso Boarding School, Dilcon Community School, Greasewood Springs Community School, Greyhills Academy, Hunters Point Boarding School, Jeehdeezá Academy, Kaibeto Boarding School, Kayenta Community School, KinDahLichi'IOlta, Leupp Schools, Little Singer Community School, Lukachukai Community School, Many Farms Community School, Many Farms High School, Naa Tsis'Aan Community School, Nazlini Community School, Pine Springs Day School, Rock Point Community School, Rocky Ridge Community School, Rough Rock Community School, Seba Dalkai Boarding School, Shonto Preparatory, Tonalea Day School, Tuba City Boarding School and Wide Ruins Community School.

Table 19. PARCC assessment results at Arizona Navajo Nation grant schools, 2018-19

	Students tested	Did not yet meet expectations	Partially met	Approached expectations	Met expectations	Exceeded expectations	Passing
3rd Grade English Language Arts (ELA)	283	51%	26%	15%	8%	0%	8%
3rd Grade Math	282	28%	28%	22%	9%	0%	9%

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Note: Grant schools represented on this table include: Black Mesa Community School, Chilchinbeto Community School, Dilcon Community School, Greasewood Springs CS, Hunters Point Boarding School, KinDahLichi'IOlta, Leupp Schools, Little Singer Community School, Lukachukai Community School, Many Farms Community School, NaaTsisAan Community School, Nazlini Community School, Rock Point Community School, Rough Rock Community School, Shonto Preparatory and Wide Ruins Community School.

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).¹⁸⁷ Maternal education is associated with an array of child outcomes starting with infant health,^{188, 189, 190} and both targeted and universal programs serving children from families with lower educational backgrounds can support child development.^{191, 192}

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,^{xiv} which has been linked to negative physical and mental health outcomes and higher rates of unemployment.¹⁹³ Native youth, both nationally and in Arizona, are disproportionately disconnected and therefore particularly vulnerable to negative outcomes and may need additional outreach and supports.¹⁹⁴

How the Navajo Nation Region is faring

- Both four- and five-year graduation rates in ADE schools in the Navajo Nation Region were consistently higher than graduation rates for American Indian students statewide (Figure 29). In 2022, 74% of Navajo Nation Region students in these schools graduated in four years, compared to 65% statewide (Table 20), and in 2021, 78% of students graduated within five years compared to 70% statewide (Figure 29).
- Graduation rates were even higher for American Indian students enrolled in off-reservation schools that enroll Navajo Nation students. In 2022, 90% of American Indian student in these off-reservation schools graduated in four years, and 88% graduated within five years in 2021 (Figure 29).
- In 2021-22, the 7th-12th grade dropout rate (9%) was the same for Navajo Nation ADE schools as it was for American Indian throughout Arizona. Dropout rates for American Indian students in off-reservation schools were substantially lower that year (4%). Dropout rates for students in Navajo Nation ADE schools and for American Indian students statewide have increased substantially from 2019-20 to 2021-22, increasing from 3% to 9% in the region and 5% to 9% statewide (Table 21).
- Among adults in the Navajo Nation Region, 77% have at least a high school education. This is the same proportion as across all Arizona reservations (77%) but lower than that seen statewide (89%). While educational attainment generally looks similar between the Navajo Nation Region and all Arizona reservations, 10% of adults in the region have a bachelor's degree or higher and 8% have an Associate's degree, compared to 9% and 7%, respectively, in all Arizona reservations (Figure 30).
- Compared with all adults, mothers giving birth in 2020 and 2021 in the region were less likely to have less than a high school education (15% and 16% respectively, compared with 23% of all adults) (Table 22; Figure 30).

^{xiv} 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.

Figure 29. Trends in 4-year and 5-year graduation rates, 2020 to 2022

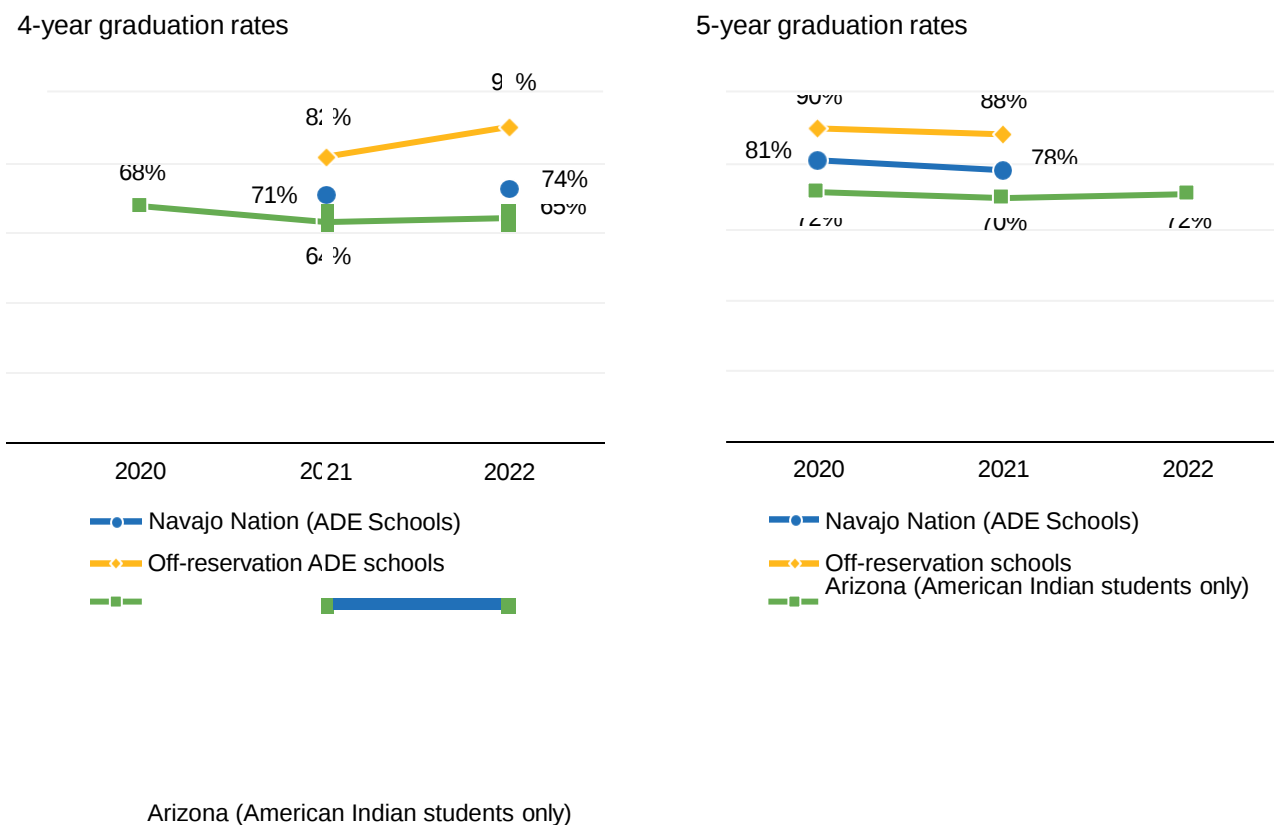


Table 20. 4-year and 5-year graduation rates, 2022

Geography	4-Year senior cohort (2022)	4-Year graduates (2022)	4-Year graduation rate (2022)	5-Year graduates (2022)	5-Year graduation rate (2022)
Navajo Nation (ADE schools)	988	727	74%	N/A	N/A
Navajo Nation Off-reservation ADE schools (American Indian students only)	416	376	90%	N/A	N/A
Arizona schools (American Indian students only)	4,213	2,739	65%	3,040	72%
Arizona schools	90,880	69,623	77%	71,277	79%

Source: Arizona Department of Education (2023). 4-Year Graduation Rates, and 5-Year graduation rates for 2022 and data by the U.S. Census Bureau (2023). Regional data were not available for 2020 4-year graduation rates, and 5-year graduation rates for 2020 and data by the U.S. Census Bureau (2023).

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>

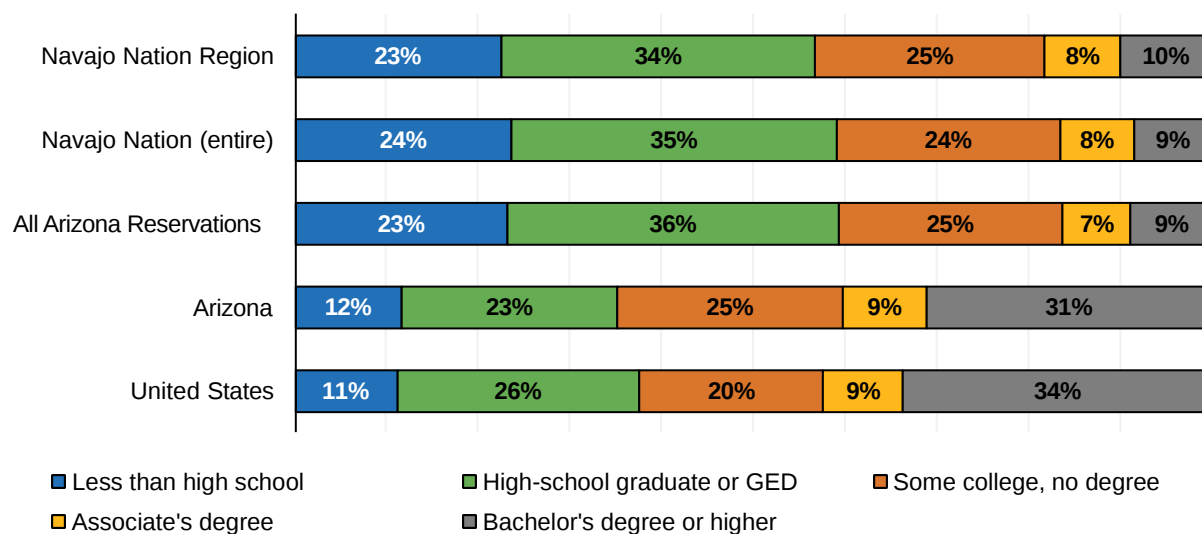
Table 21. 7th to 12th grade dropout rates, 2019-20 to 2021-22

Geography	Dropout Rate, 2019-20	Dropout Rate, 2020-21	Dropout Rate, 2021-22
Navajo Nation (ADE schools)	3%	8%	9%
Navajo Nation Off-reservation ADE schools (American Indian students only)	N/A	8%	4%
Arizona schools (American Indian students only)	5%	10%	9%
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 2%). 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 30. 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 22. 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
Navajo Nation Region	2020	1,015	15%	36%	49%
	2021	1,005	16%	35%	48%
All Arizona Reservations	2020	1,900	27%	38%	35%
	2021	Data for All Arizona Reservations not available			
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

Awéé' dóó Noseet'ígíí Nda 'O'hoot'aahígíí dóó Yaa'áholyá'ígíí

EARLY LEARNING

Why it Matters

Early childhood is a pivotal time when crucial physical, cognitive and social-emotional skills are built.^{195,196} Early experiences are important for healthy brain development and set the stage for lifelong learning and well-being.^{197, 198, 199} Just as rich, stimulating environments can promote healthy development, early negative experiences can also have lasting effects.^{200, 201} 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,²⁰² it remains important to remember that while these short- and long-term effects may be more likely, they are not inevitable.^{203, 204} 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.^{205, 206}

Quality early care and educational experiences help children develop into capable learners by supporting many crucial systems in the body.²⁰⁷ 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.²⁰⁸ Each of these factors contribute to being a skillful learner and well-adjusted person.²⁰⁹

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.^{210, 211} 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.²¹² 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.^{213, 214, 215, 216} 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.^{217, 218}

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 2019.²¹⁹ 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.²²⁰

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.^{xv, 221, 222} 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).²²³ 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.^{224, 225}

How the Navajo Nation Region is faring

- According to the 2022 FTF Navajo Nation Regional Needs and Assets Report, early childhood care and education opportunities in the Navajo Nation Region include: Navajo Head Start and Early Head Start programs; the Bureau of Indian Education (BIE) Family and Child Education (FACE) program; school-based preschool programs; center and home-based child care services under the Navajo Nation Department for Child Care and Development (DCCD) and informal care through family and friends.²²⁶
- Navajo Head Start administers two programs: Head Start and Early Head Start (EHS). Navajo Head Start provides services to young children across five Head Start districts: (1) Shiprock, (2) Crownpoint, (3) Window Rock, (4) Chinle and (5) Kayenta/Tuba City. Arizona communities are primarily served by the Window Rock, Chinle and Kayenta/Tuba City Districts. As of 2022, there were 85 total Navajo Head Start Centers in operation, with 80 Head Start classrooms and 5 EHS classrooms.²²⁷ In fiscal year (FY) 2023, the Navajo Nation Head Start program enrolled 643 three-year-olds and 500 four-year-olds as well as a few five-year-olds, for a total of 1,146 cumulatively enrolled children, slightly less than the 1,313 funded slots (Table 23). The cumulative number of children enrolled was slightly lower than the 1,203 children enrolled in FY 2019, the last year before the onset of the COVID-19 pandemic.
- In contrast, participation in EHS has remained very steady; 64 children were cumulatively enrolled in the program in FY 2023, very similar to the 63 children enrolled in FY 2019 (Table 23). EHS services cater to infants and toddlers between the ages of birth to 36 months as well as to pregnant women. Three EHS sites are in operation on the Navajo Nation. The two Arizona-based sites are in the Window Rock and Chinle Districts. Both programs offer services through center- and home-based program options. Children enrolled in the home-based program receive

^{xv} 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/>

weekly home visits, while children enrolled in the center-based program receive at least four hours of instruction per day.²²⁸

- The Bureau of Indian Education sponsors the Family and Child Education (FACE) program for American Indian families in 15 BIE schools across Arizona, including eight in the Navajo Nation Region. FACE has both center- and home-based components, as well as programming to specifically support children and their caregivers. To qualify for FACE, a child must be American Indian and be eligible for admission to a BIE school upon reaching school age.²²⁹ The eight programs within the Navajo Nation Region, listed in Table 24, reached a total of 790 adults and children in both the home-based and center-based components. The center-based components served 123 adults and 117 children, while the home-based component reached 289 adults and 303 children.
- There are 15 school-based preschool programs in the region, 14 of which participate in Quality First (Table 25). One of these programs is based at a private school, while the other 14 are located within public schools. As of January 2024, these programs had a capacity to enroll 797 preschool-age children.
- According to the 2022 Regional Needs and Assets Report, Navajo Nation DCCD, which is housed under the Navajo Nation Division for Children & Family Services, previously the Division of Social Services, provides child care services for parents and families who are working toward self-sufficiency through tribal child care centers or private providers.²³⁰ To be eligible, children must be under age 13, an enrolled member of the Navajo Nation or eligible for enrollment and residing with eligible parents or guardians. To qualify for child care assistance, an eligible parent or legal guardian must reside on or near the Navajo Nation and meet any of the following criteria: holding employment (includes self-employment); pursuing completion of a GED, secondary or post-secondary certificate or degree; attending a job-training program; participating in a TANF or Workforce Development program or receiving a referral from a Child Protective Services (CPS) agency.²³¹ Young children can receive child care through either licensed center-based or home-based providers or through unlicensed home-based providers, usually a relative of the child who can be reimbursed for providing care at home.²³² In FY 2020, 605 total children birth to age 13 received child care through DCCD. More than two-thirds of these children (65%; n=396) were young children birth to age 5 (Table 26).
- Most young children receiving child care services from Navajo Nation DCCD (83%) were enrolled in licensed center-based care, with much smaller proportions enrolled in licensed home-based care (12%) or unlicensed care by a relative (9%) (Figure 31). Please do note that children could receive more than one form of care (e.g., both licensed center-based care and care by a relative).
- 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 through DES decreased sharply from 2019 onward, dropping from 20 children receiving assistance in 2019 to fewer than 10 in

2022 (Table 27). Similarly, the number of DCS-involved children receiving assistance dropped from fewer than 10 each year between 2017 and 2020 to none in 2021 and 2022 (Table 28).

Table 23. Funded and cumulative Head Start, FY 2019 & FY 2023

	FY 2019		FY 2023	
	Funded	Cumulative	Funded	Cumulative
Navajo Nation Head Start	1,313	1,203	1,313	1,146
Navajo Nation Early Head Start	37	63	37	64

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 Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 24. Navajo Nation FACE Programs, PY 2019

	Adults receiving Center-based services	Children receiving Center-based services	Adults receiving Home-based services	Children receiving Home-based services	Unduplicated adult participants receiving any services	Unduplicated child participants receiving any services	Total unduplicated participants
All FACE programs	123	117	289	303	383	407	790
Many Farms	13	13	43	50	52	61	113
Rough Rock Community School	15	<10	18	19	33	27	60
Greasewood Springs Community School	17	20	29	30	40	47	87
Kin Dah Lichi'l Olta	18	17	17	17	30	33	63
Leupp	15	15	48	54	61	69	130
T'iis Nazbas Community School	<10	<10	46	50	53	56	109
Kayenta Community School	15	16	23	27	32	42	74
Little Singer Community School	21	19	65	56	82	72	154

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 25. School-based preschool programs, 2024

	Type of School	Capacity	Quality First Site
Total school-based preschool programs	15 programs	797	14 QF programs
Canyon De Chelly Elementary School	Public	20	Yes
Chinle Elementary School Preschool	Public	120	Yes
Many Farms Elementary School	Public	40	Yes
Pinon Elementary School	Public	55	Yes
Tsaile Public School	Public	40	Yes
Robert Charley Early Education (Red Mesa USD)	Public	57	Yes
Ganado Pre-K Academy	Public	51	No
Indian Wells Preschool	Public	29	Yes
St Michael Indian School Preschool	Private	25	Yes
Tsehootsoi Integrated Preschool Program	Public	59	Yes
Dine Family Learning Center (Leupp Public School)	Public	59	Yes
Kayenta USD C.O.P.E.	Public	21	Yes
Kayenta USD ABC Preschool	Public	148	Yes
Tuba City Primary School	Public	28*	No
Tuba City High School Child Development Center	Public	45	Yes

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>; First Things First (2024) [Quality First Data Center]. Accessed at <https://datacenter.aztf.gov/quality-first>

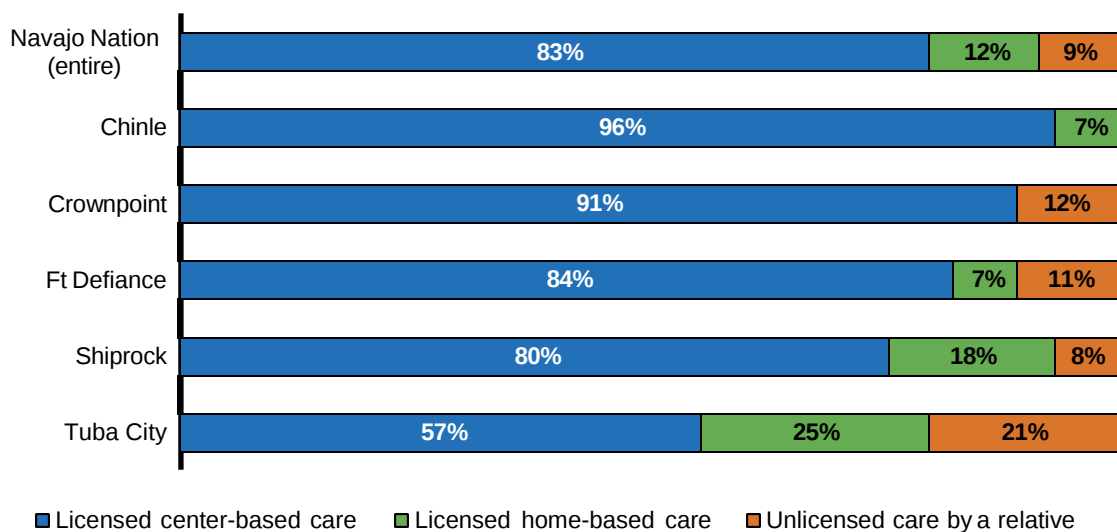
Note: Preschool capacity was not available for Tuba City Primary School; this number reflects children enrolled as reported to ADHS in the child care immunization dataset.

Table 26. Children receiving child care services through DCCD by age, Navajo Nation, FY 2020

	Number	Percent of total children receiving DCCD services
Children (ages 0-5)	396	65%
Under 1 year	25	4%
Age 1	56	9%
Age 2	79	13%
Age 3	86	14%
Age 4	84	14%
Age 5	66	11%
Ages 6 to 13	201	33%
Age 13 and older	<10	1%
Total children (ages 0-13)	605	N/A

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Figure 31. Children ages 0-5 receiving services through DCCD by child care setting, FY 2020



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 27. 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
Navajo Nation Region	14	10	20	10	10	1 to 9	88%	59%	100%	71%	67%	70%
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.

Note: DS indicates that a percentage could not be shown due to data suppression guidelines.

Table 28. DCS-involved children receiving DES child care assistance, 2017 to 2022

Geography	Number of DCS children receiving assistance						Percent of DCS 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
Navajo Nation Region	1 to 9	1 to 9	1 to 9	1 to 9	0	0	DS	DS	DS	DS	0%	0%
Arizona	12,201	12,219	11,808	7,137	8,853	8,268	88%	82%	82%	59%	81%	80%

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

Note: DS indicates that a percentage could not be shown due to data suppression guidelines.

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.²³³ 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.^{234, 235} 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.²³⁶ 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.²³⁷

One way that the quality of early child care and education is measured in Arizona is through the Quality First program.²³⁸ 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.²³⁹ Quality First providers are supported by regional funding.

How the Navajo Nation Region is faring

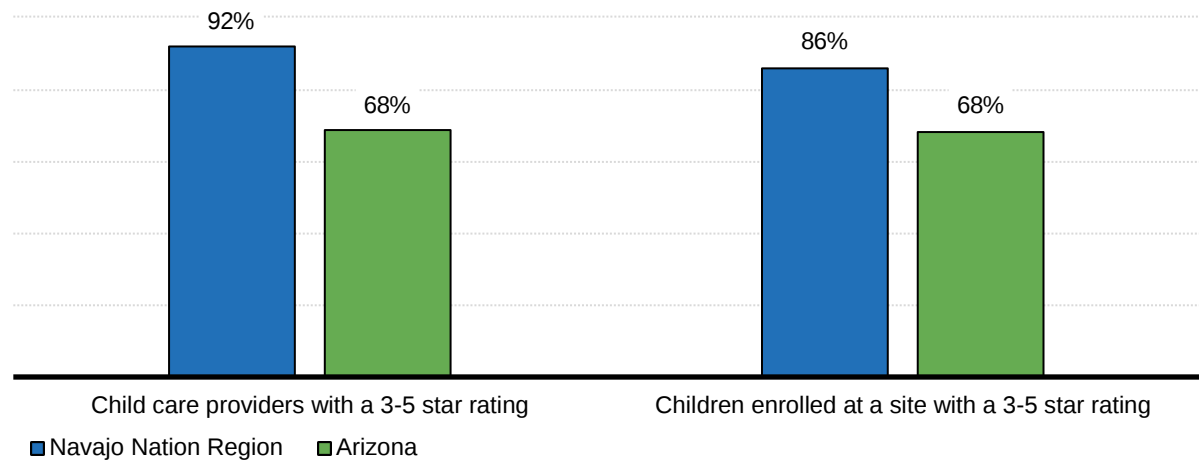
- As of 2023, there were 25 child care providers participating in Quality First in the Navajo Nation (Table 29). This includes nearly all of the school-based preschool programs in the region (see Table 25), as well as most tribal child care centers and several privately-operated child care centers.²⁴⁰
- The majority of child care providers in the region (92%) 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 32). Due to this high prevalence of quality providers, most children who are enrolled in a Quality First center (86%) are enrolled in a provider with a 3- to 5-star rating.
- Almost half of children enrolled in Quality First providers (n=202; 43%) receive Quality First scholarships, again a much higher rate than seen statewide, where about 11% of enrolled children receive scholarship (Table 30).

Table 29. Quality First child care providers by funding source, state fiscal year 2023

Geography	Child care providers served	Regional Funding	DES Expansion	Buy-In
Navajo Nation Region	25	25	0	0
Arizona	1,434	1,045	384	5

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

Figure 32. 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.

Table 30. 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
Navajo Nation Region	464	445	399	86%	202
Arizona	70,837	54,155	48,379	68%	8,262

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

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.^{241, 242, 243} Early intervention also reduces educational costs by decreasing the need for special education.²⁴⁴ 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),^{xvi} the Division of Developmental Disabilities (DDD)^{xvii} and the Arizona Department of Education Early Childhood Special Education Program are designed to provide services to families with children who have special needs.^{xviii} 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.²⁴⁵ 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.²⁴⁶ 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.²⁴⁷ 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^{xix} 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.²⁴⁸ Fewer children in Arizona are accessing critical early intervention services that can identify disabilities, provide parent-coaching and encourage optimal development at home.²⁴⁹ 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.²⁵⁰ 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.²⁵¹

How the Navajo Nation Region is faring

- The Navajo Nation Growing in Beauty program is the AzEIP provider for the Navajo Nation Region. Growing in Beauty conducts screenings and developmental evaluations, including vision and hearing, to help children access early intervention services. Growing in Beauty's mission is

^{xvi} For more information on AzEIP (which is a division of the Department of Economic Security), visit <https://www.azdes.gov/azeip/>

^{xvii} For more information on DDD (which is a division of the Department of Economic Security), visit <https://des.az.gov/services/disabilities/developmental-disabilities>

^{xviii} 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/>

^{xix} 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.

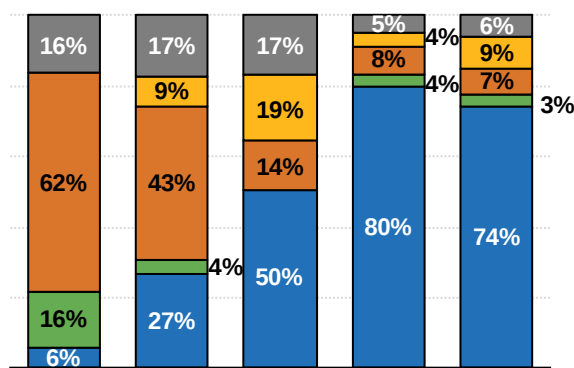
to “assure that all Diné children with a developmental delay or disability, between the ages of birth to five, grow into beautiful individuals,” and it simultaneously honors the Navajo culture and language throughout its mission. The program helps families understand key principles of early intervention.²⁵²

- In the Navajo Nation Region, most children birth to age 2 are referred to AzEIP through health care providers, though the pattern of referrals has shifted in recent years. In federal fiscal year (FFY) 2018, the largest share of referrals originated from hospitals (62%), whereas in FFY 2022, most came from a physician (74%). Compared to the state, there are very few self-referrals by parents or family members of the child; only 3% of referrals originated with parents or family members in FFY 2022 in the region compared to 21% statewide (Figure 33).
- In the region, 20% of children (birth to age 2) who were referred to AzEIP in federal fiscal year 2022 were found eligible and received services, about the same as seen in Arizona overall (21%). A much smaller share of assessed children were found not eligible (3%) compared to the state (22%). Two-thirds of children in the region referred to AzEIP (66%) are either in families where a service coordinator could not make contact (29%) or where families did not proceed with screening for eligibility (37%); much higher than the 33% statewide (Figure 34).
- In 2022, the number of children birth to age 2 receiving services from AzEIP increased for the first time since 2018, rising to 59 children receiving services as of Oct 1, 2022 from a five-year low of 38 in October 2021 (Figure 35).
- Fewer than 10 children received services from DDD in any year between state fiscal year (SFY) 2019 and 2022 (Table 31).
- 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 has fallen steadily in the region over the past five years, declining by 61% from 57 in SFY 2019 to 22 in SFY 2022. Based on the population of children birth to age 2 in the region per the 2020 Census, this suggests that only 0.6% of children in the region may be receiving AzEIP services, a substantially lower proportion than the 2.6% of children statewide (Figure 36; Table 32).
- In 2022, a total of 291 students in preschool through 3rd grade in ADE schools in the Navajo Nation Region were enrolled in special education. This includes 44 preschoolers, 45 kindergarteners, 61 1st graders, 62 2nd graders and 79 3rd graders (Table 33). A small number of 2nd and 3rd grade children were enrolled in special education in off-reservation ADE schools serving Navajo Nation students.
- Similar to trends seen in early intervention, the number of preschoolers with disabilities served by a local educational agency (LEA) in SFY 2022 (n=44) has been on a substantial decline since SFY 2019, falling by more 50% in four years (Figure 37).

- Of the preschoolers with disabilities receiving services through LEAs in 2022, 36% were diagnosed with a developmental delay, 34% with a speech or language delay, 20% with a preschool severe delay and 9% with other disabilities. The proportion of preschoolers with a developmental delay is lower than that seen statewide (43%), and other disability^{xx} much higher (3% statewide) (Figure 38).
- The number of kindergarten through 3rd grade students enrolled in special education has also declined steadily from SFY 2018 (n=396) to SFY 2022 (n=247) (Figure 39). In 2022, nearly half of these students were diagnosed with a developmental delay (45%), 26% a speech or language impairment, 10% a specific learning disability, 8% autism and 11% another disability. In a reversal of the preschool pattern, the proportion of children diagnosed with a developmental delay was higher for students in the region (45%) than Arizona overall (27%) (Figure 40). In off-reservation ADE schools, most children enrolled in special education had a speech or language impairment (36%) or developmental disability (45%).

Figure 33. Children birth to age 2 referred to AzEIP by referral source, federal fiscal years 2018 to 2022

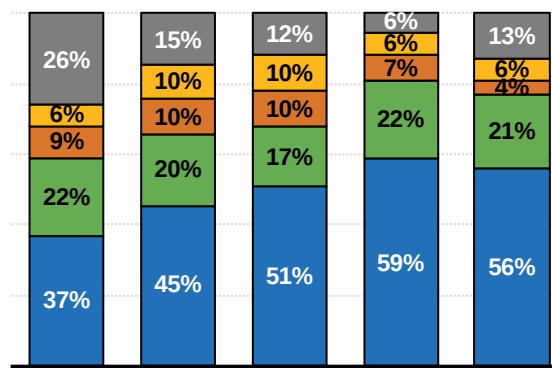
Navajo Nation Region



FFY2018 FFY2019 FFY2020 FFY2021 FFY2022

■ Other
 ■ Public health/social service agency
 ■ Hospital
 ■ Parent/family
 ■ Physician

Arizona



FFY2018 FFY2019 FFY2020 FFY2021 FFY2022

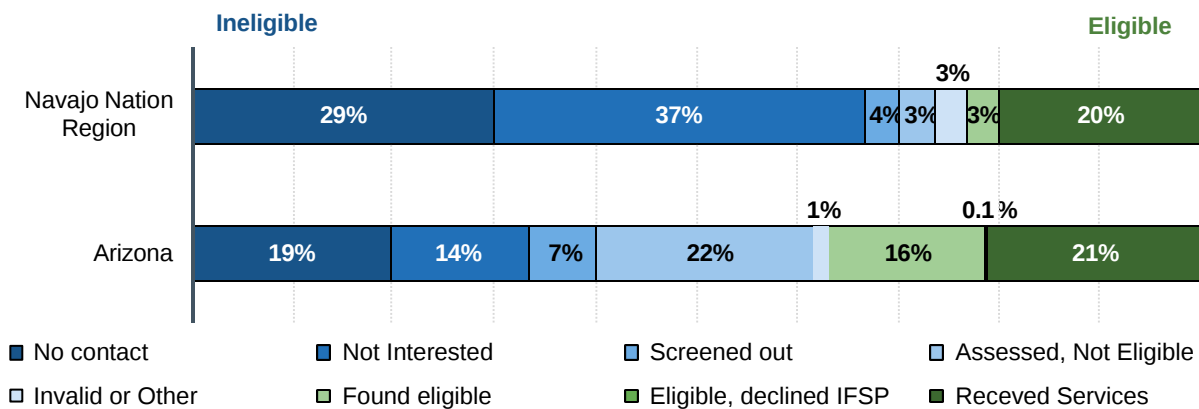
■ Other
 ■ Public health/social service agency
 ■ Hospital
 ■ Parent/family
 ■ Physician

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. These referrals reflect unique children (duplicates have been removed). "DS" indicates that too few children were referred from that source to calculate an accurate percentage under data suppression policies.

^{xx} The "Other Disability" category includes children with hearing impairment, visual impairment, or deaf-blindness.

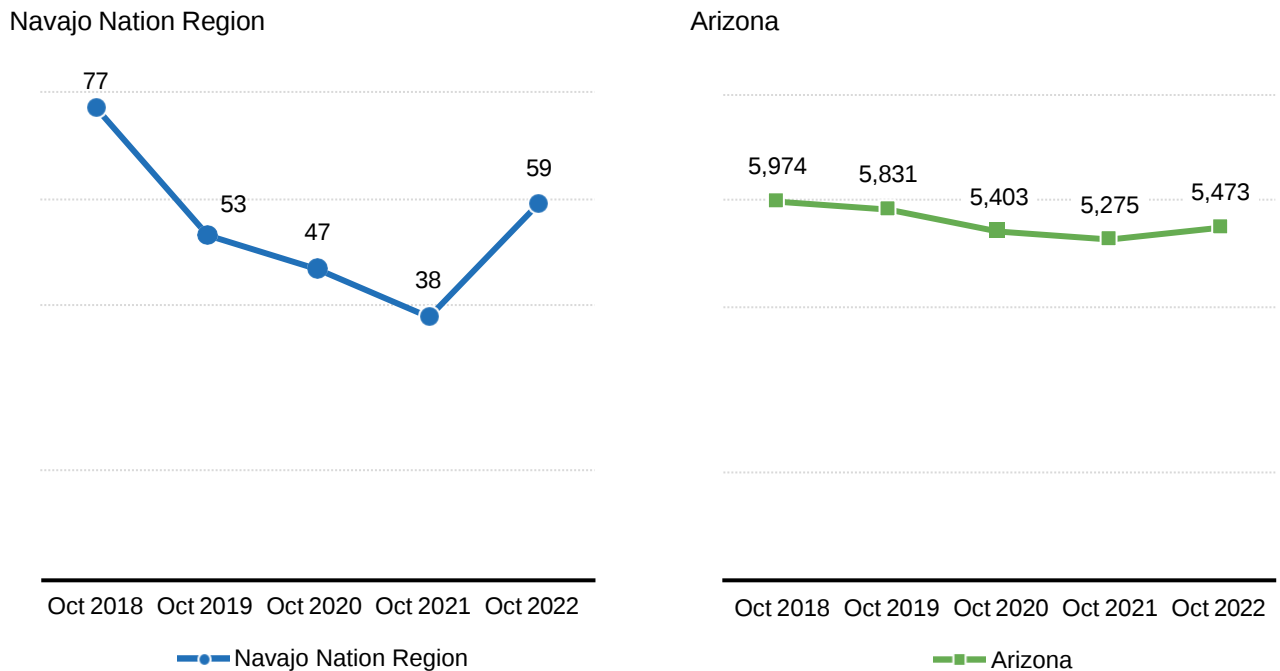
Figure 34. Outcomes for children birth to age 2 referred to AzEIP, federal fiscal year 2022



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.”

Figure 35. Children birth to age 2 receiving services from AzEIP as of October 1, 2018 to 2022



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

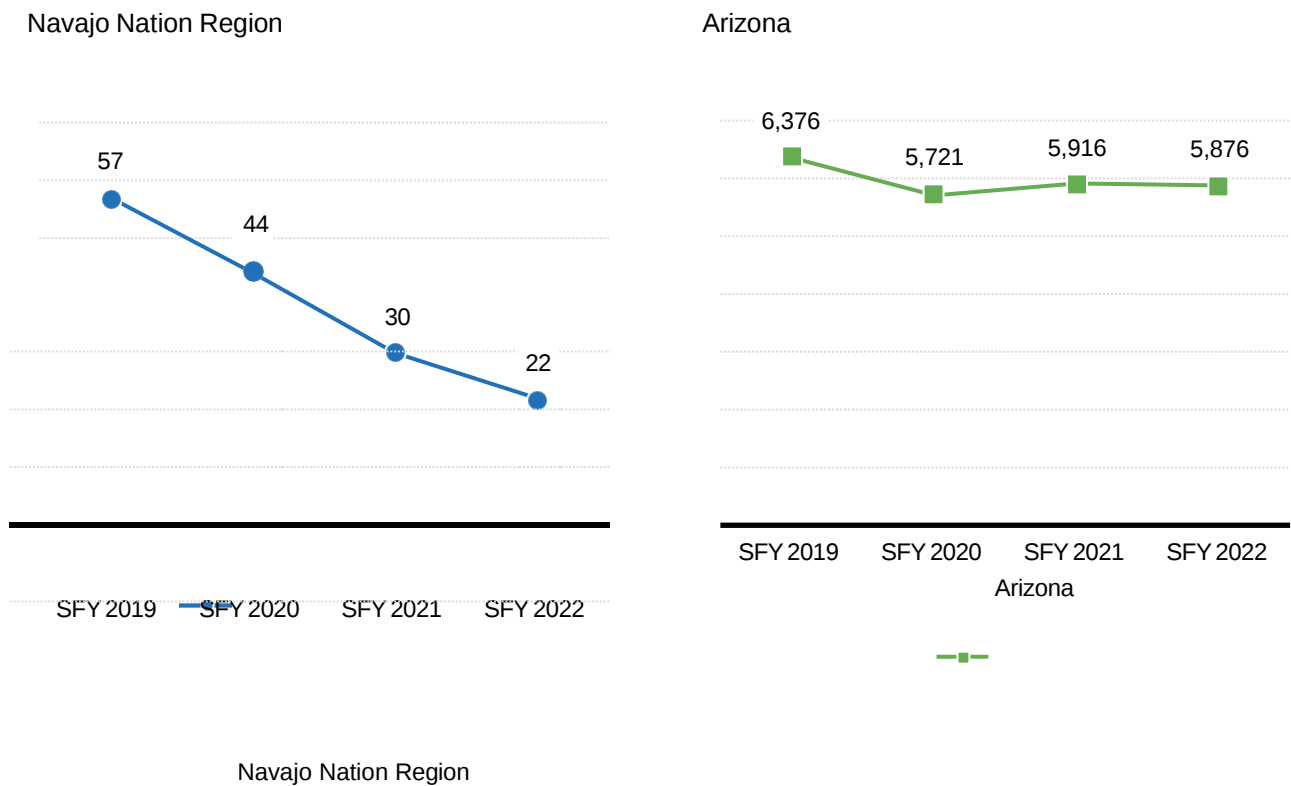
Note: These data reflect the Oct 1 snapshot of AzEIP services, not a cumulative total throughout the year.

Table 31. 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
Navajo Nation Region	1 to 9	1 to 9	1 to 9	1 to 9	DS
Arizona	4,005	4,078	2,438	3,691	-8%

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

Figure 36. Number of children (ages 0-2) receiving AzEIP and/or DDD services, state fiscal years 2019 to 2022



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

Table 32. 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
	FY 2019	FY 2020	FY 2021	FY 2022		
Navajo Nation Region	57	44	30	22	3,465	0.6%
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.

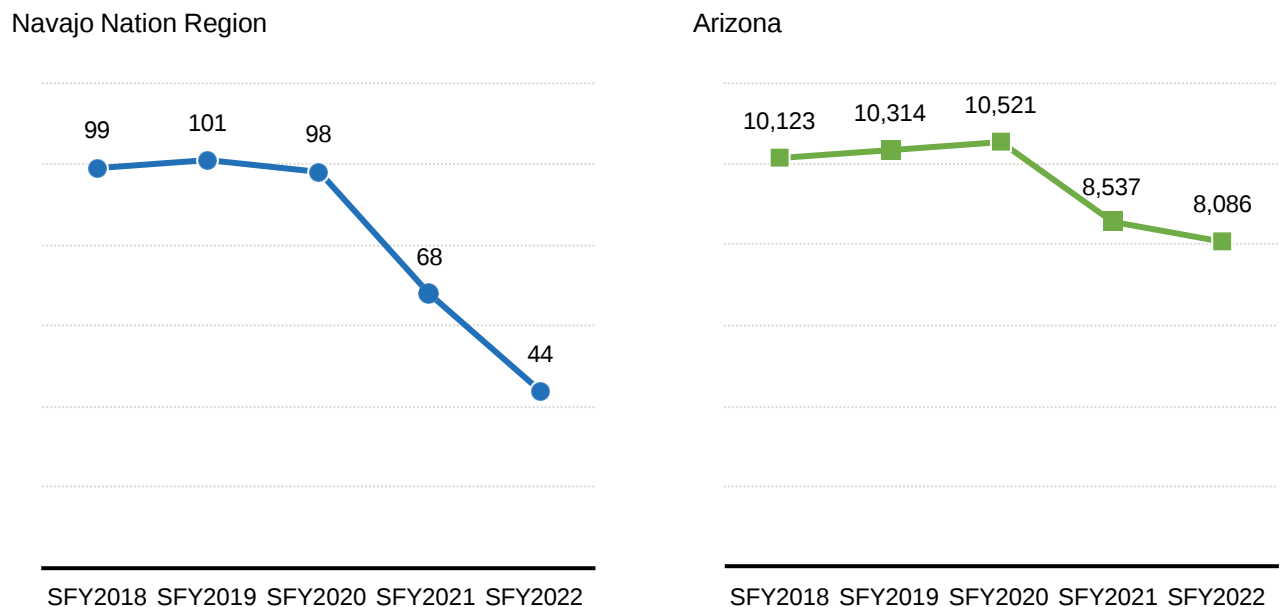
Table 33. Preschool to 3rd grade students enrolled in special education, state fiscal years 2022

	Students enrolled in special education, SFY 2022				
	Preschool	Kindergarten	1st Grade	2nd Grade	3rd Grade
Navajo Nation (ADE schools)	44	45	61	62	79
Off-reservation ADE schools serving Navajo Nation students	0	0	0	<11	<11
Arizona schools	8,086	6,693	9,212	10,350	11,079

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

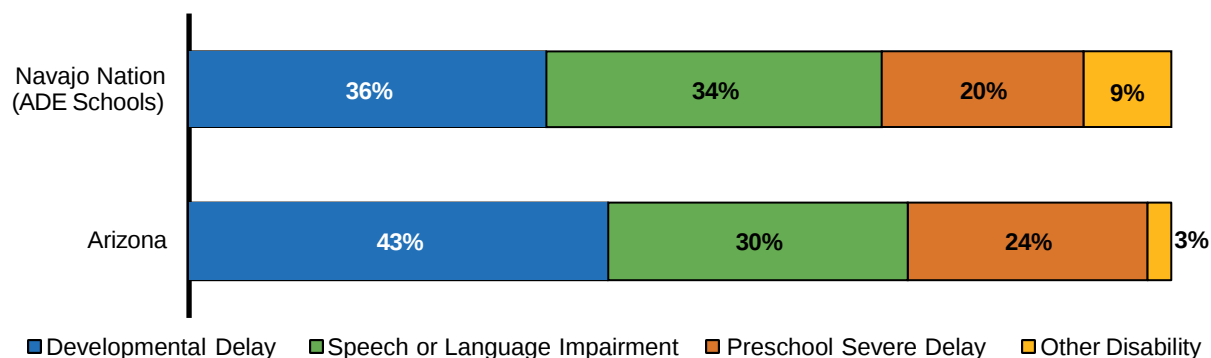
Note: The only off-reservation schools with enrolled PS-3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Figure 37. Trends in preschoolers with disabilities served by LEAs, 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

Figure 38. Preschoolers with disabilities receiving services through Local Education Agencies (LEAs) by type of disability, state fiscal year 2022

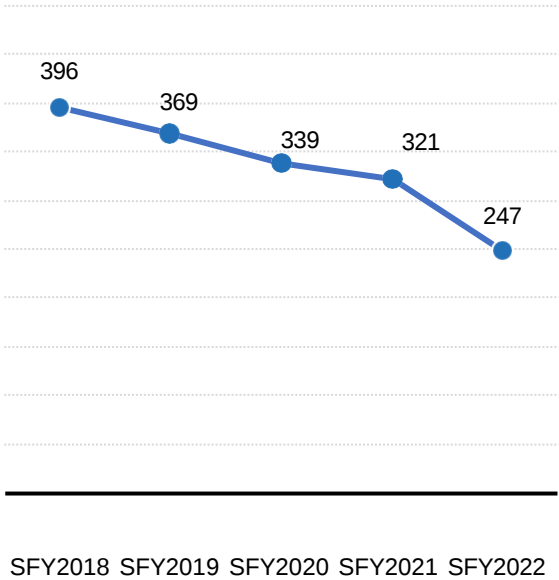


Source: Arizona Department of Education (2023). [Special Needs Dataset]. Custom tabulation of unpublished data by the UArizona CRED Team

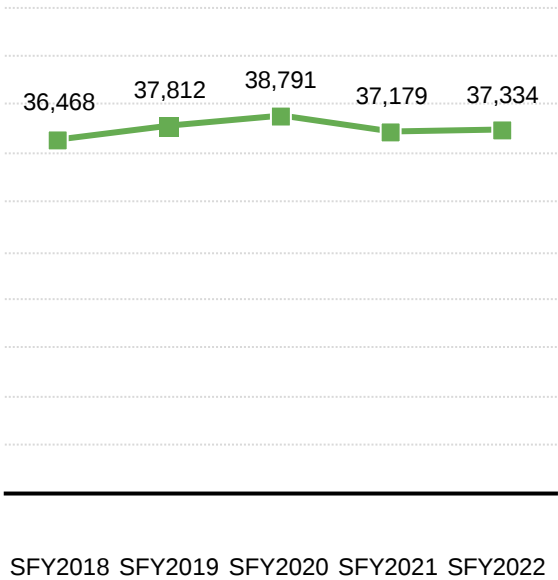
Note: The "Other Disability" category includes children with hearing impairment, visual impairment, or deaf-blindness. None of the off-reservation ADE schools that serve Navajo Nation students had preschool students enrolled in special education.

Figure 39. Kindergarten to 3rd grade students enrolled in special education in public and charter schools, state fiscal years 2018 to 2022

Navajo Nation Region

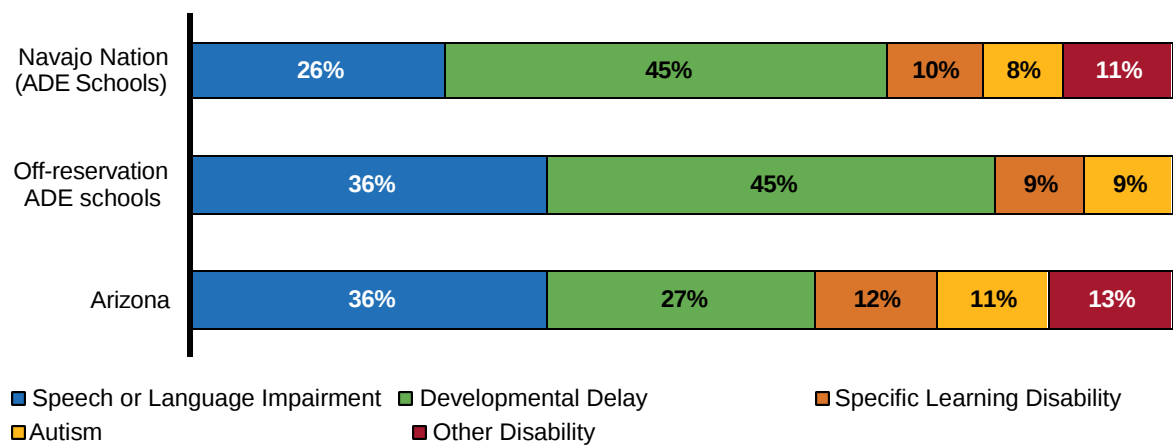


Arizona



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

Figure 40. Kindergarten to 3rd grade students enrolled in special education in public and charter schools by primary disability, state fiscal year 2022



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. The only off-reservation schools with enrolled PS-3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

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



MATERNAL & CHILD HEALTH

Ámá dóó baa Áłchíní Yázhí Bishá nah

MATERNAL & 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.^{253, 254} Experiences during the prenatal and early childhood periods can result in lifelong impacts on immune functioning, brain development and risk for chronic diseases.^{255, 256} Poor health in childhood can also result in lower educational attainment and socioeconomic status in adolescence, adulthood and even inter-generationally.^{257, 258} Therefore, adequate access to preventive care and treatment services is vital to support a child's long-term health, development and success.^{259, 260, 261} Members of federally-recognized tribes have access to health care services provided through the Indian Health Services (IHS) and/or tribally-administered health care facilities.^{262, 263}

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.^{xxi} During the COVID-19 pandemic, uninsured rates declined due to federal policies prohibiting states from disenrolling people from Medicaid.²⁶⁴ Despite these efforts, uninsured rates in the overall population are still high.²⁶⁵ 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.²⁶⁶ 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.²⁶⁷

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,^{xxii} premature births and maternal and infant mortality.^{268, 269, 270, 271, 272} 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.^{273, 274, 275} Black, Hispanic,

^{xxi} For more information on AHCCCS and KidsCare see: <https://www.azahcccs.gov/Members/GetCovered/Categories/KidsCare.html>

^{xxii} 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.^{276, 277} 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.^{278, 279, 280} 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.²⁸¹

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.^{282, 283} Significant and sustained investment is needed to reduce this gap in adequate health care services for Native communities.

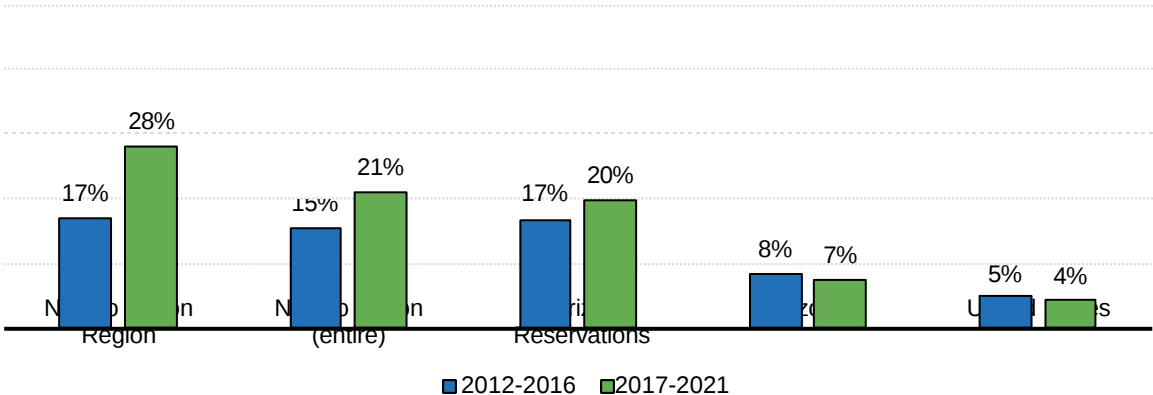
How the Navajo Nation Region is faring

- According to the 2022 FTF Navajo Nation Regional Needs and Assets Report, families in the Navajo Nation Region can access health care through facilities operated by IHS and tribally-operated hospitals and clinics. The Navajo Area IHS provides health care services to American Indians who reside in the Four Corners area of the Southwest, including parts of Arizona, New Mexico and Utah. Health care in the Navajo Area is provided through in-patient, outpatient, and community health programs based in six hospitals, seven health centers, and 15 health stations, which include the following health care facilities: Chinle Comprehensive Health Care Facility, Crownpoint Health Care Facility, Dziłth-Na-O-Dith-Hle Health Center, Four Corners Regional Health Center, Gallup Indian Medical Center, Inscription House Health Center, Kayenta Health Center, Pinon Health Center, Shiprock-Northern Navajo Medical Center, Tohatchi Health Care Center and Tsaile Health Center.²⁸⁴
- 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. Under the leadership of tribal health corporations, the Navajo Nation manages three tribally-operated health care facilities in Arizona under P.L. 93-638 ("638") contracts: Tsehootsooi Medical Center in Fort Defiance, Tuba City Regional Health Care Corporation in Tuba City and Winslow Indian Health Care Corporation in Winslow.
- Health insurance coverage plays an important role in access to health care. In the Navajo Nation Region, the proportion of young children birth to age 5 who do not have health insurance increased from an estimate 17% according to the 2012-2016 American Community Survey (ACS) to 28% in the 2017-2021 ACS. 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. Members of the Navajo Nation with or without health insurance may access health care services at the tribally-operated or IHS facilities listed above.

- However, despite the apparent decrease in young children with health insurance, most births in the Navajo Nation Region were covered by AHCCCS in 2020 (80%) and 2021 (83%), which is higher than AHCCCS coverage across all Arizona reservations in 2020 (71%) and Arizona overall (48% and 46%, respectively). Only 5% of births in 2020 and 6% in 2021 were covered by IHS, compared to 16% on all Arizona reservations (Table 34).
- Between 2018 and 2022, the proportion of births in the Navajo Nation Region paid for by AHCCCS remained consistently higher than 80%, while proportion of births paid for by IHS varied from 1% to 7% (Figure 42). 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.²⁸⁵
- In 2021, just over 60% of the 1,005 births in the Navajo Nation Region were to mothers who began prenatal care in the first trimester, while about one in 10 (10%) births were to mothers who had fewer than five prenatal visits, and another 4% 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 Navajo Nation Region were slightly less likely to have inadequate or late prenatal care than those in all reservation in the state. However, the region still lagged behind the state in terms of timely and adequate prenatal care (Table 35).
- The proportion of births to mothers with fewer than five prenatal care visits declined from a high of 12.0% in 2020 to a low of 7.6% in 2022, a positive improvement though this rate is still above the statewide rate of 4.7% in 2022. Similarly, the share of births with no prenatal care fell from a peak of 5.6% in 2019 to 2.8% in 2022, just above the statewide rate of 2.3% (Figure 43). Both of these trends are a positive sign for improvements in access to adequate prenatal care.
- Between 2018 and 2022, the proportion of births in the Navajo Nation Region to mothers who began prenatal care in the first trimester decreased to from 65% in 2018 to 60% in 2022, lower than the statewide rate of 71% (Figure 44). This indicates an ongoing need for timely prenatal care in the region.

Figure 41. 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.

Table 34. 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
Navajo Nation Region	2020	1,015	80%	5%	85%
	2021	1,005	83%	6%	89%
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%

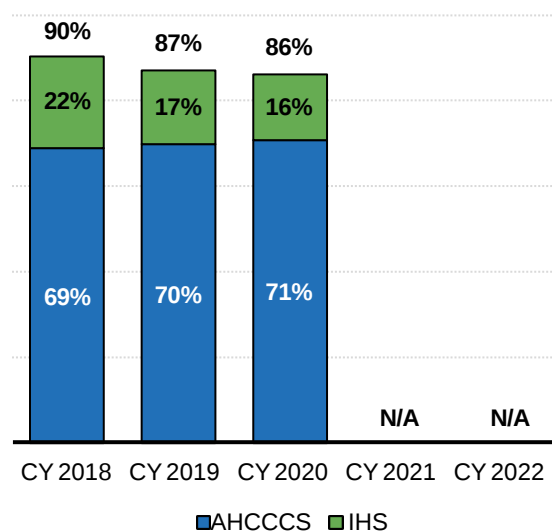
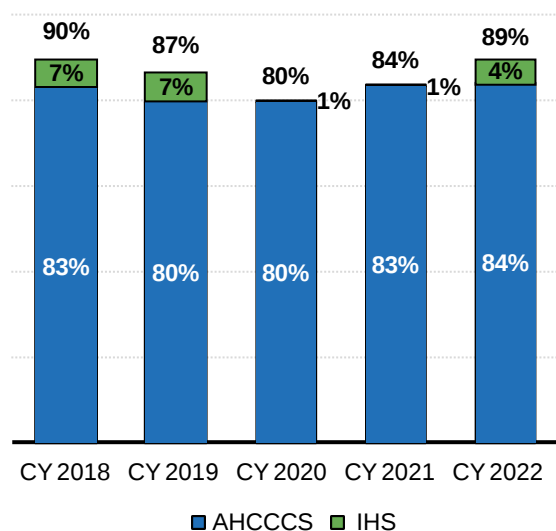
Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

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

Navajo Nation Region

All Arizona Reservations



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

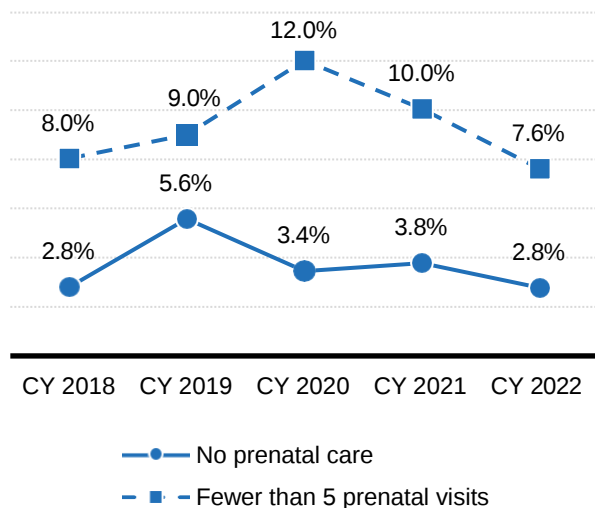
Geography	Calendar year	Number of births	Mother had no prenatal care	Mother had fewer than five prenatal visits	Mother began prenatal care in the first trimester
Navajo Nation Region	2020	1,015	3%	12%	60.8%
	2021	1,005	4%	10%	60.9%
All Arizona Reservations	2020	1,900	5%	14%	55.8%
	2021	Data for All Arizona 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.

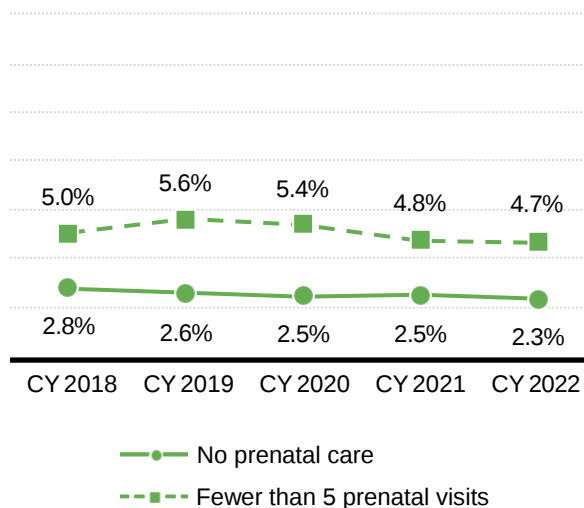
Note: Mothers of twins are counted twice in this table. 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health status profile of American Indian in Arizona for 2021 has not yet been released.

Figure 43. Births to mothers with inadequate prenatal care, 2018 to 2022

Navajo Nation Region



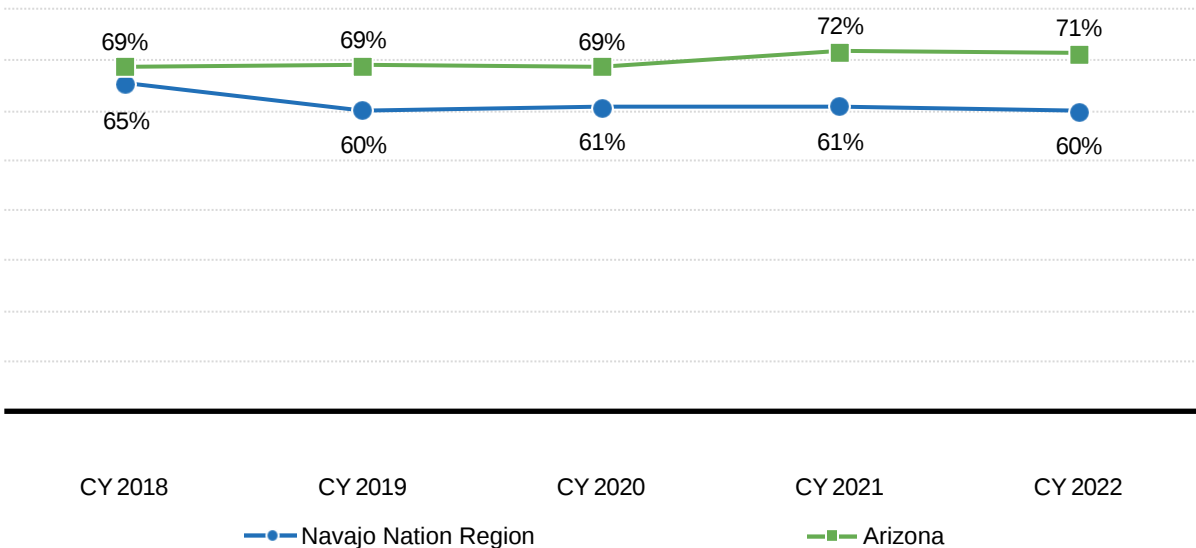
Arizona



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

Note: Mothers of twins are counted twice in these figures

Figure 44. 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.^{286, 287, 288, 289, 290}

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.^{291, 292} The use of opioids, whether prescribed or illicit, during pregnancy also poses health risks to developing fetuses including preterm birth, stillbirth and birth defects.²⁹³ 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.^{294, 295}

How the Navajo Nation Region is faring

- In 2020 and 2021, 7-8% of births in the Navajo Nation Region were to mothers younger than age 20 and 2-3% were to mothers younger than 18. Both of these percentages were lower 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 slightly less prevalent in the region compared to reservations statewide (Table 36).
- 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 (6.5-9.0%) than in the state (4.6%-5.8%). However, in an encouraging trend, the percentage of births to mothers younger than 18 fell to a five-year low of only 1.3% in 2022, very similar to the 1.1% statewide (Figure 45).
- The share of mothers giving birth who smoked cigarettes during pregnancy was much smaller in the region in 2020 (1.1%) than in all Arizona reservations (11.1%) and Arizona overall (3.6%) (Table 36). The Navajo Nation Region has met the Healthy People 2030 target of no more than 4.3% of women using tobacco during pregnancy for all years between 2018 and 2022, even with a slight uptick in smoking during pregnancy from 2021 (0.9%) to 2022 (1.5%) (Figure 46).
- Between 2018 and 2022, 59 newborns were hospitalized because of maternal drug use during pregnancy in the Navajo Nation Region. Based on the total number of births, this equates to only 3.3 newborns hospitalized per 100 births, much lower than the 3 newborns hospitalized per 100 live births in the state. The average length of hospital stay was longer in the region (15.4 days) than in Arizona as a whole (9.5 days) (Table 37).

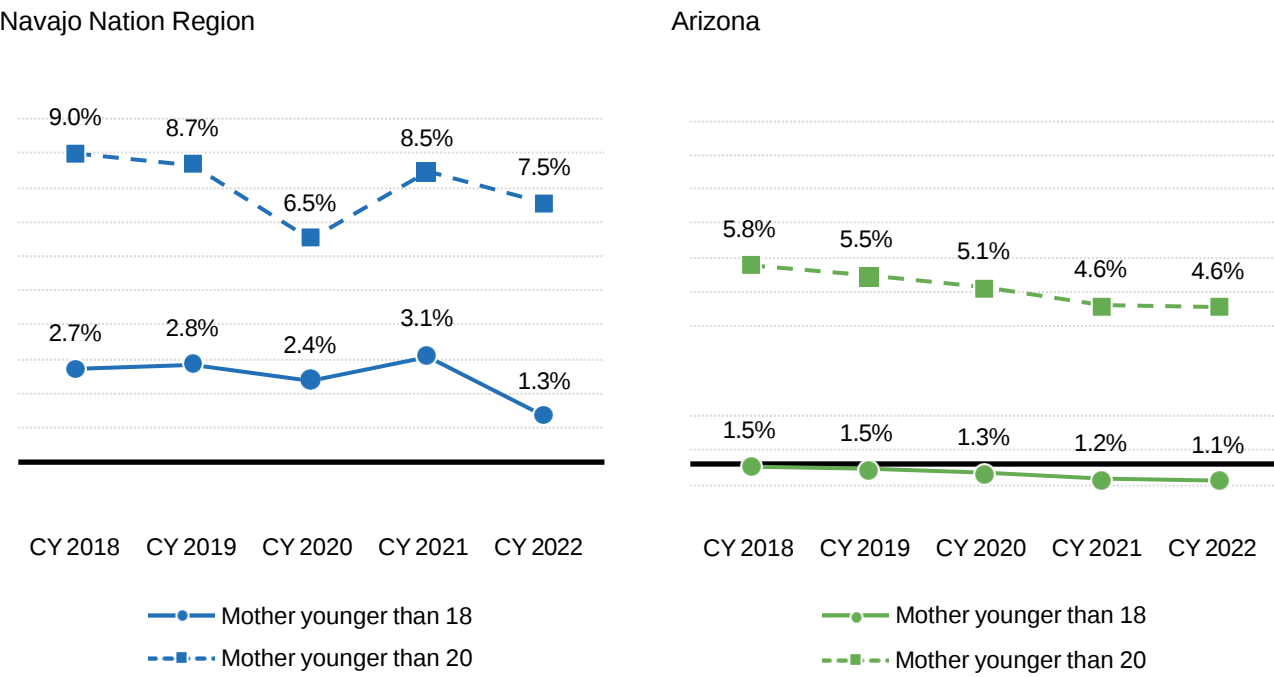
Table 36. Selected characteristics of mothers giving birth, 2020 to 2021

Geography	Calendar year	Number of births	Mother was younger than 18	Mother was younger than 20	Mother smoked cigarettes during pregnancy
Navajo Nation Region	2020	1,015	2%	7%	1.1%
	2021	1,005	3%	8%	0.9%
All Arizona Reservations	2020	1,900	4%	9%	11.1%
	2021	Data for All Arizona Reservations not available			
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.

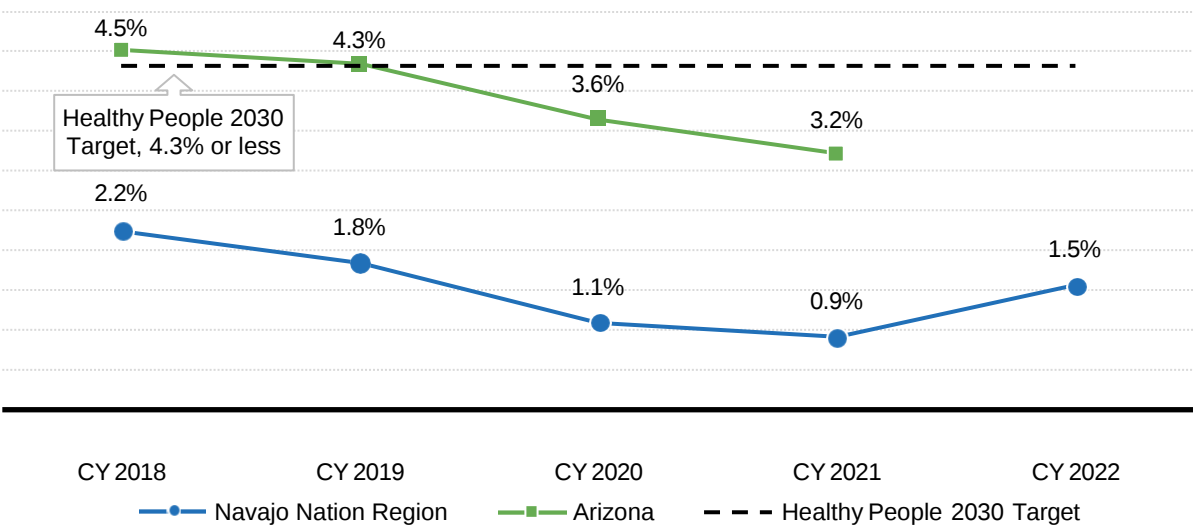
Figure 45. Births to mothers who were younger than 20, 2018 to 2022



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

Note: Mothers of twins are counted twice in this figure.

Figure 46. Births to mothers who smoked cigarettes during pregnancy, 2018 to 2022



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

Table 37. Newborns hospitalized because of maternal drug use during pregnancy, 2018-2022 combined

Geography	Newborns hospitalized	Average length of stay (days)
Navajo Nation Region	59	15.4
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.^{296, 297} Children of mothers categorized as having maternal obesity have increased risk of birth complications, asthma, diabetes, heart disease and neonatal and infant mortality.^{298, 299, 300} 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.^{301, 302, 303, 304} 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.^{305, 306}

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.^{307,308} 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.³⁰⁹ 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.³¹⁰ 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.³¹¹ Mothers who screen positively for depression must be referred to a case manager or treatment services.³¹² These screenings, as well as the ability to bill AHCCCS for the

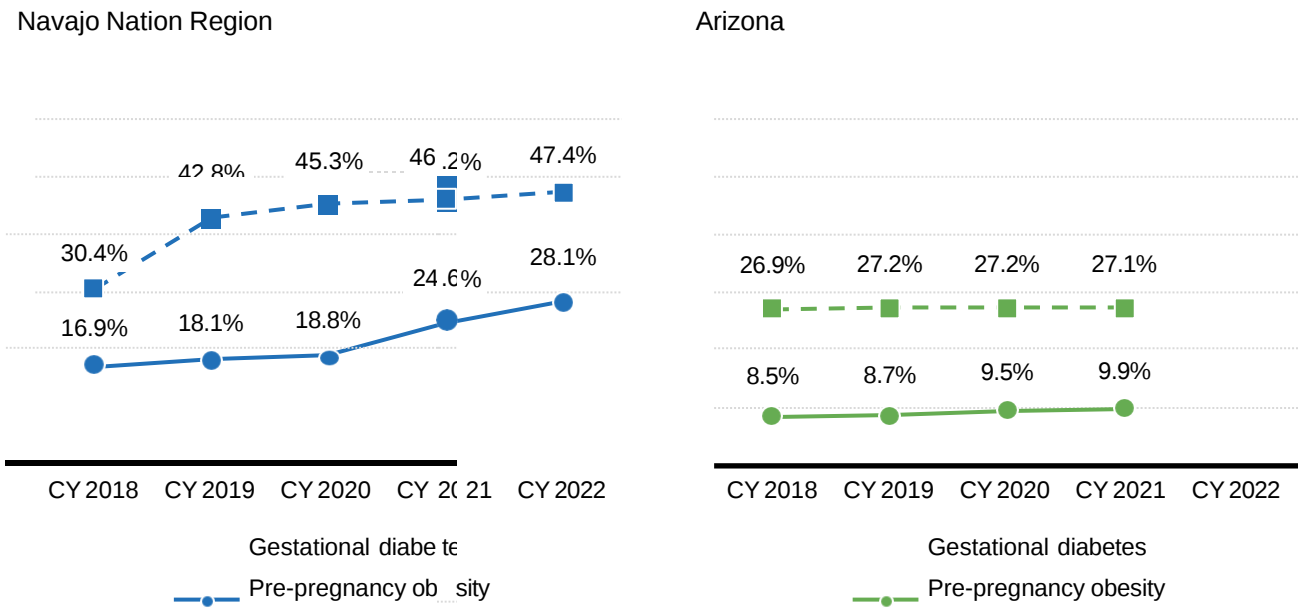
cost of screenings, will hopefully increase the likelihood that mothers experiencing postpartum depression are referred to appropriate mental health services.

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.³¹³ 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.³¹⁴

How the Navajo Nation Region is faring

- Between 2018 and 2022, rates of pre-pregnancy obesity and gestational diabetes in the Navajo Nation Region steadily increased. Pre-pregnancy obesity increased from about one in three births in 2018 (30.4%) to nearly half of all births in 2022 (47.4%). Gestational diabetes followed a similar pattern, increasing from 16.9% of births in 2018 to 28.1% of births in 2022. In 2021, the latest year that can be compared with the state, the Navajo Nation Region had substantially higher rates of both pre-pregnancy obesity (47.4% compared with 27.1%) and gestational diabetes (28.1% compared with 9.9%) (Figure 47).
- 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%).³¹⁵ 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.^{316, 317}

Figure 47. 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.³¹⁸ 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.^{319, 320} 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.³²¹

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.^{322, 323} 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.³²⁴

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.³²⁵ 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.³²⁶

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.³²⁷ 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.³²⁸ 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 Navajo Nation Region is faring

- In 2021, higher proportions of the babies born were preterm (12.7%) in the Navajo Nation Region than in Arizona overall (10.0%), but the proportion of low birth weight births (8.5%) 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 low-birthweight (8.1%) and preterm (11.2%) in 2020 were also slightly lower in the region than across all Arizona reservations (8.9% and 12.6%, respectively) (Table 38).
- Between 2018 and 2021, the proportion of low birth weight births had been steadily increasing in the region, from a low of 6.4% in 2018 to 8.5% in 2021, but in 2022, the rate of low birth weight births fell to 7.6% in the region, dipping below the statewide rate (7.8%) for the first time in four years (Figure 48).
- The Healthy People 2030 target for the percentage of preterm births is 9.4% or lower. In 2018, the Navajo Nation Region met this target, but since 2018, preterm birth rates have been well above 9.4%, meaning the region has not met this target. However, like low birth weight birth trends, the percentage of preterm births fell for the first time in four years to 11.1% in 2022 from a high of 12.7% in 2021 (Figure 49).
- According to data from the 2020 Navajo Nation Maternal and Child Health Needs Assessment that was included in the 2022 Regional Needs and Assets Report, about two in five infants (44%) who were enrolled in the Navajo Nation WIC program were breastfed either partially (23%) or fully (21%) between 2016 and 2018. By comparison, during the same period, only 30% of infants in the Arizona WIC program were breastfed partially (20%) or fully (10%) (Figure 50).
- Data from the Navajo Nation WIC program in 2019 indicated that 85% of infants were ever breastfed or given human milk at birth or after, 42% were breastfed for at least six months, and 29% for at least a full year (Figure 51). Approximately one in 10 infants (11%) were exclusively breastfed for six months or more.

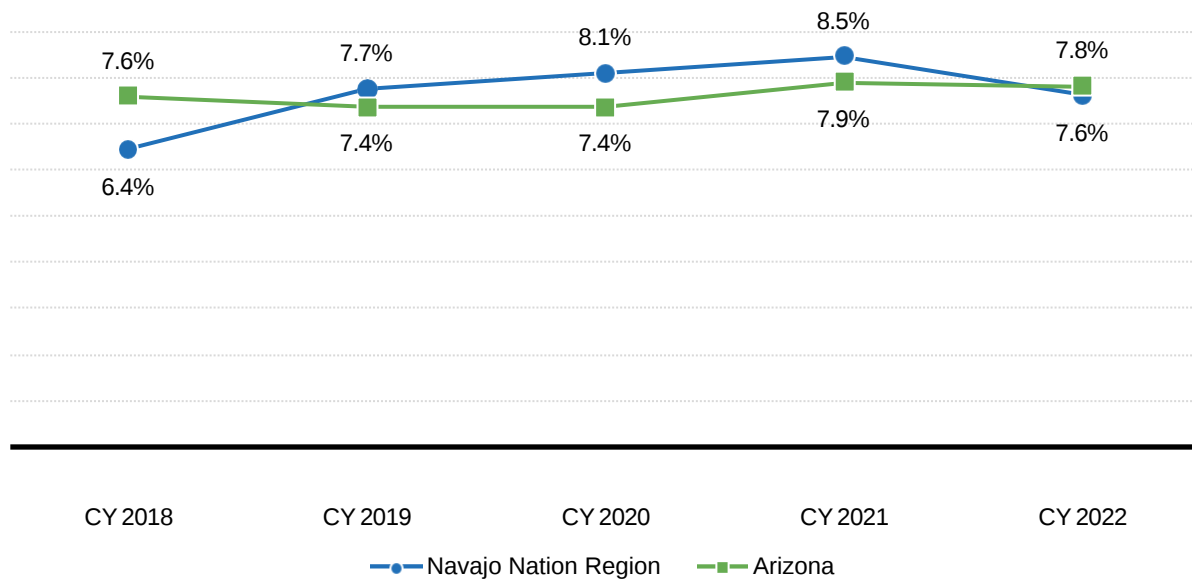
Table 38. Selected birth outcomes, 2020 to 2021

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
Navajo Nation Region	2020	1,015	8.1%	11.2%	7%
	2021	1,005	8.5%	12.7%	7%
All Arizona Reservations	2020	1,900	8.9%	12.6%	N/A
	2021	Data for All Arizona Reservations not available			
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.

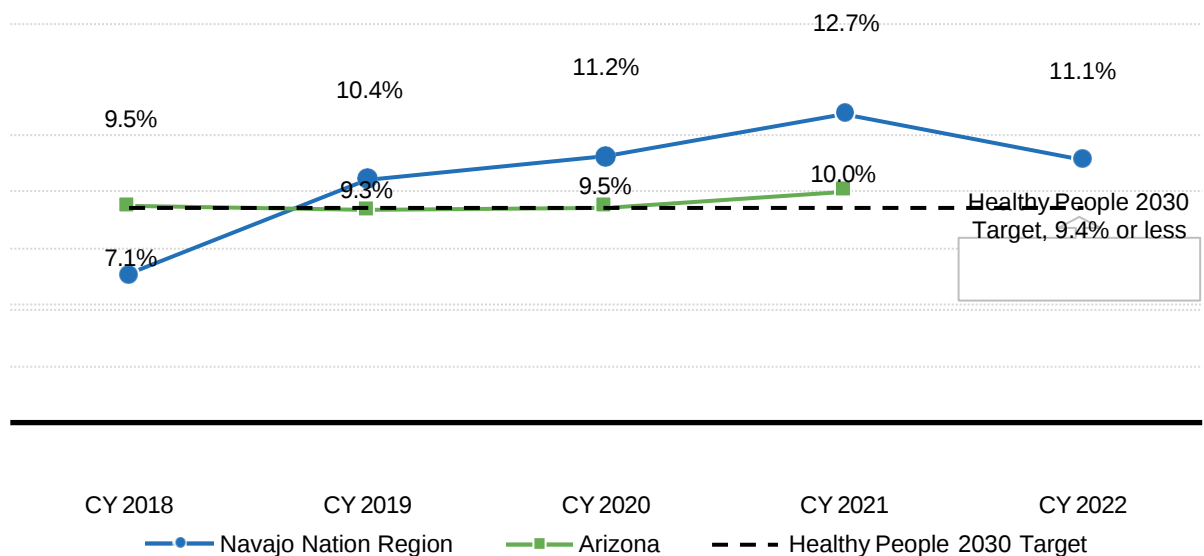
Note: 'All Arizona Reservations' row reflects only births to American Indian mothers residing on Arizona reservations. The Health Status Profile of American Indian in Arizona for 2021 has not yet been released.

Figure 48. Low birth weight births, 2018 to 2022



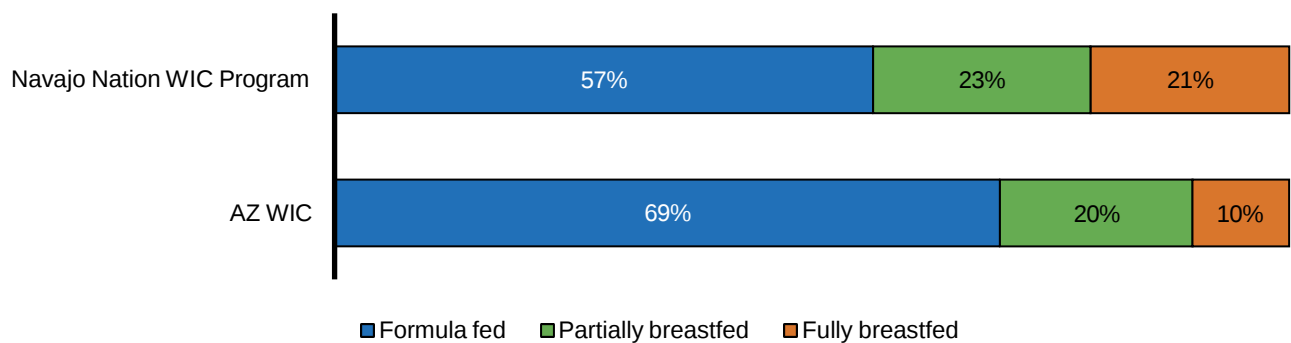
Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Figure 49. Preterm births, 2018 to 2022



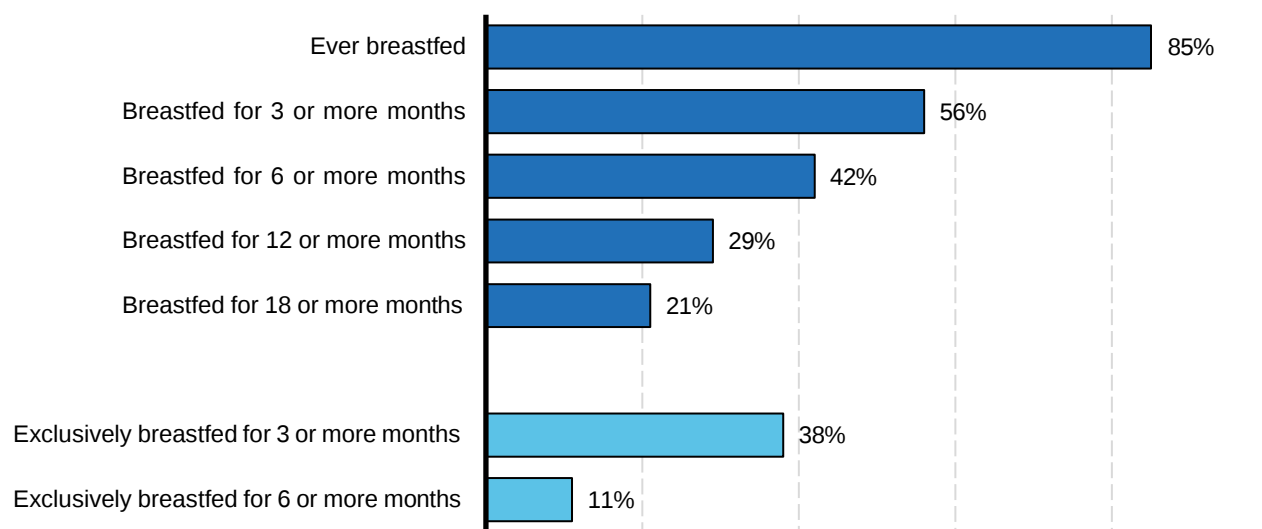
Source: Arizona Department of Health Services (2023). [Vital Statistics Births dataset]. Unpublished data.

Figure 50. Feeding method for infants enrolled in WIC, 2016-2018



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Figure 51. Breastfeeding rates for infants enrolled in Navajo Nation WIC, 2019



Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.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.”³²⁹ 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.³³⁰ 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.³³¹ 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.³³²

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.^{333, 334} RSV is the most frequent cause of hospitalization in children under 1 year of age.³³⁵ 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.^{336, 337} These new treatments have the potential to prevent severe illness in infants and

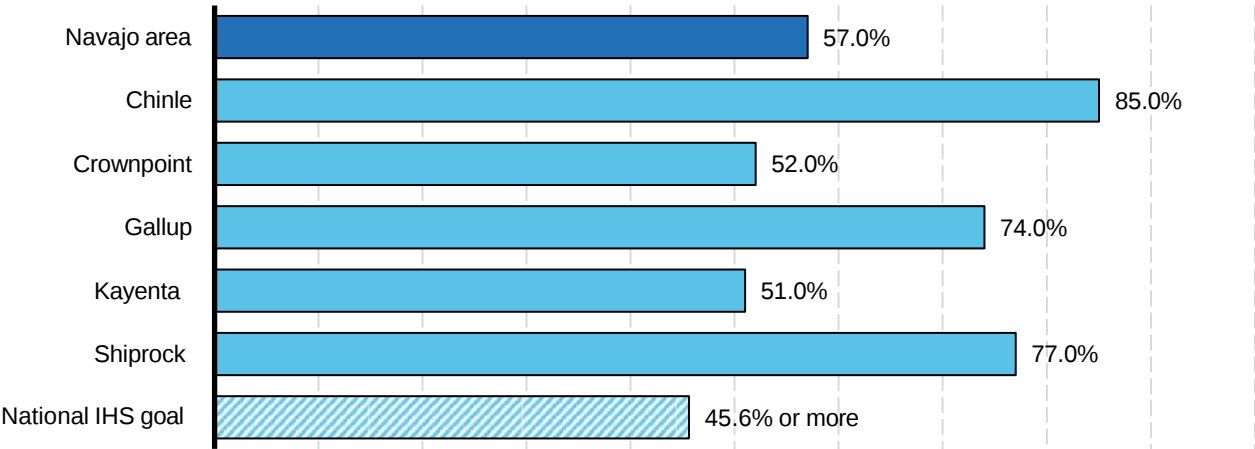
young children, but shortages of the antibody medication have led the Centers for Disease Control and Prevention (CDC) to recommend prioritizing access for the highest-risk infants. This includes infants under 6 months of age, those with underlying health conditions such as lung or heart disease and 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.³³⁸ 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.³³⁹ The American Academy of Pediatrics recommends that all children ages 6 months and older be vaccinated against influenza each year.³⁴⁰

How the Navajo Nation Region is faring

- According to data from the 2020 Navajo Nation Maternal and Child Health Needs Assessment that was included in the 2022 Regional Needs and Assets Report, 57% of children ages 19 to 35 months were up-to-date on all early childhood immunizations in the Navajo IHS Area, meeting the national IHS target of 45.6% or more (Figure 52).
- In the 2022-23 school year, immunization rates for children enrolled in child care or preschool in the Navajo Nation Region (DTaP^{xxiii} 95.3%; Polio 96.4%; MMR 96.8%) were higher than statewide child care immunization rates (DTaP 90.6%; Polio 92.2%; MMR 93.0%). The immunization rate in the region met the Healthy People 2030 DTaP immunization target of 90%. Vaccine uptake is generally good in the region, with no children in child care or preschool (0.0%) exempt from every required vaccine, compared to 4% statewide (Table 39).
- Similarly, kindergarten immunization rates in schools in the region (DTaP 97.8%; Polio 98.3%; MMR 96.3%) were also higher than statewide rates (DTaP 89.6%; Polio 90.3%; MMR 89.9%) in the 2022-23 school year. Immunization rates in regional schools met the Healthy People 2030 kindergarten MMR immunization target of 95% or more, unlike schools statewide, where only 89.9% of kindergarteners had complete MMR immunizations. Personal belief exemption rates and rates of exemptions from all required vaccines (0.2% for both) were again substantially lower than rates in Arizona overall (7.3% and 4.6%, respectively) (Table 40).
- Data from the 2020 Navajo Nation Maternal and Child Health Needs Assessment showed that 37.2% of children from 6 months to age 17 in the Navajo IHS Area had received their annual influenza immunization in 2018, meeting the national IHS goal of 20.6% or more children receiving this immunization (Figure 53).
- 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 only 39 RSV cases. However, in 2022, there were 540 cases of RSV and 377 cases of influenza in young children in the region, the highest numbers seen in 4 years. Similar increases were seen in cases statewide, though without the 2021 dip in RSV cases (Figure 54).

^{xxiii} The DTaP vaccine immunizes against Diphtheria, Tetanus and Pertussis.

Figure 52. Percent of children (ages 19-35 months) who are up-to-date on all early childhood immunizations, Navajo IHS GPRA, 2018



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf> .

Table 39. Children in child care or preschool with selected required immunizations, 2022-23

Geography	Number Enrolled	DTaP	Polio	MMR	Religious exemption	Medical exemption	Exempt from every required vaccine
Navajo Nation Region	279	95.3%	96.4%	96.8%	0.0%	0.7%	0.0%
Arizona	70,690	90.6%	92.2%	93.0%	5.7%	0.2%	4.0%
Healthy People 2030 targets		90.0%					

Source: Arizona Department of Health Services (2023). Childcare Immunization Coverage, 2022-23 School Year. Unpublished data received by request & aggregated by the Community, Research, & Development Team. Arizona Department of Health Services (2023). Childcare 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 in this table represent immunization rates at the following public school preschools: Indian Wells Preschool, Tuba City Primary School, Pinon Elementary School, Chinle Elementary Preschool, Ganado Pre-K Academy, Many Farms Elementary School, Tsaile Public School, Canyon De Chelly Elementary, and Dine Family Learning Center (at Leupp).

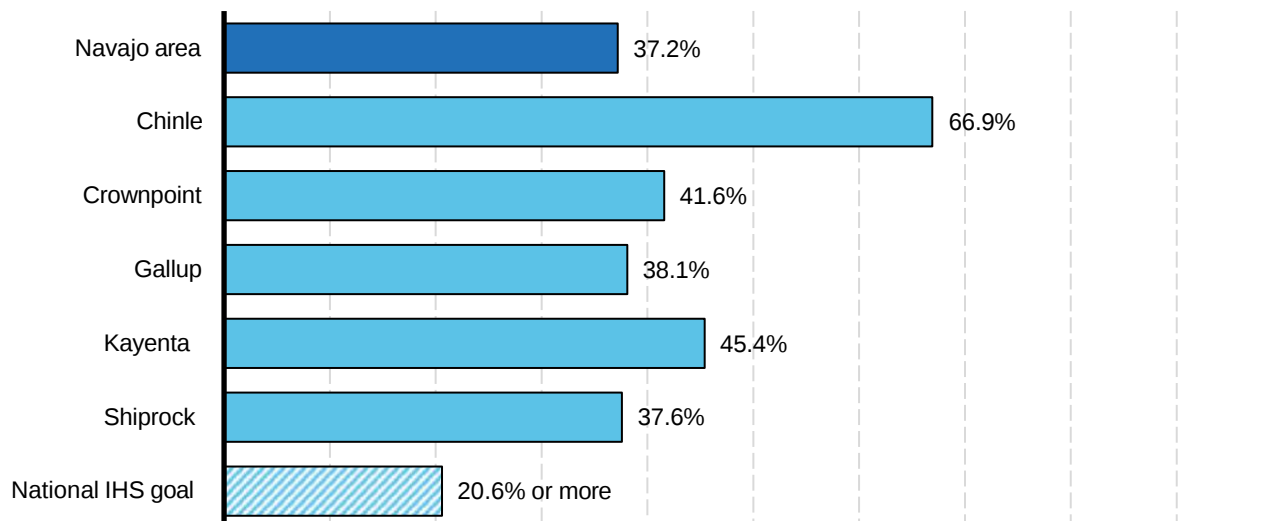
Table 40. Kindergarteners with selected required immunizations, 2022-23

Geography	Number Enrolled	DTaP	Polio	MMR	Personal belief exemption	Medical exemption	Exempt from every required vaccine
Navajo Nation Region	643	97.8%	98.3%	96.3%	0.2%	0.2%	0.2%
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>

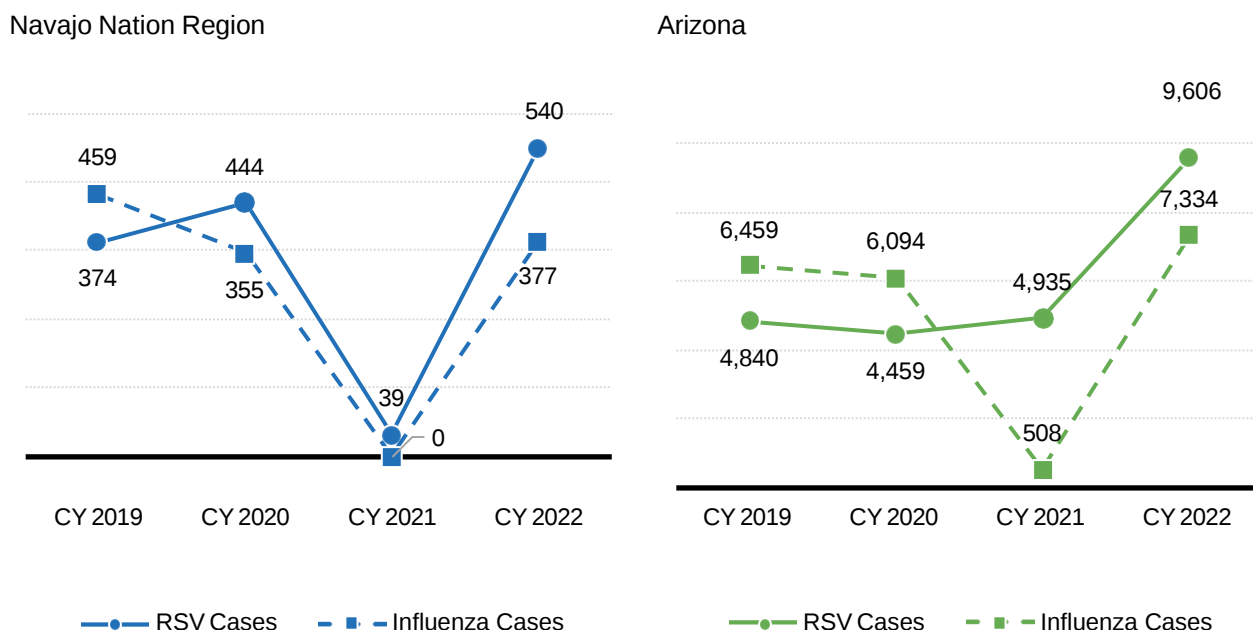
Note: These data reflect immunization rates at Many Farms Community School, Seba Dalkai Boarding School, Indian Wells Elementary, Pinon Elementary, Tsehootsooi Dine Bi'olta' (Navajo Immersion), Tsehootsooi Primary Learning Center, Ganado Primary School, Chinle Elementary, Canyon De Chelly Elementary, Many Farms Public School, Tsaile Elementary, Mesa View Elementary, Red Mesa Elementary, Round Rock K-8, Jeehdeez'a Academy, Greasewood Springs Community School, Hunters Point Boarding School, Leupp Public School, Tuba City Elementary, Dzil Libei Elementary, Tsinaabaas Habitiin Elementary, and Carrizo Mission School.

Figure 53. Percent of children (children 6 months to 17 years old) with annual influenza immunization, Navajo IHS GPRA, 2018



Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Figure 54. 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

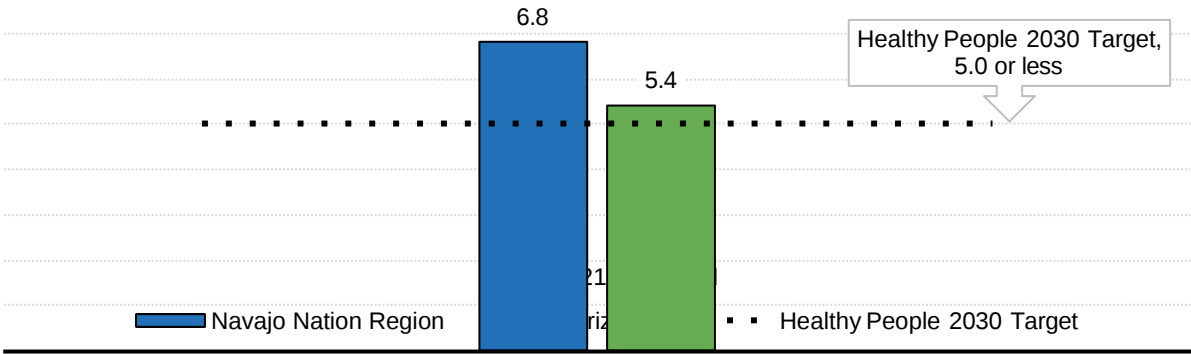
Infant mortality refers to the death of infants under 1 year of age. Some of the most common causes of infant mortality in Arizona and the U.S. include congenital abnormalities, low birth weight, preterm birth, pregnancy complications, sudden infant death syndrome (SIDS) and unintentional injuries.^{341, 342, 343} 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.³⁴⁴ 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.^{345, 346} 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.³⁴⁷

The leading cause of death for children birth to age 17 in the United States is unintentional injuries.³⁴⁸ The most prevalent accidental injuries are car crashes, drowning, falls, suffocation, fires and poisoning.³⁴⁹ Deaths from unintentional injuries are more common for children living in rural areas, as well as among American Indian and Alaska Native children.^{350, 351} 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.³⁵²

How the Navajo Nation Region is faring

- The infant mortality rate in the Navajo Nation Region 2019-2021 (6.8 deaths per 1,000 live births) was higher than Arizona's (5.4), and both failed to meet the Healthy People 2030 target of 5.0 or fewer (Figure 55).
- The types of unintentional injuries leading to non-fatal emergency department visits among young children (birth to age 4) are similar in the Navajo Nation Region to the state as a whole. Between 2016 and 2020, the majority of emergency department visits among young children in the region were due to falls (n=465), with smaller numbers due to being struck by or against an object (n=185), natural or environmental reasons (n=85), or other causes (n=140) (Figure 56). Emergency visits due to poisoning were much less prevalent in the region (fewer than 6) compared to the state, where poisoning was the fifth most common cause of visits for young children.
- However, the types of unintentional injuries leading to non-fatal hospitalizations for young children in the region were substantially different than the pattern seen statewide. Fire or hot objects (n=22) were the leading cause of hospitalization due to unintentional injury in the Navajo Nation Region, followed by poisoning (n=10) and motor vehicle traffic injuries (n=10). By contrast, falls led to the most hospitalization for unintentional injuries across Arizona, followed by poisoning. Motor vehicle injuries ranked 5th among statewide causes (Figure 56).
- There were 80 deaths of children birth to age 17 in the Navajo Nation Region between 2019 and 2021. A quarter of these deaths (25%) were due to accidents, nearly one in five were due to intentional self-harm or suicide (19%), and 13% were due to congenital malformations. The proportion of child deaths due to self-harm and suicide were three times higher in the region than in Arizona overall (6%) (Figure 57).

Figure 55. Infant mortality rates, 2019 to 2021 combined

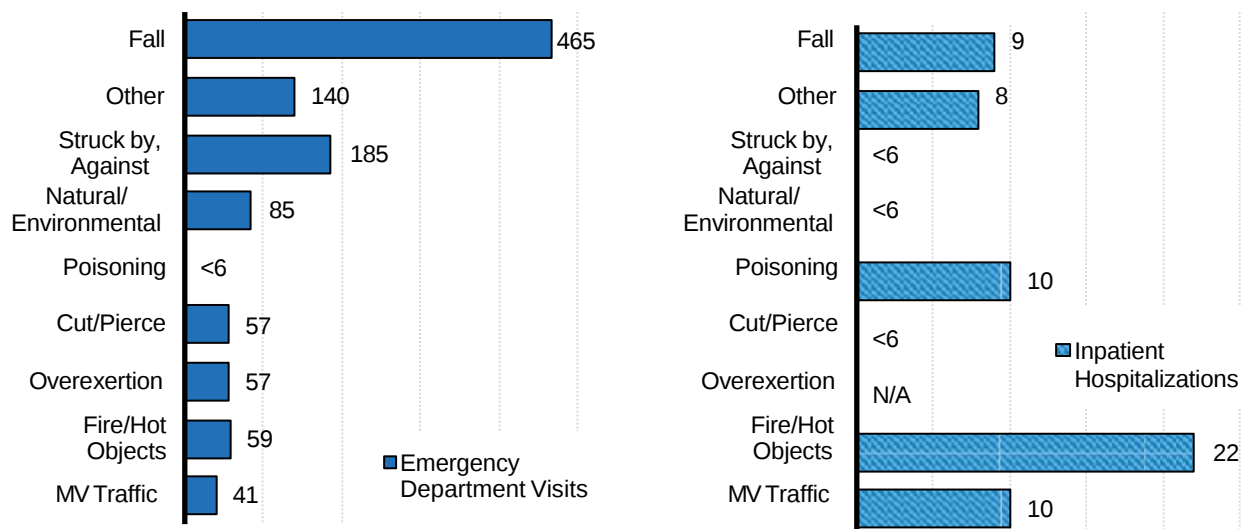


Source: Arizona Department of Health Services (2023). [Vital Statistics Mortality Report dataset]. Unpublished data.

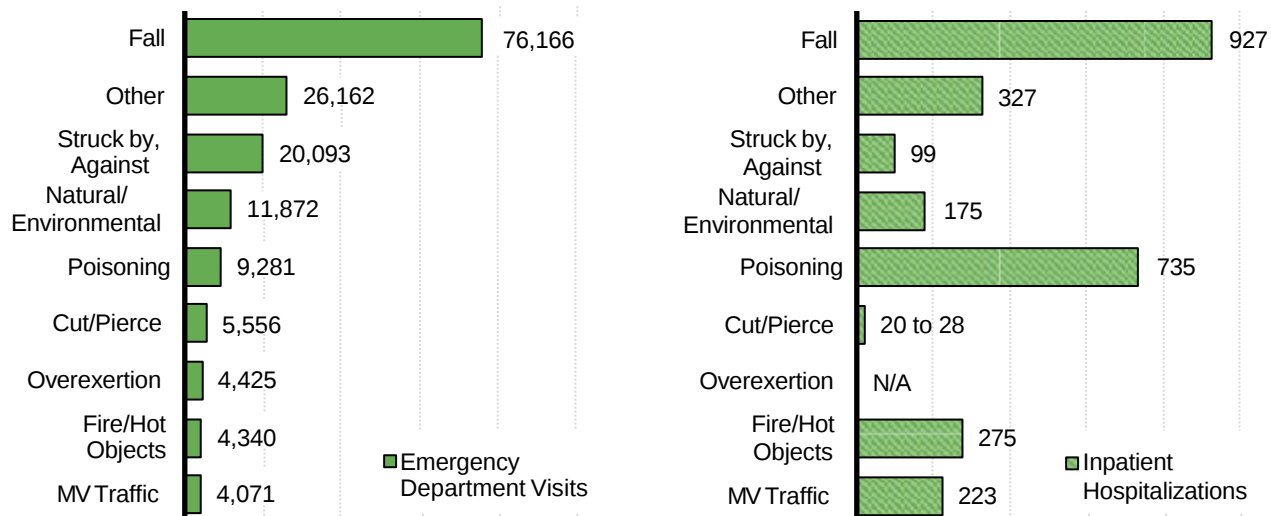
Note: Infant mortality rates are the number of infant deaths (babies under age 1) per 1,000 live births.

Figure 56. Non-fatal emergency department visits due to unintentional injuries for children birth to age 4 by selected mechanism of injury, 2018-2022 combined

Navajo Nation Region

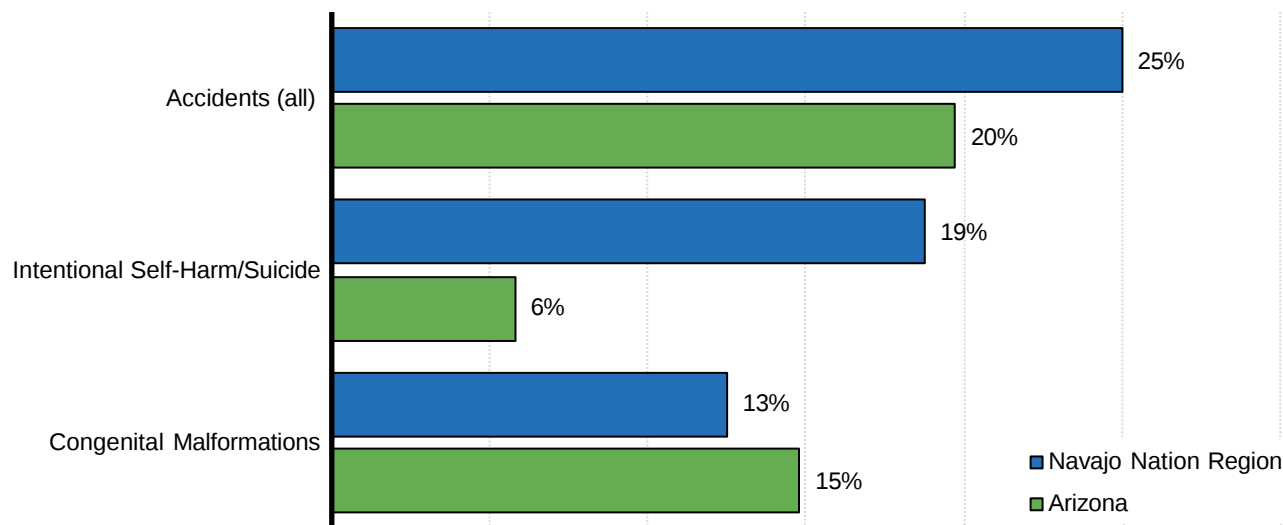


Arizona



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

Figure 57. Leading causes of death for children birth to age 17, 2018-2021 combined



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

Note: The leading causes of child death in Arizona are accidents (20%), congenital malformations (15%), low birthweight (9%), intentional self-harm/suicide (6%), and cancer/malignant neoplasms (5%). Causes of death in this figure are ordered by the leading causes of death in the region.

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



FAMILY SUPPORT AND LITERACY

Hooghan Haz'ánigíí Bik'á'adoolwołíí dóó Áłchíní Yázhí Yólta' Íhoo'aah

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.^{xxiv, 353} 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.^{354, 355, 356} ACEs are more prevalent among Arizona children with special health care needs and children living in poverty.³⁵⁷

Social, physical, academic and economic outcomes are positively influenced by healthy relationships and interactions with family members and caregivers during childhood.^{358, 359, 360, 361, 362} 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.³⁶³ 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.³⁶⁴ 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.³⁶⁵ 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.³⁶⁶ 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.^{367, 368, 369} Literacy practices at home have also been found to increase children's motivation to learn.³⁷⁰ These early literacy skills are important because they are linked to durable outcomes including elementary school performance and overall educational achievement.³⁷¹

^{xxiv} 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.³⁷² In Arizona, reading scores have been slowly approaching the national average, however American Indian students still have the lowest scores as a group.³⁷³ 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.³⁷⁴

How the Navajo Nation Region is faring

- According to the 2022 First Things First (FTF) Navajo Nation Regional Needs and Assets Report, the FTF Navajo Nation Regional Partnership Council helps to fund the Growing in Beauty program, which is operated by the Navajo Nation Office of Special Education and Rehabilitation.³⁷⁵ The program provides home visits to pregnant women and families with children ages birth to 5 using the Parents as Teachers model, and also incorporates Diné cultural practices into early literacy and language activities.³⁷⁶ In 2020, 159 families with 199 children birth to age 5 participated in the program, and 20 families graduated from the program (Table 41).

Table 41. Growing in Beauty FTF home visitation program data, 2019 to 2020

	2019	2020
Number of families with children birth to age 5 participating in the program	161	159
Number of children birth to age 5 participating in the program	209	199
Number of families graduating from the program	19	20

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

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.^{377, 378} Access to treatment for substance use disorders and supports for parents and

families grappling with these issues can help to ameliorate the short and long-term impacts on young children.^{379, 380}

How the Navajo Nation Region is faring

- Between 2018 and 2021, there were 59 deaths with opiates or opioids contributing in the Navajo Nation Region (Table 42). 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.

Table 42. Number of deaths with opiates or opioids contributing, 2018-2021 combined

Geography	Number of deaths with opiates or opioids contributing, 2018-2021
Navajo Nation Region	59
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.³⁸¹ 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.³⁸² 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.³⁸³ Despite being challenged recently by several states, ICWA was upheld by the supreme court.^{384, 385} 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.³⁸⁶

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.³⁸⁷ In recent years, the number of unlicensed kinship homes has even exceeded the number of foster homes in Arizona.³⁸⁸ 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.³⁸⁹

How the Navajo Nation Region is faring

- Child welfare services in the Navajo Nation Region are overseen by the Navajo Nation Division for Children & Family Services - Department of Family Services.³⁹⁰ In 2020 there were 706 substantiated cases of child abuse or neglect for children birth to age 17, a decrease from 1,017 in 2019 (Table 43).
- According to the 2022 Regional Needs and Assets Report, ICWA cases in the Navajo Nation are overseen by the Navajo Indian Child Welfare Act Program, part of the Navajo Nation Division for Children & Family Services, formerly the Division of Social Services. In 2020, the largest number of ICWA placements were in the state of Arizona, with 241 cases involving 476 children birth to age 17 (Table 44). Key informants in the 2022 report indicated that ICWA cases are dispersed throughout the state, but the largest number are located in the Phoenix area, followed by the Flagstaff area.³⁹¹ In 2020, 93 children in ICWA placements were reunited with their parents, 55 were adopted or taken under legal guardianship by a relative, and 14 were adopted into non-relative Navajo homes (Table 45).
- In 2020, there were 9,499 children birth to age 17 in out-of-home care under the Department of Family Services (Table 43). The majority of these children (n=6,466) were placed with relatives, 746 were placed with their parents, 709 in contracted foster homes, 456 in contracted group homes, and 959 in Navajo Nation licensed foster homes (Table 46). Key informants in the 2022 Regional Needs and Assets Report noted that most children placed with relatives or with their parents live in the Navajo Nation, while contracted foster homes and group homes are all located outside the Navajo Nation, some in bordering towns and some further from the Nation.³⁹²
- In 2020, there were 22 total non-relative foster care homes licensed by the Navajo Nation Department of Family Services, 12 on-reservation and 10 off-reservation. These homes had a total availability of 55 beds, 30 in on-reservation homes and 25 in off-reservation homes (Table 47). According to key informants in the 2022 Regional Needs and Assets Report, the number of children placed in Navajo Nation licensed foster home (n=959 in 2020) greatly exceeds the capacity of this non-relative foster care homes because many of these children are in the care of relative who became licensed foster care providers. These homes are not captured in Table 47. Becoming a licensed foster care provider can help relatives who are caring for children access additional supports like monthly financial support and child care assistance.³⁹³

Table 43. Child abuse or neglect cases and children in out-of-home care, 2019 to 2020

	2019	2020
Substantiated cases of child abuse or neglect	1,017	706
Children (ages 0-17) in out-of-home care	10,035	9,499

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 44. Average ICWA Cases, 2019 to 2020

	Number of Cases (2019)	Number of Children (2019)	Number of Cases (2020)	Number of Children (2020)
Arizona	214	419	241	476
New Mexico	100	194	113	217
Utah	53	111	53	122
All other states	119	221	104	196

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 45. ICWA Permanent Placement Outcomes, 2019 to 2020

	2019	2020
Children reunified with parents	177	93
Children established permanency in the form of Guardianship or Adoption by a Relative.	171	55
Children established permanency in the form of Adoption by a non-relative, Navajo Adoptive home.	24	14

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 46. Placement of children (ages 0-17) in out-of-home care, 2019 to 2020

	2019	2020
Children (ages 0-17) placed with relatives	6,767	6,466
Children (ages 0-17) placed with parents	1,019	746
Children (ages 0-17) in contract foster homes	474	709
Children (ages 0-17) in contract group homes	609	456
Children (ages 0-17) placed in Navajo Nation licensed foster homes	474	959

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 47. Foster Care Availability, 2019 to 2020

	2019 On-Reservation	2019 Off-Reservation	2020 On-Reservation	2020 Off-Reservation
Navajo Nation licensed Foster Care Homes (non-relative)	12	4	12	10
Beds in Navajo Nation Foster Care Homes (non-relative)	30	12	30	25

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

APPENDIX 1: ADDITIONAL DATA TABLES

Population Characteristics

Table 48. 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
Navajo Nation Region	7,332	1,084	1,146	1,235	1,180	1,298	1,389
Navajo Nation (entire)	12,692	1,928	1,933	2,034	2,108	2,248	2,441
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 49. 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
Navajo Nation Region	94,511	1%	3%	1%	97%	1%	2%
Navajo Nation (entire)	165,158	2%	3%	1%	97%	1%	2%
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 50. 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
Navajo Nation Region	5,943	2%	3%	1%	99%	1%	3%
Navajo Nation (entire)	10,251	2%	2%	1%	99%	1%	3%
All Arizona Reservations	12,316	8%	3%	1%	95%	1%	4%
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 51. 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
Navajo Nation Region	2020	1,015	3%	1%	0.1 to 0.5%	95%	1%
	2021	1,005	3%	0.1 to 0.5%	0.1 to 0.5%	96%	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 52. 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	
Navajo Nation Region	7,132	26	0.4%
Navajo Nation (entire)	11,747	34	0.3%
All Arizona Reservations	14,097	191	1%
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 53. 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
Navajo Nation Region	89,791	32%	1%	67%
Navajo Nation (entire)	159,145	34%	1%	65%
All Arizona Reservations	166,148	47%	3%	50%
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 54. 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
Navajo Nation Region	89,791	32%	50%	18%
Navajo Nation (entire)	159,145	34%	48%	18%
All Arizona Reservations	166,148	47%	41%	12%
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 55. Limited-English-speaking households, 2017-2021 ACS

Geography	Estimated number of households	Number and percent of limited-English-speaking households	
Navajo Nation Region	28,406	5,687	20%
Navajo Nation (entire)	48,978	8,893	18%
All Arizona Reservations	52,248	6,361	12%
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 56. 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	
Navajo Nation Region	7,332	3,247	44%
Navajo Nation (entire)	12,692	5,638	44%
All Arizona Reservations	15,140	6,558	43%
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 57. 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
Navajo Nation Region	\$38,900	\$36,500	\$57,800	\$29,000	\$22,100
Navajo Nation (entire)	\$37,500	\$33,500	\$51,200	\$25,400	\$21,000
All Arizona Reservations	<i>All Arizona reservations data not available</i>				
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 58. 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
Navajo Nation Region	7,661	27%	19%	21%	32%
Navajo Nation (entire)	12,667	28%	19%	22%	31%
All Arizona Reservations	15,304	27%	22%	22%	30%
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 59. 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	
Navajo Nation Region	5,088	5,167	4,792	4,344	3,969	3,643	72%
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 60. 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	
Navajo Nation Region	7,332	7,813	7,255	6,499	5,864	5,397	74%
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 61. 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
Navajo Nation (ADE sites)	81	30	74	2,201,445	368,805	1,065,809
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 62. 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
Navajo Nation (ADE sites)	158	230	168	763,518	4,076,877	2,471,430
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 63. 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
Navajo Nation Region	7,132	11%	15%	3%	35%	36%
Navajo Nation (entire)	11,747	11%	14%	4%	38%	34%
All Arizona Reservations	14,097	11%	14%	2.6%	38%	35%
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 64. 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
Navajo Nation Region	95,358	39%	28%	33%
Navajo Nation (entire)	168,527	38%	29%	33%
All Arizona Reservations	177,201	51%	23%	26%
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 65. 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
Navajo Nation Region	26,609	43%	31%	26%
Navajo Nation (entire)	45,177	44%	31%	26%
All Arizona Reservations	52,122	55%	24%	21%
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 66. 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	
Navajo Nation Region	2,733	1,046	38%
Navajo Nation (entire)	4,626	1,640	35%
All Arizona Reservations	5,701	2,326	41%
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 67. Eligible families not using DES child care assistance, 2017 to 2022

Geography	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Navajo Nation Region	20.0%	46.2%	0.0%	DS	25.0%	28.6%
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 68. Children receiving DES child care assistance who are enrolled in quality environments, 2022

Geography	Children ages 0-5 (non-DCS involved)			DCS-involved children ages 0-5		
	Received assistance	Enrolled in quality environment	Percent in quality environment	Received assistance	Enrolled in quality environment	Percent in quality environment
Navajo Nation Region	1 to 9	1 to 9	DS	0	0	N/A
Arizona	20,099	13,619	68%	8,268	5,969	72%

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

Note: Quality environments are defined by DES as child care providers with a 3-, 4-, or 5-star Quality First rating, a national accreditation, or a Child Development Associate (CDA) credential for family child care providers.

Table 69. Number of children birth to age 2 receiving services from AzEIP as of October 1, 2018 to 2022

Geography	2018	2019	2020	2021	2022
Navajo Nation Region	77	53	47	38	59
Arizona	5,974	5,828 to 5,836	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 70. Preschoolers with disabilities receiving services through Local Education Agencies by type of disability, state fiscal years 2018- 2022 combined

Geography	Total Preschoolers	Developmental Delay	Speech or Language Impairment	Preschool Severe Delay	Other Disability
Navajo Nation (ADE Schools)	DS	36%	34%	20%	9%
Off-reservation ADE schools serving Navajo Nation students	No preschoolers served at select off-reservation schools				
Arizona schools	8,086	43%	30%	24%	3%

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. The only off-reservation schools with enrolled PS-3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Table 71. Kindergarten to 3rd grade students enrolled in special education in public and charter schools, state fiscal years 2018 to 2022

Geography	K-3rd grade students enrolled in special education				
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Navajo Nation (ADE Schools)	396	369	339	321	247
Off-reservation ADE schools serving Navajo Nation students	17	25	29	17	11
Arizona school	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. The only off-reservation schools with enrolled PS-3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Table 72. Kindergarten to 3rd grade students enrolled in special education in public and charter schools by primary disability, state fiscal year 2022

Geography	Total K-3rd grade students	Speech or Language Impairment	Developmental Delay	Specific Learning Disability	Autism	Other Disability
Navajo Nation (ADE Schools)	247	26%	45%	10%	8%	11%
Off-reservation ADE schools serving Navajo Nation students	DS	36%	45%	9%	9%	0%
Arizona schools	37,334	36%	27%	12%	11%	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. The only off-reservation schools with enrolled PS-3rd graders were Sanders Elementary School (in Sanders Unified District) and Sand & Sage Academy (in Page Unified District). All other off-reservation schools included in this report are middle and high schools.

Maternal & Child Health

Table 73. 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
Navajo Nation Region	2020	1,015	19%	45%
	2021	1,005	25%	46%
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 74. 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
Navajo Nation Region	374	444	39	540	459	355	0	377
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 75. 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
Navajo Nation Region	63	1,110
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. Census³⁹⁴ 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 Navajo Nation Region presented in this report are drawn from the Census Geography for the Arizona portion of the Navajo Nation Reservation and trust land. 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)³⁹⁵ 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 Navajo Nation Region presented in this report are drawn from the Census Geography for the Arizona portion of the Navajo Nation Reservation and trust land. 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

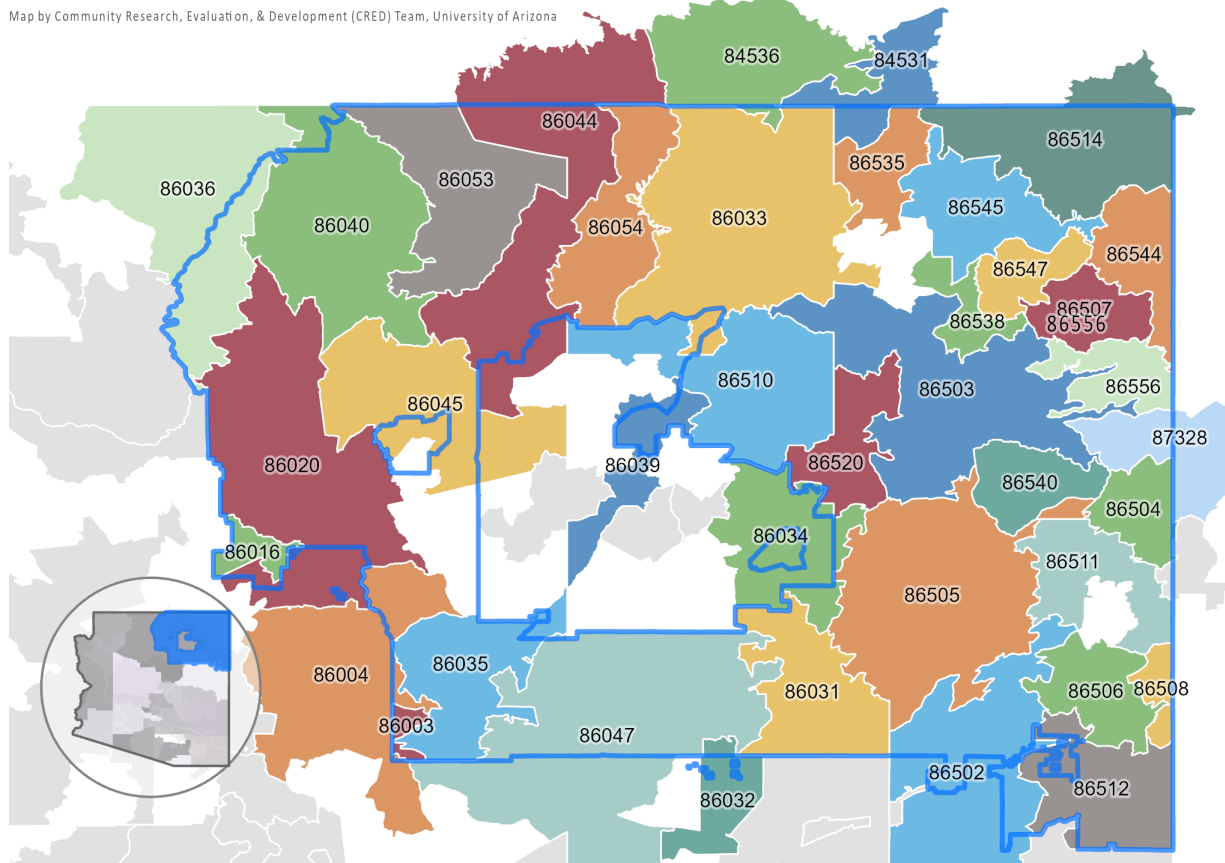
available. However, due to both the constraints of agency staff and agency-maintained datasets as well as the timing of requests, not all data were available on the same time and geographic scales. This report attempts to include the most recent and complete data available, with notes indicating where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

Figure 58. Zip Code Tabulation Areas (ZCTAs) in the Navajo Nation 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>)

Table 76. Zip Code Tabulation Areas (ZCTAs) in the Navajo Nation Region

Zip Code Tabulation Area (ZCTA)	Population (all ages)	Percent of this ZCTA's total population living in the Navajo Nation Region	This ZCTA is shared with
Navajo Nation Region	94,511		
84531	9	100%	
84536	117	100%	
86003	113	100%	

Zip Code Tabulation Area (ZCTA)	Population (all ages)	Percent of this ZCTA's total population living in the Navajo Nation Region	This ZCTA is shared with
86004	134	0.3%	Coconino Region
86016	59	100%	
86020	1,821	98%	Coconino Region
86031	1,705	100%	
86032	44	3%	Navajo/Apache Region
86033	7,723	100%	Coconino Region
86034	1,620	77%	Coconino Region
86035	1,691	100%	Coconino Region
86036	136	70%	Coconino Region
86039	678	47%	Coconino Region
86040	2,257	22%	Coconino Region
86044	3,579	100%	Coconino Region
86045	9,653	92%	Coconino Region
86047	4,010	28%	Coconino Region, Navajo/Apache Region
86053	2,025	100%	
86054	1,841	100%	
86502	976	95%	Navajo/Apache Region
86503	9,851	100%	
86504	5,164	100%	
86505	6,605	100%	
86506	1,415	100%	
86507	1,912	100%	
86508	606	100%	
86510	4,795	100%	Coconino Region
86511	3,603	100%	
86512	1,801	84%	Navajo/Apache Region
86514	2,183	100%	

Zip Code Tabulation Area (ZCTA)	Population (all ages)	Percent of this ZCTA's total population living in the Navajo Nation Region	This ZCTA is shared with
86515	2,561	100%	
86520	2,361	100%	
86535	1,051	100%	
86538	2,355	100%	
86540	1,099	100%	
86544	1,060	100%	
86545	1,414	100%	
86547	1,094	100%	
86556	2,398	100%	
87328	178	100%	

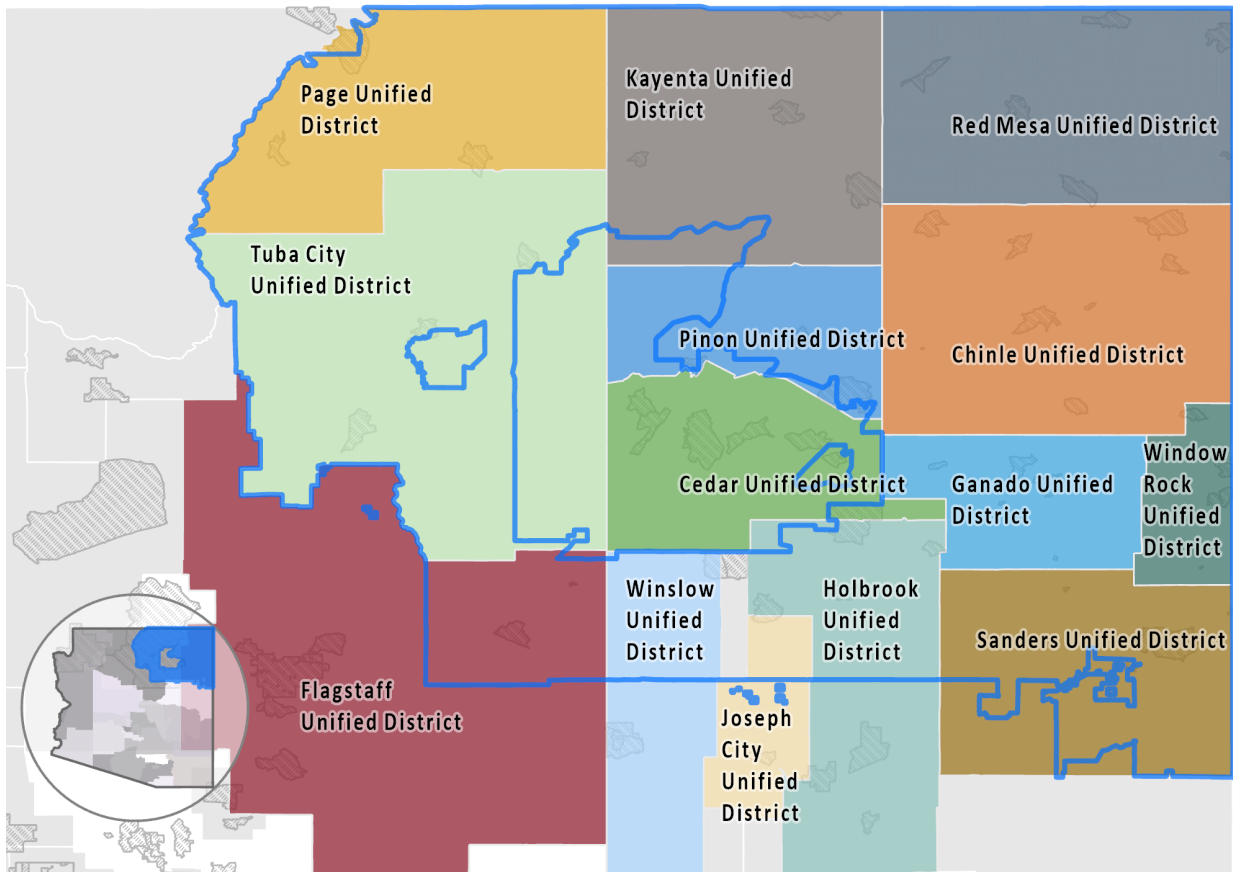
Source: U.S. Census Bureau (2023). 2020 Decennial Census, Demographic and Housing Characteristics, Table P1.

Note: With the implementation of differential privacy in the 2020 Census, small area estimates now have injected 'noise' (error) to prevent accidental disclosure of Census responses. Geographies that are not primary census geographies, like ZCTAs, have noisier (or less accurate) estimates than primary geographies, like tracts.

APPENDIX 4: SCHOOLS AND SCHOOL DISTRICTS OF THE NAVAJO NATION REGION

Figure 59. School Districts in the Navajo Nation Region

Map by Community Research, Evaluation, & Development (CRED) Team, University of Arizona



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/cqi-bin/qeo/shapefiles/index.php>)

Table 77. School Districts and Local Education Agencies (LEAs) in the Navajo Nation Region

Name of District or Local Education Agency (LEA)	Number of schools	Grades Served
Navajo Nation (ADE Schools)	70	PS-12
Cedar Unified District	2	PS-12
Chinle Unified District	8	PS-12
Flagstaff Unified District	1	PS-5
Ganado Unified School District	4	PS-12
Holbrook Unified District	1	PS-6
Kayenta Unified School District #27	4	PS-12
Northeast Arizona Technological Institute of Vocational Education	12	9-12
Pinon Unified District	4	PS-12
Red Mesa Unified District	5	PS-12
Shonto Governing Board of Education, Inc.	1	9-12
Tuba City Unified School District #15	7	PS-12
Window Rock Unified District	7	PS-12
Off-reservation ADE schools serving Navajo Nation students	4	PS-12
Sanders Unified District	2	K-8
Holbrook Unified District	2	K-8
Flagstaff Unified District	2	K-8
Page Unified District	3	K-6
Winslow Unified District	1	K-8

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

Table 78. Navajo Nation students enrolled in schools in Arizona, 2020-21

District	School	Students
Arizona Public Schools- On Navajo Nation		12,022
Cedar Unified District		105
	Jeddito School (K-8)	105
Chinle Unified School District		3,198
	Canyon De Chelly Elementary Sch (K-6)	312
	Chinle Elementary School (PS-6)	492
	Chinle Junior High School (7-8)	314

District	School	Students
	Chinle High School (9-12)	880
	Many Farms Elementary School (K-8)	363
	Mesa View Elementary School (K-6)	371
	Tsaile Elementary School (K-8)	466
Flagstaff Unified School District		152
	Leupp Public School (PS-5)	152
Ganado Unified District		1,297
	Ganado Primary School (PS-2)	235
	Ganado Intermediate School (3-5)	229
	Ganado Middle School (6-8)	361
	Ganado High School (9-12)	472
Holbrook Unified School District		367
	Indian Wells Elementary School (PS-6)	367
Kayenta Unified School District		1,650
	Kayenta Elementary School (PS-4)	533
	Kayenta Middle School (5-8)	472
	Monument Valley High School (9-12)	645
Pinon Unified School District		990
	Pinon Elementary School (PS-5)	414
	Pinon Accelerated Middle School (6-8)	278
	Pinon High School (9-12)	298
Red Mesa Unified School District		420
	Red Mesa Elementary School (K-5)	113
	Red Mesa Junior High School (6-8)	70
	Red Mesa High School (9-12)	163
	Red Valley/Cove High School (9-12)	15
	Round Rock Elementary School (K-8)	59
Sanders Unified School District		645
	Sanders Elementary School (PS-5)	261
	Sanders Middle School (6-8)	171
	Valley High School (9-12)	213
Tuba City Unified School District		1,386
	Dzil Libei Elementary School (K-5)	38
	Nizhoni Accelerated Academy (9-12)	32
	Tsinaabaas Habitiin Elementary School (K-4)	37
	Tuba City Elementary School (PS-5)	431
	Tuba City Junior High School (6-8)	290
	Tuba City High School (9-12)	558
Window Rock Unified School District		1,812
	Integrated Preschool (PS)	27

District	School	Students
	Dine Bi'Olta (Immersion School) (K-6)	97
	Tse'Hootsooi Primary Learning Center (K-3)	403
	Tse'Hootsooi Intrmd. Learning Center (4-6)	350
	Tse'Hootsooi Middle School (7-8)	308
	Window Rock High School (9-12)	627
Arizona Charter Schools- On Navajo Nation		82
	Little Singer Community Junior High School (7-8)	ND
	Shonto Preparatory Technology High School (9-12)	82
Arizona Public Schools- Off Navajo Nation		14,380
Flagstaff Unified School District		8,785
	Charles W Sechrist Elementary School (PS-5)	404
	Coconino High School (9-12)	1,344
	Eva Marshall Elementary School (K-5)	437
	Flagstaff High School (9-12)	1,573
	John Q Thomas Elementary School (PS-5)	345
	Lura Kinsey Elementary School (PS-5)	334
	Manuel DeMiguel Elementary School (PS-5)	551
	Mount Elden Middle School (6-8)	779
	Northern Arizona Distance Learning (8-12)	177
	Sinagua Middle School (6-8)	1,102
	Sturgeon Cromer Elementary School (PS-5)	412
	Summit High School (9-12)	102
	Thomas M Knoles Elementary School (PS-5)	465
	W F Killip Elementary School (PS-5)	366
	Weitzel's Puentedehozho Bilngl Magnet School (K-5)	394
Holbrook Unified School District		1,468
	Holbrook Junior High School (6-8)	392
	Holbrook High School (9-12)	630
	Hulet Elementary School (PS, 2-5)	308
	Park Elementary School (K-1)	138
Page Unified School District		2,290
	Desert View Elementary School (PS, 3-5)	528
	Lake View Elementary School (K-2)	465
	Manson Mesa High School (9-12)	24
	Page Middle School (6-8)	530
	Page High School	743
Winslow Unified School District		1,837
	Bonnie Brennan School (PS-K; 3-4)	359
	Jefferson Elementary School (1-2)	274
	Washington School (5-6)	254

District	School	Students
	Winslow Junior High School (7-8)	336
	Winslow High School (9-12)	614
BIE & Grant Schools on Navajo Nation		6,040
Arizona Navajo Central		2,011
Grant	Black Mesa Community School (K-8)	68
BIE	Cottonwood Day School (K-8)	176
BIE	Jeehdeez'a Academy, Inc (K-5)	122
Grant	Lukachukai Community School (K-8)	269
Grant	Many Farms Community School (K-8)	252
BIE	Many Farms High School (9-12)	374
Grant	Nazlini Community School (K-6)	187
Grant	Pinon Community School (K)	27
Grant	Rock Point Community School (K-12)	397
Grant	Rough Rock Community School (K-12)	139
Arizona Navajo North		3,150
Grant	Chilchinbeto Community School (K-8)	110
BIE	Dennehotso Boarding School (K-8)	156
Grant	Greyhills Academy High School (9-12)	201
BIE	Kaibeto Boarding School (K-8)	227
BIE	Kayenta Community School (K-8)	303
Grant	Leupp Schools, Inc. (K-12)	118
Grant	Little Singer Community School (K-6)	211
Grant	Naa Tsis Aan Community School (K-8)	81
BIE	Rocky Ridge Boarding School (K-8)	94
Grant	Shonto Preparatory School (K-8)	315
BIE	Tonalea Day School (K-8)	148
BIE	Tuba City Boarding School (K-8)	1,186
Arizona Navajo South		879
BIE	Crystal Boarding School (K-6)	90
Grant	Dilcon Community School (K-8)	152
Grant	Greasewood Springs Comm Sch (K-8)	172
Grant	Hunters Point Boarding School (K-5)	113
Grant	Kin Dah Lich'i Olta (K-6)	159
BIE	Pine Springs Day School (K-4)	50
BIE	Seba Dalkai Boarding School (K-8)	79
Grant	Wide Ruins Community School (K-6)	64
Off Navajo Nation Residential Halls		97
	Tiisyaakin Residential Hall (Holbrook)	25
	Winslow Residential Hall	72

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 79. Navajo Nation students enrolled in districts in Arizona, 2020-21

District	Students
Total students in school in Arizona	32,621
Arizona Public Schools- On Navajo Nation	12,022
Cedar Unified District	105
Chinle Unified School District	3,198
Flagstaff Unified School District	152
Ganado Unified District	1,297
Holbrook Unified School District	367
Kayenta Unified School District	1,650
Pinon Unified School District	990
Red Mesa Unified School District	420
Sanders Unified School District	645
Tuba City Unified School District	1,386
Window Rock Unified School District	1,812
Arizona Charter Schools- On Navajo Nation	82
Little Singer Community Junior High School (7-8)	ND
Shonto Preparatory Technology High School (9-12)	82
Arizona Public Schools- Off Navajo Nation	14,380
Flagstaff Unified School District	8,785
Holbrook Unified School District	1,468
Page Unified School District	2,290
Winslow Unified School District	1,837
BIE & Grant Schools on Navajo Nation in Arizona	6,040
Arizona Navajo Central	2,011
Arizona Navajo North	3,150
Arizona Navajo South	879
Off Navajo Nation Residential Halls in Arizona	97

Source: First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

Table 80. Students enrolled in BIE schools, 2018-19 to 2020-21

School Name	2018-19	2019-20	2020-21	Change 2018-19 to 2020-21
Total Navajo Nation BIE Schools	7,055	6,594	6,031	-15%
Aneth Community School (K-6)	145	132	129	-11%
Baca/Dlo'ay Azhi Community School (K-6)	314	320	250	-20%
Beclabito Day School (K-4)	55	48	47	-15%
Bread Springs Day School (K-3)	117	104	172	+47%
Chi'chil'tah Community School (K-8)	127	101	88	-31%
Cottonwood Day School (K-8)	194	188	176	-9%
Cove Day School (K-6)	40	44	80	+100%
Crystal Boarding School (K-6)	133	124	90	-32%
Dennehotso Boarding School (K-8)	186	165	156	-16%
Jeehdeez'a Academy, Inc. (K-5)	142	132	122	-14%
Kaibeto Boarding School (K-8)	261	261	227	-13%
Kayenta Community School (K-8)	392	342	303	-23%
Lake Valley Navajo School (K-8)	57	37	28	-51%
Many Farms High School (9-12)	386	360	374	-3%
Mariano Lake Community School (K-6)	161	138	111	-31%
Nenahnezad Community School (K-6)	210	205	159	-24%
Ojo Encino Day School (K-8)	180	182	138	-23%
Pine Springs Day School (K-4)	69	65	50	-28%
Pueblo Pintado Community School (K-8)	211	204	148	-30%
Red Rock Day School (K-8)	155	126	114	-26%
Rocky Ridge Boarding School (K-8)	106	95	94	-11%
Sanostee Day School (K-3)	53	34	37	-30%
Seba Dalkai Boarding School K-8)	79	80	79	0%
T'iis Nazbas Community School (K-8)	157	140	119	-24%
Tiists'oozi'bi'olta Community School (K-8)	392	355	308	-21%
Tohaali' Community School (K-8)	115	108	88	-23%
Tonalea Day School (K-8)	204	161	148	-27%
Tse'ii'ahi Community School (K-4)	114	113	118	+4%
Tuba City Boarding School (K-8)	1,346	1,320	1,186	-12%
Wingate Elementary School (K-8)	490	485	548	+12%
Wingate High School (9-12)	464	425	344	-26%

Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>

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/>
- Source: First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.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 Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ³⁶ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ³⁷ 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>
- ³⁸ McCarty, T.L. (2021). The holistic benefits of education for Indigenous language revitalisation and reclamation (ELR²). *Journal of Multilingual and Multicultural Development*, 42(10), 927-940. <https://doi.org/10.1080/01434632.2020.1827647>
- ³⁹ 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>
- ⁴⁰ 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>
- ⁴¹ 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>
- ⁴² 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/>
- ⁴³ 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>
- ⁴⁴ 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>
- ⁴⁵ 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>
- ⁴⁶ 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>
- ⁴⁷ 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>
- ⁴⁸ 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>
- ⁴⁹ 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>

-
- ⁵⁰ 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>
- ⁵¹ 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/>
- ⁵² 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>
- ⁵³ 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>
- ⁵⁴ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the educational success of children and youth learning English: Promising futures* (R. Takanishi, & S. Le, Eds.). The National Academies Press. <https://doi.org/10.17226/24677>
- ⁵⁵ National Academies of Sciences, Engineering, and Medicine. (2016). *Parenting matters: Supporting parents of children ages 0-8* (V. L. Gadsen, M. Ford, & H. Breiner, Eds.). The National Academies Press. <https://doi.org/10.17226/21868>
- ⁵⁶ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ⁵⁷ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ⁵⁸ 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>
- ⁵⁹ 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>
- ⁶⁰ 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>
- ⁶¹ 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>
- ⁶² 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>
- ⁶³ 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>
- ⁶⁴ 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>
- ⁶⁵ 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>
- ⁶⁶ 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>

-
- ⁶⁷ 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
- ⁶⁸ 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>
- ⁶⁹ 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>
- ⁷⁰ 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>
- ⁷¹ 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>
- ⁷² 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>
- ⁷³ 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/>
- ⁷⁴ 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/>
- ⁷⁵ 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>
- ⁷⁶ 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>
- ⁷⁷ 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>
- ⁷⁸ 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>
- ⁷⁹ 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>
- ⁸⁰ 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/>
- ⁸¹ Vandivere, S., Yrausquin, A., Allen, T., Malm, K., & McKlinton, 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>
- ⁸² 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>

-
- ⁸³ 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
- ⁸⁴ 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>
- ⁸⁵ 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/>
- ⁸⁶ 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>
- ⁸⁷ 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
- ⁸⁸ Red Horse, J. (1997). Traditional American Indian family systems. *Families, Systems, & Health*, 15(3), 243-250. <https://doi.org/10.1037/h0089828>
- ⁸⁹ 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>
- ⁹⁰ 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>
- ⁹¹ 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>
- ⁹² 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>
- ⁹³ 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>
- ⁹⁴ 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>
- ⁹⁵ 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>
- ⁹⁶ 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>
- ⁹⁷ 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>
- ⁹⁸ 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/>

-
- ⁹⁹ 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>
- ¹⁰⁰ National Academies of Sciences, Engineering, and Medicine (2023). *Reducing intergenerational poverty*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27058>
- ¹⁰¹ 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>
- ¹⁰² 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>
- ¹⁰³ 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
- ¹⁰⁴ Ibid.
- ¹⁰⁵ 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>
- ¹⁰⁶ 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>
- ¹⁰⁷ 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>
- ¹⁰⁸ 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>
- ¹⁰⁹ McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204. <https://doi.org/10.1037/0003-066X.53.2.185>
- ¹¹⁰ 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>
- ¹¹¹ 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>
- ¹¹² 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>
- ¹¹³ 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](https://doi.org/10.1016/S2352-4642(17)30024-X)
- ¹¹⁴ 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>
- ¹¹⁵ 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>
- ¹¹⁶ 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>

-
- ¹¹⁷ 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>
- ¹¹⁸ 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>
- ¹¹⁹ 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>
- ¹²⁰ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹²¹ 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/>
- ¹²² 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>
- ¹²³ Baer, T. E., Scherer, E. A., Flegler, 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>
- ¹²⁴ 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>
- ¹²⁵ 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>
- ¹²⁶ 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>
- ¹²⁷ 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>
- ¹²⁸ 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>
- ¹²⁹ 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
- ¹³⁰ 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/25wifavgfd-costs-12.pdf>
- ¹³¹ 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>
- ¹³² 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>

-
- ¹³³ Arizona Department of Education. (2021, June 14). *Introduction to the CACFP* [Video]. Vimeo. <https://vimeo.com/562872764>
- ¹³⁴ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹³⁵ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹³⁶ 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>
- ¹³⁷ 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>
- ¹³⁸ 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>
- ¹³⁹ National Center for Children in Poverty. (2014). *Arizona demographics for low-income children*. Retrieved September 20, 2023 from http://www.nccp.org/profiles/AZ_profile_6.html
- ¹⁴⁰ 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>
- ¹⁴¹ 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>
- ¹⁴² 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>
- ¹⁴³ 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.](https://ascend.aspeninstitute.org/2gen-approach/#:~:text=Two%2Dgeneration%20(2Gen)%20approaches,one%20generation%20to%20the%20next.)
- ¹⁴⁴ 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>
- ¹⁴⁵ 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>
- ¹⁴⁶ 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>
- ¹⁴⁷ 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>
- ¹⁴⁸ 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>

-
- ¹⁴⁹ 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>
- ¹⁵⁰ 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
- ¹⁵¹ 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>
- ¹⁵² 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>.
- ¹⁵³ 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>
- ¹⁵⁴ Kunes, 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>
- ¹⁵⁵ 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>
- ¹⁵⁶ 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>
- ¹⁵⁷ 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/>
- ¹⁵⁸ 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>
- ¹⁵⁹ 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>
- ¹⁶⁰ 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>
- ¹⁶¹ 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
- ¹⁶² 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>

-
- ¹⁶³ National Research Council. (2012). *Key national education indicators: Workshop summary*. The National Academies Press. <https://doi.org/10.17226/13453>
- ¹⁶⁴ 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>
- ¹⁶⁵ 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>
- ¹⁶⁶ 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
- ¹⁶⁷ 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
- ¹⁶⁸ 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>
- ¹⁶⁹ 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>
- 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 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>
- ¹⁷² 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>
- ¹⁷³ 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>
- ¹⁷⁴ 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>
- ¹⁷⁵ 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>
- ¹⁷⁶ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹⁷⁷ Arizona Department of Education. (n.d.). *Assessments*. Retrieved August 20, 2021 from <https://www.azed.gov/assessment>
- ¹⁷⁸ 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/>

-
- ¹⁷⁹ Arizona Department of Education. (2023). *Move on when reading*. Retrieved July 27, 2023 from <http://www.azed.gov/mowr/>
- ¹⁸⁰ 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>
- ¹⁸¹ 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>
- ¹⁸² 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>
- ¹⁸³ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹⁸⁴ Bureau of Indian Education (2020, March 26). Assistant Secretary Sweeney announces BIE’s approved standards, assessments and accountability system. Retrieved from <https://www.bia.gov/as-ia/opa/online-press-release/assistant-secretary-sweeney-announces-bies-approved-standards>
- ¹⁸⁵ Bureau of Indian Education (2022). MyPearson. Retrieved from <https://bie.mypearsonsupport.com/>
- ¹⁸⁶ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ¹⁸⁷ 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>
- ¹⁸⁸ 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>
- ¹⁸⁹ 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>
- ¹⁹⁰ 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>
- ¹⁹¹ 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>
- ¹⁹² 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>
- ¹⁹³ 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>
- ¹⁹⁴ 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>
- ¹⁹⁵ 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>
- ¹⁹⁶ 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.wpenginpowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf

-
- ¹⁹⁷ 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.wpenginpowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf
- ¹⁹⁸ 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>
- ¹⁹⁹ 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.wpenginpowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf
- ²⁰⁰ 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.wpenginpowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf
- ²⁰¹ 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>.
- ²⁰² 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>
- ²⁰³ 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.wpenginpowered.com/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-4.pdf
- ²⁰⁴ 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.wpenginpowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf
- ²⁰⁵ 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>
- ²⁰⁶ Ibid.
- ²⁰⁷ 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.wpenginpowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf
- ²⁰⁸ 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>
- ²⁰⁹ Ibid.
- ²¹⁰ 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>

-
- ²¹¹ 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/>
- ²¹² 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>
- ²¹³ 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/>
- ²¹⁴ 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>
- ²¹⁵ 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>
- ²¹⁶ 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
- ²¹⁷ Center for American Progress. (2018). *Child care access in Arizona*. Retrieved October 12, 2023 from <https://childcaredeserts.org/2018/>
- ²¹⁸ 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
- ²¹⁹ 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>
- ²²⁰ 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>
- ²²¹ National Low Income Housing Coalition. (2021). *Out of Reach 2021 – Arizona*. Retrieved September 7, 2021 from <https://reports.nlihc.org/sites/default/files/orr/files/reports/state/az-2021-orr.pdf>
- ²²² 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>
- ²²³ Arizona Department of Economic Security. (n.d.). *Child care*. Retrieved October 12, 2023 from <https://des.az.gov/services/child-and-family/child-care>
- ²²⁴ 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>
- ²²⁵ 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>

-
- ²²⁶ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ²²⁷ Navajo Head Start (2022). 2021-2022 Annual Report. Retrieved from <https://www.navajohs.com/wp-content/uploads/2022/12/NHS-2021-2022-Annual-Report-FINAL.pdf>
- ²²⁸ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ²²⁹ Ibid.
- ²³⁰ Ibid.
- ²³¹ Ibid.
- ²³² Ibid.
- ²³³ 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>
- ²³⁴ 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
- ²³⁵ 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
- ²³⁶ 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.wpenginpowered.com/wp-content/uploads/2020/06/wp15_health_FINALv2.pdf
- ²³⁷ 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>
- ²³⁸ First Things First. (n.d.). *About Quality First*. Retrieved October 12, 2023 from <https://www.firstthingsfirst.org/resources/quality-first/about-quality-first/>
- ²³⁹ First Things First. (n.d.). *About Quality First*. Retrieved October 12, 2023 from <https://www.firstthingsfirst.org/resources/quality-first/about-quality-first/>
- ²⁴⁰ First Things First (2024) [Quality First Data Center]. Accessed at <https://datacenter.azftf.gov/quality-first>
- ²⁴¹ 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>
- ²⁴² 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>
- ²⁴³ 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>

-
- ²⁴⁴ 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>
- ²⁴⁵ Arizona Department of Economic Security. (n.d.). *Arizona early intervention program*. Retrieved October 12, 2023 from <https://des.az.gov/AzEIP/>
- ²⁴⁶ 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>
- ²⁴⁷ Arizona Department of Economic Security. (n.d.). *Developmental disabilities*. Retrieved October 12, 2023 from <https://des.az.gov/ddd/>
- ²⁴⁸ 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>
- ²⁴⁹ 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>
- ²⁵⁰ 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.>
- ²⁵¹ 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>
- ²⁵² *First Things First* (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ²⁵³ 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
- ²⁵⁴ 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
- ²⁵⁵ 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>
- ²⁵⁶ 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
- ²⁵⁷ 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.wpenginpowered.com/wp-content/uploads/2020/10/2020_WP15_actionguide_FINAL.pdf
- ²⁵⁸ 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>

-
- ²⁵⁹ 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>
- ²⁶⁰ 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/>
- ²⁶¹ 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>
- ²⁶² 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>
- ²⁶³ 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>
- ²⁶⁴ 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/>
- ²⁶⁵ 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>
- ²⁶⁶ 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/>
- ²⁶⁷ Ibid.
- ²⁶⁸ 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#PreconceptionHealthCare>
- ²⁶⁹ 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>
- ²⁷⁰ Partridge, S., Balayla, J., Holcroft, C. A., & Abenheim, 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>
- ²⁷¹ 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>
- ²⁷² 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
- ²⁷³ 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®=04&sreg=04&obj=9&slev=4>

-
- ²⁷⁴ 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®=04&sreg=04&obj=9&slev=4>
- ²⁷⁵ 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®=04&sreg=04&obj=9&slev=4>
- ²⁷⁶ 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>
- ²⁷⁷ 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>
- ²⁷⁸ 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/>
- ²⁷⁹ 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>
- ²⁸⁰ 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>
- ²⁸¹ 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
- ²⁸² 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>
- ²⁸³ 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 Indians 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>
- ²⁸⁴ *First Things First* (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ²⁸⁵ 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/>
- ²⁸⁶ 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>
- ²⁸⁷ 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>
- ²⁸⁸ Youth.gov. (2016). *Pregnancy prevention: Adverse effects*. Retrieved September 10, 2021 from <http://youth.gov/youth-topics/teen-pregnancy-prevention/adverse-effects-teen-pregnancy>
- ²⁸⁹ 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>

-
- ²⁹⁰ 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>
- ²⁹¹ 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
- ²⁹² 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>
- ²⁹³ 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>
- ²⁹⁴ 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>
- ²⁹⁵ 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>
- ²⁹⁶ 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>
- ²⁹⁷ Daneshmand, S. S., Stortz, S., Morrissey, 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>
- ²⁹⁸ 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>
- ²⁹⁹ 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>
- ³⁰⁰ 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](https://doi.org/10.1016/S2213-8587(16)30107-3)
- ³⁰¹ 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>
- ³⁰² 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>
- ³⁰³ 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>
- ³⁰⁴ 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](https://marchofdimes.org/sites/default/files/2022-10/2022%20Maternity%20Care%20Report.pdf?mc_cid=87ad97824f&mc_eid=UNIQID)
- ³⁰⁵ Ibid.

-
- ³⁰⁶ 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>
- ³⁰⁷ 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>
- ³⁰⁸ 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>
- ³⁰⁹ 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>
- ³¹⁰ 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>
- ³¹¹ 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>
- ³¹² Ibid.
- ³¹³ 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>
- ³¹⁴ Ibid.
- ³¹⁵ 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>
- ³¹⁶ 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>
- ³¹⁷ 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>
- ³¹⁸ 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>
- ³¹⁹ 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>

-
- ³²⁰ 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>
- ³²¹ 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>
- ³²² 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>
- ³²³ 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>
- ³²⁴ March of Dimes. (2021, June). *Low birthweight*. Retrieved August 8, 2023 from <https://www.marchofdimes.org/find-support/topics/birth/low-birthweight>
- ³²⁵ 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>
- ³²⁶ 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>
- ³²⁷ 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>
- ³²⁸ 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>
- ³²⁹ 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>
- ³³⁰ 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>
- ³³¹ 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/>
- ³³² 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/>
- ³³³ 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>
- ³³⁴ 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>
- ³³⁵ 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>
- ³³⁶ 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/>

-
- ³³⁷ 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>
- ³³⁸ 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>
- ³³⁹ 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>
- ³⁴⁰ 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>
- ³⁴¹ 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>
- ³⁴² 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>
- ³⁴³ 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>
- ³⁴⁴ 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>
- ³⁴⁵ Ibid.
- ³⁴⁶ 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>
- ³⁴⁷ 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>
- ³⁴⁸ 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>
- ³⁴⁹ 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>
- ³⁵⁰ 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>
- ³⁵¹ 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>
- ³⁵² 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/>

-
- ³⁵³ 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>
- ³⁵⁴ 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>
- ³⁵⁵ 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>
- ³⁵⁶ 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>
- ³⁵⁷ 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>
- ³⁵⁸ Evans, G., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43-48. <https://doi.org/10.1111/cdep.12013>
- ³⁵⁹ 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>
- ³⁶⁰ 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>
- ³⁶¹ 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
- ³⁶² 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>
- ³⁶³ 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>
- ³⁶⁴ 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>
- ³⁶⁵ 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>
- ³⁶⁶ Ibid.
- ³⁶⁷ 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

-
- ³⁶⁸ 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>
- ³⁶⁹ 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-ecls-k>
- ³⁷⁰ Ibid.
- ³⁷¹ Ibid.
- ³⁷² 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>
- ³⁷³ 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>
- ³⁷⁴ Reach Out and Read. (n.d.). *Programs near you*. Retrieved February 5, 2024 from <http://www.reachoutandread.org>
- ³⁷⁵ First Things First (2022). *First Things First Navajo Nation Regional Needs and Assets Report*. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ³⁷⁶ U.S. Department of Health and Human Services, Office of Early Childhood Development (2024). *Growing in Beauty sees programs and families prosper through continuous quality improvement*. Retrieved from <https://www.acf.hhs.gov/eod/success-story/growing-beauty-sees-program-and-families-prosper-through-continuous-quality>
- ³⁷⁷ 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>
- ³⁷⁸ Smith, V., & Wilson. R. (2016). Families affected by parental substance use. *Pediatrics*, 138(2). <https://doi.org/10.1542/peds.2016-1575>
- ³⁷⁹ 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>
- ³⁸⁰ Smith, V., & Wilson. R. (2016). Families affected by parental substance use. *Pediatrics*, 138(2). <https://doi.org/10.1542/peds.2016-1575>
- ³⁸¹ 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://cwip-prod-prod-drupal-s3fs-us-east-1.s3.amazonaws.com/public/documents/icwa.pdf?VersionId=7yuNb.FbjYhQIyZp2QWJ768uU0UEzamk>
- ³⁸² 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>
- ³⁸³ 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://cwip-prod-prod-drupal-s3fs-us-east-1.s3.amazonaws.com/public/documents/icwa.pdf?VersionId=7yuNb.FbjYhQIyZp2QWJ768uU0UEzamk>
- ³⁸⁴ 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>
- ³⁸⁵ United States Supreme Court. (2023). *Haaland v. Brackeen*, 599 U.S. Retrieved February 5, 2024 from https://www.supremecourt.gov/opinions/22pdf/21-376_7148.pdf

-
- ³⁸⁶ 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/>
- ³⁸⁷ 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>
- ³⁸⁸ 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>
- ³⁸⁹ 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>
- ³⁹⁰ First Things First (2022). First Things First Navajo Nation Regional Needs and Assets Report. Retrieved from <https://files.firstthingsfirst.org/regions/Publications/2022%20RNA%20NAVAJO%20NATION%20FINAL.pdf>
- ³⁹¹ Ibid.
- ³⁹² Ibid.
- ³⁹³ Ibid
- ³⁹⁴ U.S. Census Bureau. (May, 2000). Factfinder for the Nation. Retrieved from <http://www.census.gov/history/pdf/cff4.pdf>
- ³⁹⁵ 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