

Child Care Deserts

An Analysis of Child Care Supply and Demand Gaps in Montana

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Executive Summary

Access to child care is essential to a healthy economy, allowing parents of young children to engage in the labor force and preparing the state's future workforce through high-quality early childhood education. Despite the state's reliance on child care to meet workforce needs, Montana parents and businesses have suffered from a lack of access to care. In 2023, more than 66,000 Montana parents were unable to fully engage with the labor force due to family responsibilities and a lack of childcare.ⁱ

Accurate and consistent reporting on the magnitude of the gap between the supply and demand for child care is essential to understanding the severity of the shortage, and to measuring the state's success in closing this gap. This paper provides a consistent definition of child care supply and demand in the state, and therefore; a measure of the gap between the two. The definitions of child care supply and demand, and the gap analysis presented is intended to reflect the existing best practices and most current methodology. This report will be updated as new information becomes available.

Highlights include:

- Total childcare capacity exceeded 20,600 in 2023, growing by approximately 8% over the year and translating to more than 1,500 additional slots. Only licensed child care providers and some Family, Friend, and Neighbor (FFN) caregivers are considered a part of child care supply in Montana. Licensed capacity is used to estimate the number of children each provider serves.
- The potential demand for child care is defined as the number of children under age six who live in households where all available parents are in the labor force. In 2023, more than 46,000 children under six lived in working parent households and potentially needed care.
- To measure the gap between the supply and demand for child care, the licensed child care capacity is expressed as a percentage of estimated demand. **Montana's total child care capacity met 44% of estimated demand and infant capacity met 32% of estimated demand in 2023 – up slightly from a year prior.**
- Sub-state analysis demonstrates the prevalence of the child care shortage throughout the state, with licensed capacity undersupplying potential demand in every county. The most significant unmet demand occurs in the more rural areas of the state. County-level analysis provides the most consistent and easily accessible information on sub-state area gaps in child care supply and demand, despite limitations.
- A child care desert is defined as any geographic area where child care supply meets less than a third of the potential demand. Nearly 60% of Montana's counties are classified as child care deserts, including four counties without a single licensed provider. Approximately 30% of children under age six live in a county designated as a child care desert.

Using the definitions and analysis presented here provides policymakers with the most updated and comprehensive understanding of the magnitude of the child care shortage and how the unmet need for child care varies across the state. Improving access to child care for Montana families and creating equitable access to high-quality affordable child care will help ensure that Montana parents can fully engage in the labor force and the state's economy can continue to grow.

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Introduction

The lack of affordable, high-quality child care in Montana has prevented many parents from fully participating in the labor force, thus further exacerbating the state’s workforce shortage. In 2023, an estimated 66,000 Montana parents were unable to fully engage in the workforce due to family responsibilities and a lack of childcare. Accurate and consistent reporting on the magnitude of the gap between the supply and demand for child care is essential to understanding the severity of the shortage, and to measuring the state’s success in closing this gap.

Recognizing the importance of accurate and consistent reporting on the state’s child care needs, early childhood education (ECE) researchers from various state agencies and external stakeholders have coalesced around a single methodology to measure the severity of the child care shortage in Montana. The methodology presented in this report reflects the most current research adopted by state agencies and ECE researchers to measure the child care gap in Montana and will be updated as more information becomes available. The analysis that follows details the methodology, assumptions, and limitations of the child care gap analysis.

Supply of Child Care

In Montana, child care comes in a variety of forms. Large licensed centers, small family and group home settings, neighbors or close family friends, before and after school care, summer camps, and nannies are all examples of child care. While all these forms of child care provide important supports for Montana families and the economy, only licensed child care providers and some Family, Friend, and Neighbor (FFN) caregivers are considered a part of child care supply for this analysis due to data availability.ⁱⁱ

Provider Types Included

Licensed Family, Group, and Center-based providers are included in child care supply, as well as relative care and FFN caregivers receiving state assistance. Relative care exempt (RCE) is narrowly defined as individuals caring for close relatives, such as a brother, sister, nephew, niece, grandchild, or great grandchild. The table below provides detailed information on the capacity limits for each provider type, as well as the prevalence of each type in Montana.

Figure 1. Child Care Provider Capacity by Type in 2023

Provider Type	Total Capacity	Infant Capacity	Percent of Providers	Percent of Capacity
Centers	16 or more	Up to 12	29%	67%
Group	9 to 15	Up to 6	38%	25%
Family	3 to 8	Up to 3	19%	6%
Family, Friend and Neighbor (FFN)	Up to 4	NA	5%	<1%
Relative Care Exempt (RCE)	Up to 2	NA	9%	1%

Source: DPHHS CCUBS database as of 12/23. RCE and FFN total capacity based on the number of children from different families or sibling sets. RCE and FFN providers do not have total capacity limits for children within the same sibling set. NA = Not applicable because age limits are not placed on FFN or RCE providers. Provider capacity by type defined in 52-2-703 MCA.

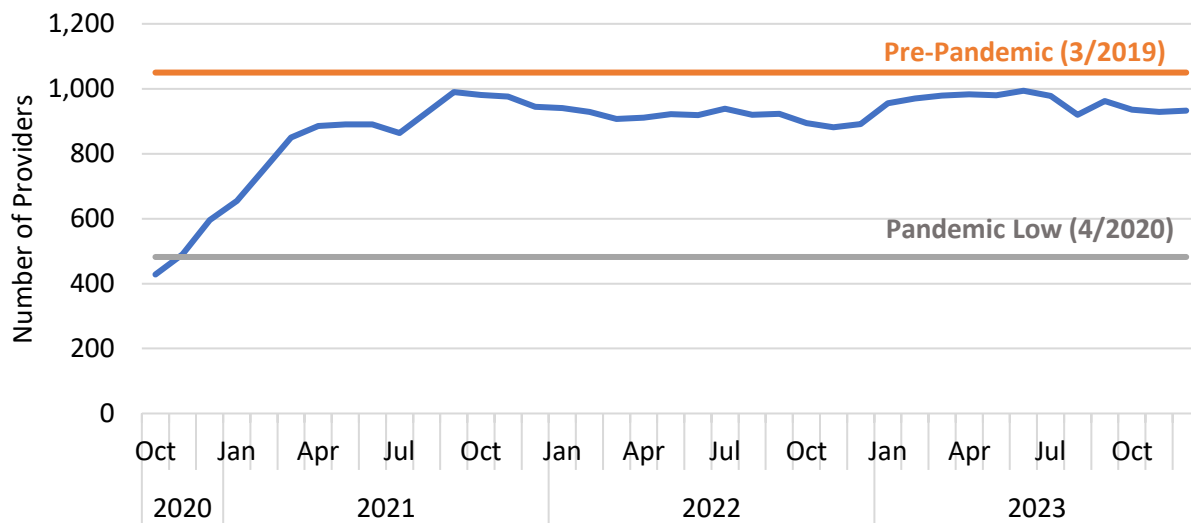
The child care supply used in these calculations doesn't include capacity for child care and early education programs not required to be licensed with the state. Head Start provides preschool to children under age 5. Not all Head Start programs in Montana are licensed with the state, and Head Start is only included in the child care supply if the program is licensed. Additionally, some programs may be licensed or registered with a tribal nation located within Montana. Capacity for these programs is also not included in the child care supply.

Legally operating unlicensed care is an important element of child care supply, especially in rural communities and communities with a significant shortage of licensed child care. However, data on unlicensed care is very limited because it is not tracked through the child care licensing database. Therefore, this type of unlicensed care is not included in child care supply. Illegal unlicensed care may be cause for concern. When a child care business is licensed, parents can have reasonable assurance that certain health and safety criteria are met and monitored by the state.

Out-of-school time care, including after school care is delivered in a variety of ways and is currently exempt from child care licensing regulations. This includes after school care offered through public schools, Boys and Girls Clubs, YMCA programs, and youth centers. Legally operating unlicensed school-age care is not included in this analysis of child care supply. Although after-school and summer child care are important supports for families with school-age children, the focus of this analysis is on how licensed child care meets the estimated demand. Child care programs licensed by the Montana Department of Public Health and Human Services (DPHHS) may include school age children in their programs as well. A licensed facility may choose to serve children up to age 13.ⁱⁱⁱ

Only providers located in Montana, and those with an active license/certification are included in child care supply. Figure 2 shows the number of licensed providers in the state over the last three years relative to pre-pandemic levels, as well as to the height of pandemic-related closures in April 2020. In 2023 there were an average of 960 childcare providers located throughout the state, which falls slightly below pre-pandemic levels.

Figure 2. Number of Licensed Child Care Providers in Montana Over-Time



Source: MTDLI analysis of child care licensing data provided by MT DPHHS.

Number of Children per Provider

Licensed capacity is used to estimate the number of children served by each provider. A provider may care for more total children than their license capacity if they offer part-time care but may not exceed their capacity in the facility at one time. The actual number of children served by each facility can vary daily depending on staff availability, parental preferences, public health guidelines, among other things. Capturing the actual number of enrolled children served by each provider is not possible within the existing data systems. Therefore, licensed capacity is used as a proxy.

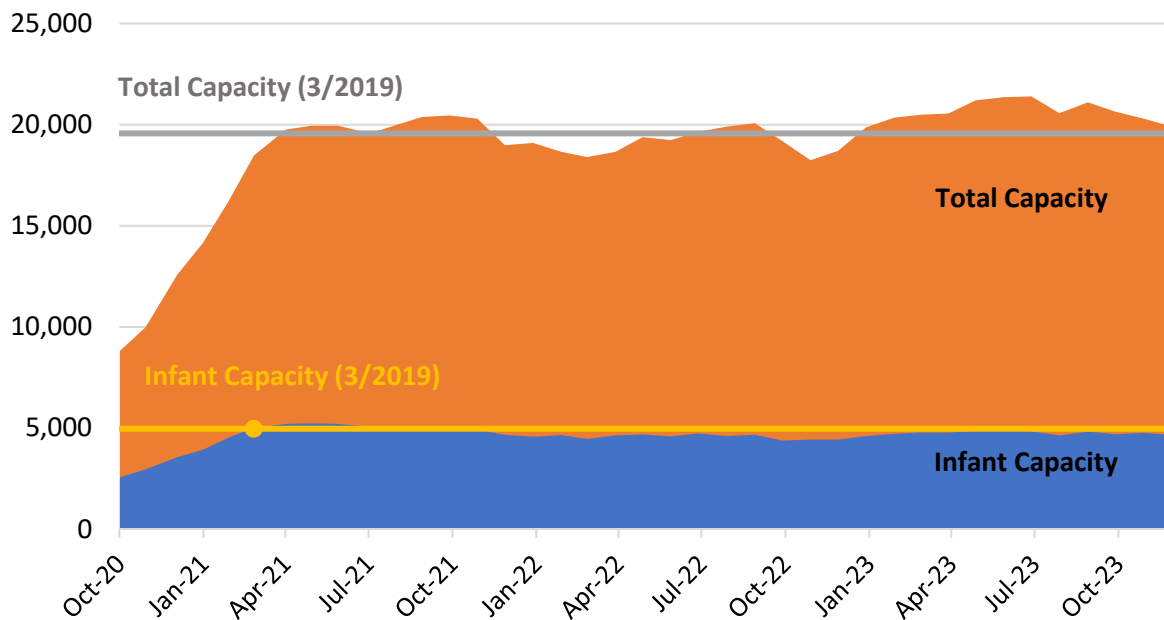
Within the total licensed capacity of a facility, a child care provider may be licensed to care for a certain number of infants/toddlers. Children under the age of 19 months must be cared for by a provider who is licensed to care for infants/toddlers.^{iv} Infant capacity is a subset of the total capacity of the child care provider and varies by provider type, as shown in Figure 1. The supply of infant child care is calculated as a subset of the total supply of child care in Montana.

Licensed Child Care Capacity – the number of children the facility is licensed to serve at one time.

Number of Children Enrolled – The total number of children who are served by a single facility. Differs from licensed capacity due to part-time care, staff availability, parental preference, or public health guidelines.

Figure 3 shows the change in both total child care capacity and infant capacity in Montana over the last three years relative to pre-pandemic levels. By March 2021, total and infant capacity reached pre-pandemic levels seen two years prior. Total childcare capacity grew by approximately 8% in 2023, adding over 1,500 licensed childcare slots across the state.

Figure 3. Licensed Child Care Capacity in Montana Over-Time



Source: MTDLI analysis of child care licensing data provided by MT DPHHS. Capacity refers to number of children the facility is licensed to care for at one time. Infant refers to children under 19 months old.

The total capacity and infant capacity data are provided monthly from MT DPHHS child care licensing database. Annual capacity is calculated as the 12-month average to reflect the capacity over a given time-period instead of a point-in-time estimate. Total childcare capacity exceeded 20,600 slots in 2023. Infant capacity averaged 4,700 slots at licensed Montana childcare facilities in 2023.

Demand for Child Care

Many Montana parents rely on some form of child care to engage in the workforce before their children are school-age. However, the actual demand for licensed child care in Montana is difficult to measure. For example, not all working families need child care due to their preferences, work schedule, or access to other caregivers. This analysis uses the potential child care demand from working families as a proxy for actual child care demand. The potential demand for child care is defined as **the number of children under age six who live in households where all available parents are in the labor force.**^v When there is adequate licensed child care supply to meet potential demand, then parents can choose the type of care that fits their needs, rather than having that choice determined by cost or availability.

Actual Demand for Child Care – The number of children whose parents would like them to attend a licensed child care facility.

Potential Demand for Child Care – The number of children under age six who live in households where all available parents are in the labor force.

The actual demand for child care extends beyond just children living in households with all available parents working. Approximately 10% of people who are not in the workforce cite family responsibilities as the reason they are not looking for work.^{vi} Some of these individuals would likely enter the labor force if they had access to child care. Additionally, families who have chosen to have a parent stay home as a full-time caregiver may still need some level of child care, even on a part-time basis. This estimate of potential demand for child care also only captures children under age six; however, school-age children may also need child care before or after-school and during the summer.

While access to high-quality child care benefits the state’s workforce, it also provides benefits to children and families. Parents who choose voluntarily to exit the labor force to care for their children may still prefer that their children attend a child care facility to experience the benefits of a structured learning environment. Access to high-quality early childhood education promotes the development of key social-emotional skills, which supports a child’s ability to continuously engage in learning environments, manage their own behaviors, and get along well with others.^{vii}

An alternative measure of child care demand is the total number of children under age six, which captures the total number of children who could potentially need child care. Using total population as an estimate of demand overcomes the limitation that more parents may work if child care was more accessible. However, not all families need or choose to use child care due to their own circumstances. Using the total population of children under age six as an estimate of child care demand would likely overestimate the actual demand for child care.

Methodology and Data Sources

The potential demand for child care in Montana is estimated using data from the American Community Survey (ACS) and Population Estimates Program (PEP) produced by the U.S. Census Bureau. The ACS estimates the number of children under six years old living in households where all available parents are in the labor force. These data are available for all counties in Montana using 5-year estimates, which use survey responses collected over a span of five years.^{viii}

The U.S. Census Bureau's Population Estimates Program (PEP) are used to adjust the ACS 5-year estimates to reflect the most recent population counts. The PEP data is available by single year of age and can be used to calculate the population under age six and under two by county in Montana each year. The percentage of children under the age of six who live in households where all available parents are in the labor force is multiplied by the PEP population data to generate estimates of the total demand for child care and the demand for infant care in Montana. More detailed information on the child care demand calculation is available in appendix A1.

Calculating potential child care demand in this way allows demand to reflect changes in the population of children under six. However, this methodology does not adjust for any changes in the percentage of children under six living in working parent households over time. This percentage is held constant over the ACS 5-year timeframe. The ACS data also does not estimate the number of children under two in working parent households. Therefore, the demand for infant care is estimated assuming the percentage of children under two living in households where all available parents are in the labor force is the same as the percentage of children under six living in working parent households.

Child Care Gap Analysis

The child care gap refers to the difference between the supply of licensed child care in Montana and the estimated demand for care. **To measure the gap between the supply and demand for child care, the licensed child care capacity in the state is expressed as a percentage of estimated demand.** The denominator reflects the potential demand for child care and the numerator is the licensed child care capacity in Montana. Therefore, any gap measurement under 100% is considered undersupplied. More detailed information on the child care gap calculation is available in appendix A1.

Using this calculation of the child care gap, **Montana's total child care capacity currently meets 44% of estimated demand and infant capacity meets only 32% of estimated demand.**^{ix} Figure 4 shows the estimated demand for childcare from children under age six and two compared to the average annual capacity at licensed child care facilities in 2023.

Figure 4. Statewide Child Care Supply and Demand Analysis in 2023

Age Category	Children Needing Care	Average Child Care Capacity	Percent of Demand Met by Capacity
Under Six	46,390	20,640	44%
Under Two	14,680	4,750	32%

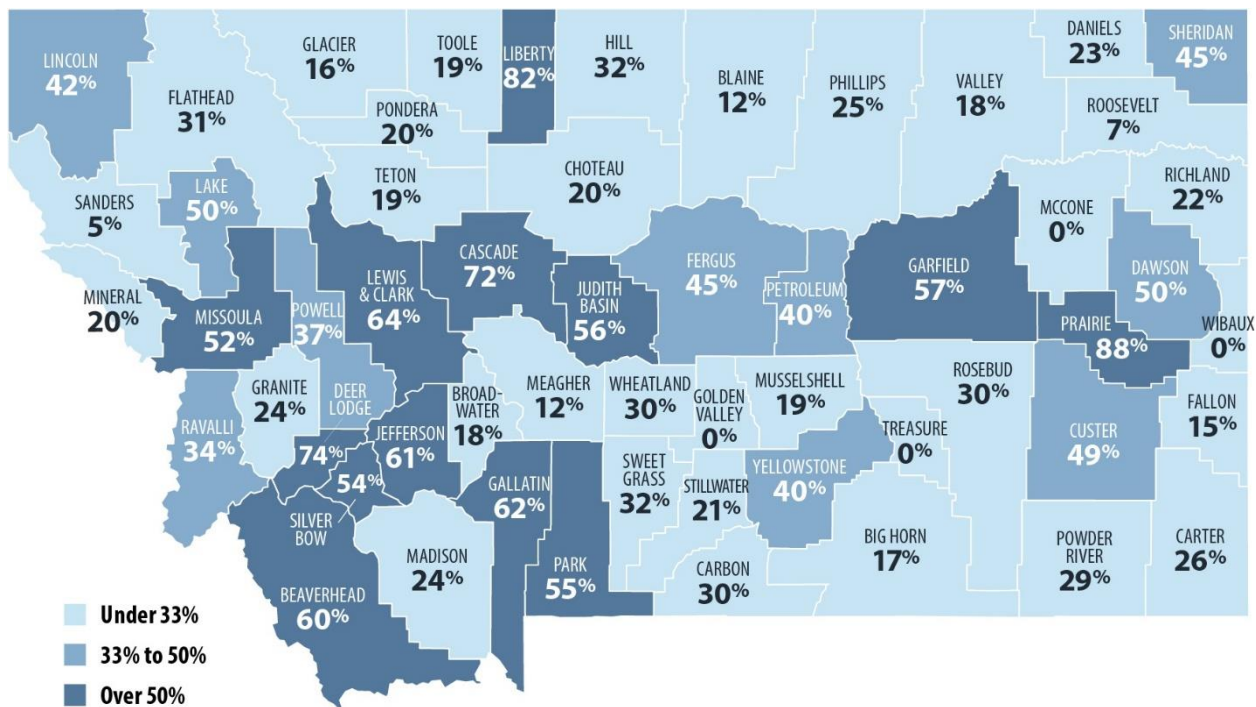
Source: MTDLI analysis of child care licensing data provided by MT DPHHS. U.S. Census Bureau 2022 Population Estimates Program (PEP) data provided by Montana KIDS Count and 2018-2022 American Community Survey (ACS) data. Average childcare capacity for children under two reflects infant capacity. Data are rounded to the nearest ten.

Sub-State Geographical Area

The availability and demand for child care varies across the state. Understanding critical need areas is essential for targeting efforts to increase child care access in Montana. A county-level analysis provides a more detailed picture of how the child care gap varies across the state. To calculate the child care gap in each county, the total and infant capacity of licensed providers located in the county is compared to the estimated potential demand from children in the county who live in household where all available parents are in the labor force. This analysis assumes that parents prefer to find child care within their own county, and that providers are only serving families in the county. To the extent parent’s search area and provider service areas align with county borders, then a county-level analysis will best identify critical high-need child care areas in the state.

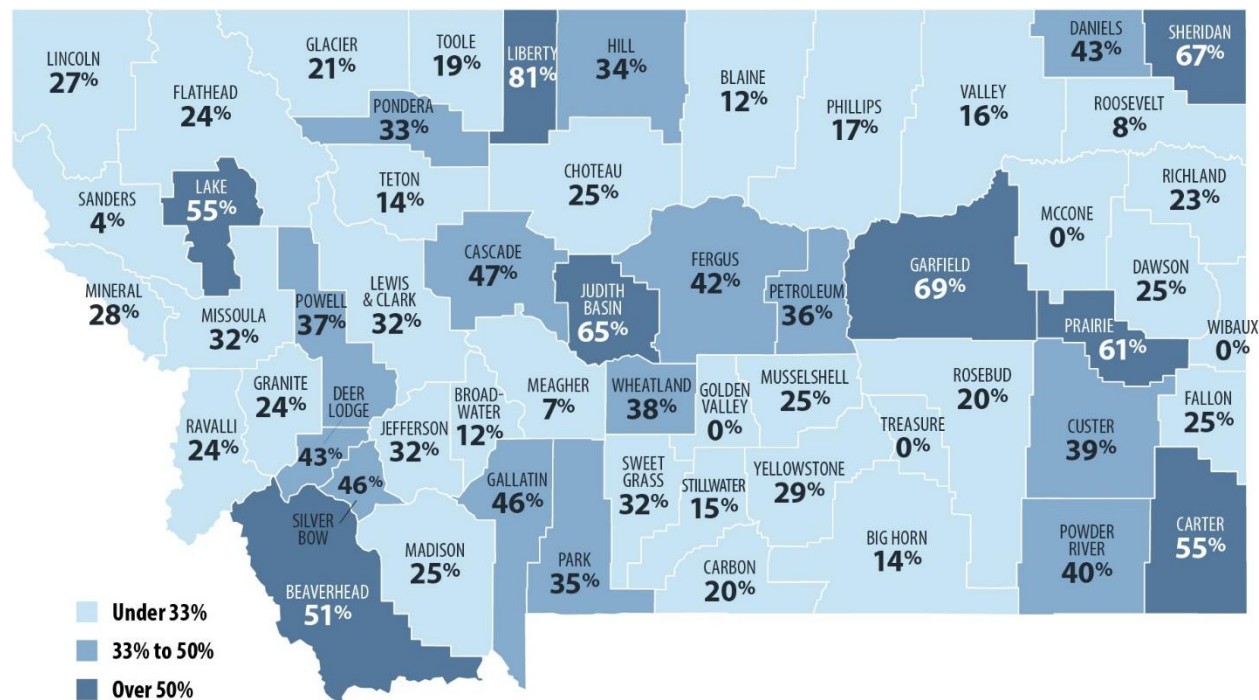
Figure 5 shows total child care supply as a percent of potential demand in each county in Montana. The county-level analysis reveals the widespread nature of the child care shortage in Montana. Licensed capacity is undersupplied in every county relative to potential demand. In general, urban areas of the state have greater access to care than rural areas, and there are four counties without a single licensed provider. County-level estimates below the statewide rate of 44% indicate a more significant shortage of licensed childcare relative to the statewide average.

Figure 5. Child Care Capacity as a Percent of Demand from Children Under 6 by County in 2023



of estimated demand in 2023. Counties with estimates below the statewide average have a more significant shortage of licensed infant care relative to demand.

Figure 6. Infant Child Care Capacity as a Percent Demand from Children Under Age 2 in 2023



Source: MTDLI analysis of child care capacity data provided by MTDPHHS through 12/2023. MTDLI childcare demand calculation based on U.S. Census Bureau 2022 Population Estimates Program (PEP) data provided by Montana KIDS Count and 2018-2022 American Community Survey (ACS) data produced by the U.S. Census Bureau.

A limitation of using a county-level analysis is that parents do not restrict their child care choices to the boundaries of their county. A distance-based approach to researching the child care supply gaps allows for a more realistic representation of parental search areas and child care provider service areas, by eliminating arbitrary geographical boundaries. However, a distance-based approach is more time and resource intensive, and the results do not significantly change the state’s understanding of how child care gaps vary across Montana. Nearly all areas of the state are identified as having inadequate access to child care regardless of research methodology. Therefore, an area-based analysis of child care gaps at the county-level remains the preferred sub-state methodology. For more information on a distance-based approach to estimating child care supply and demand gaps, see appendix A2.

Child Care Deserts

Nationally, the term “child care desert” is used to describe a geographic area with extremely limited access to child care. However, there is no formal threshold for the classification of an area as a child care desert. The most common threshold used is defined by the Center for American Progress (CAP) as a census tract that contains either no child care providers or so few options that there are more than three times as many children as licensed child care slots. According to this definition, 30% of Montana children under six were living in a child care desert in 2023.^x

Based on the definition from the CAP, a **child care desert is defined as any geographic area where child care supply meets less than a third of the potential demand**. Stated another way, a child care desert is any area in Montana where over 66% of children living in working parent households cannot access licensed child care. According to this definition, 59% of Montana counties (33 of 56) are considered child care deserts in 2023.

Child Care Desert – any geographic area where licensed child care capacity meets *less than a third* of potential demand.

Infant child care deserts are defined using the potential demand for infant care and licensed child care capacity for children under the age of 19 months. Any geographic area where infant capacity meets less than a third of potential demand is considered an infant child care desert. Infant care is the most significantly undersupplied form of care in the state, meeting only 32% of estimated demand in 2023.^{xi} Lack of availability for infants was the greatest barrier to accessing child care reported by Montana families according to a 2019 needs assessment.^{xii}

One limitation of using child care deserts to identify areas with the greatest unmet need for child care is that the analysis does not consider other demographic or socioeconomic characteristics impacting a families' ability to access care. Other areas of the state may also have significant levels of unmet child care demand due to income or demographic barriers that prevent Montana families from accessing care. More information about barriers families face in accessing child care can be found in appendix A3.

Appendix

A1. Child Care Gap Analysis Calculation

The demand for child care in year (y) is calculated as follows:

Total Child Care Demand

$$(1) \text{ DemandTot}_y = \text{PrctCWP}_{y-4,y} \times \text{PopU6}_y$$

Infant Care Demand

$$(2) \text{ DemandInfant}_y = \text{PrctCWP}_{y-4,y} \times \text{PopU2}_y$$

$$(3) \text{ PrctCWP}_{y-4,y} = \left(\frac{\text{CWP}_{y-4,y}}{\text{TotChild}_{y-4,y}} \right)$$

Where,

PopU6_y = the total number of children under age six in year (y) from the US Census Bureau's Population Estimates Program (PEP).

PopU2_y = the total number of children under age two in year (y) from the US Census PEP data.

$\text{CWP}_{y-4,y}$ = the number of children under six who live in households where all available parents are in the labor force from US Census ACS 5-Year estimate.

$\text{TotChild}_{y-4,y}$ = the total number of children under age six from ACS 5-Year estimate.

The demand for child care is then compared to the licensed child care provider capacity to estimate the child care gap. The gap in total child care capacity and infant capacity in year (y) is calculated as follows:

Total Child Care Gap

$$(4) \text{ TCGap}_y = \frac{\text{TotLC}_y}{\text{DemandTot}_y} \quad \text{TCGap}_y = \begin{cases} < 1, \text{ then undersupplied} \\ = 1, \text{ then meets demand} \\ > 1, \text{ then oversupplied} \end{cases}$$

Infant Child Care Gap

$$(5) \text{ ICGap}_y = \frac{\text{InfantLC}_y}{\text{DemandInfant}_y} \quad \text{ICGap}_y = \begin{cases} < 1, \text{ then undersupplied} \\ = 1, \text{ then meets demand} \\ > 1, \text{ then oversupplied} \end{cases}$$

Where,

TotLC_y = Total Licensed Capacity reported by MTDPHHS in year (y), where annual capacity is calculated as the 12-month average.

InfantLC_y = Infant Licensed Capacity reported by MTDPHHS in year (y), where annual capacity is calculated as the 12-month average.

Data from the ACS 5-Year estimates is updated in December for the previous five years. The U.S. Census Bureau's Population Estimates Program (PEP) data by single year of age are published annually in July by Montana Kids COUNT for the previous year. The potential child care demand calculation is updated once per year in January to reflect all updated data. The most recent data available for 2023 is 2018-2022 ACS 5-Year estimates and 2022 U.S. Census vintage 2022 PEP population estimates.

A2. Distance-Based Approach

The distance-based approach to measuring child care supply and adjusting for nearby demand was introduced in a 2019 article published in the journal *Early Childhood Research Quarterly*.^{xiii} This approach differs from an area-based analysis in that it is centered on family locations and assumes families are interested in nearby providers whether or not they are located in the same census tract or other administrative area unit. This new approach in the original journal article uses an enhanced two-stage floating catchment area method (E2SFCA). In stage one of the two-stage calculation, a weighted capacity-to-population ratio is generated for every child care provider in the data set. Stage two of the methodology determines the quantity of local child care supply for each family location, based on the total capacity of nearby providers adjusted for their nearby young-child population.^{xiv}

The American Community Survey 5-year estimates are used to determine family location. However, it is important to note a limitation of using ACS data in a distance-based approach. The data do not provide exact household locations and can only be geographically disaggregated down to the level of census block group. Thus, it is not possible to calculate each household's exact distance from a provider. Additionally, the distance-based approach considers only the distance from home to a child care provider and does not consider to proximity of the child care facility the caregiver's work.

The Center for American Progress uses a distance-based approach to estimate the child care supply and demand gap by census block across the United States.^{xv} Their analysis finds that child care is most significantly undersupplied in rural communities, mid-income communities, and among minority groups. In Montana, the child care supply is classified as inadequate in all but a few census tracts in the Northwest and Southwest portions of the state, as well as a tract in the Billings area.^{xvi}

The Bipartisan Policy Center (BPC) also conducted a distance-based analysis by census block that incorporated drive time to measure the child care gap in Montana — the number of children who potentially need child care but whose families cannot reasonably access formal child care facilities by driving. Each census block group was assigned a service area of a specific radius, based on driving distance. Potential child care need within the block group was proportionally allocated to the child care providers within the service area. A complex matrix balancing operation was used to balance the allocations from each block group to achieve the maximum allocation of children possible.^{xvii}

Across thirty-five states, including Montana, BPC analysis found a child care gap of 31% - meaning 31% of children below the age of six with all available parents in the workforce did not have access to formal child care. In Montana, the child care gap was 48.6%, ranking 5th out of twenty-five states for largest percentage gap in child care capacity. The BPC analysis found rural areas of the state were far more underserved than urban areas, even after using the distance adjustment for families in rural communities, and even though urban communities had a much higher potential need for child care.

The BPC also analyzed the child care gap in opportunity zones within Montana. Opportunity zones were established under the Tax Cuts and Jobs Act of 2017, which created tax incentives for investors to support low-income communities. There are 25 opportunity zones identified in Montana, and BPC estimates the child care gap in these zones is higher than the statewide average. BPC analysis finds a 49% gap in child care capacity within Montana’s opportunity zones.

A3. Other Barriers Families Face in Accessing Care

The cost of care is a key barrier many families face in accessing child care. Over half of parents (53%) reported child care costs as a barrier to accessing care, particularly for low-income families.^{xxviii} In 2023, Montana households averaged \$18,940 in child care expenses for children under age five. Annual child care expenses in 2023 were equivalent to 28% of the state’s median household income.^{xxix}

In Montana, the average cost of full-time daycare for an infant or toddler in center-based care is \$11,700 per year.^{xxx} The annual cost of care for one child is more expensive than in-state tuition for a four-year public college and costs more than the median contract rent.^{xxxi} Costs grow exponentially for parents of multiple young children. Child care for two children—an infant and a 4-year-old—costs \$22,100. A typical family in Montana would have to spend 33% of their income on child care for an infant and a 4-year-old.^{xxxi} According to the U.S. Department of Health and Human Services (HHS), child care is affordable if it costs not more than 7% of a family’s income.^{xxxi}

Certain Montana families experience added barriers to accessing child care. Due to a legacy of discriminatory policies, families that experience additional barriers to child care include children who are enrolled tribal members or reside on tribal land, children for whom English is not the primary language spoken at the home, children with disability or special health care needs, and children involved in the child welfare system.^{xxxi} Families who are tribal members or who reside on tribal land are more likely than non-tribal families to report a lack of affordable transportation, lack of infant care, lack of providers who speak their language, and a lack of child care providers who understand their culture as barriers to accessing child care.^{xxxi}

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- ⁱ MTDLI analysis of Current Population Survey microdata from IPUMS through November 2023. Reported as 12-month average from Dec 2022 through Nov 2023.
- ⁱⁱ Only FFN caregivers who receive child care assistance are captured in the data collected by MT Dept of Health and Human Services and are included in child care supply.
- ⁱⁱⁱ MCA 52-2-703. Child means a person under 13 years of age or a person with special needs, as defined by the department, who is under 18 years of age or is 18 years of age and a full-time student expected to complete an educational program by 19 years of age.
- ^{iv} Administrative Rules of Montana (ARM) 37.95.102 (24).
- ^v The labor force is defined by the U.S. Bureau of Labor Statistics (BLS) as the number of people who are employed or who are unemployed and actively seeking work.
- ^{vi} Current Population Survey microdata from IPUMS through November 2023. Estimates are 12-month average.
- ^{vii} McCoy DC, Yoshikawa H, Ziol-Guest KM, et al. Impacts of Early Childhood Education on Medium- and Long-Term Educational Outcomes. *Educational Researcher*. 2017;46(8):474-487. doi:10.3102/0013189X17737739
- ^{viii} The data are contained in table B23008 published by the American Community Survey.
- ^{ix} DPHHS child care licensing data through 12/2023. 2018-2022 ACS 5-Year Estimates. US Census Bureau 2022 Population Estimates (PEP) by county provided by Montana Kids Count. Infant is defined as a child less than 19 months old.
- ^x Ibid.
- ^{xi} Ibid.
- ^{xii} "Montana's Early Childhood System: A Comprehensive Needs Assessment," Montana Department of Health and Human Services, Early Childhood Services Bureau. September 2019.
- ^{xiii} Elizabeth Davis, Won Fy Lee, and Aaron Sojourner, "Family centered measures of access to early care and education," *Early Childhood Research Quarterly* 47 (2) (2019): 472–486.
- ^{xiv} Rasheed Malik, Won F Lee, Aaron Sojourner, and Elizabeth Davis, "Measuring Childcare Supply Using the Enhanced Two-Stage Floating Catchment Area Method," Center for American Progress. 2020. <https://cdn.americanprogress.org/content/uploads/2020/06/18081719/Child-Care-Deserts-Methodology.pdf>
- ^{xv} Rasheed Malik, Katie Hamm, Won F Lee, Elizabeth Davis, and Aaron Sojourner, "The Coronavirus will make child care deserts worse and exacerbate inequity," Center for American Progress. June 2020.
- ^{xvi} The data are available at <https://childcaresdeserts.org/>
- ^{xvii} Linda K. Smith, Anubhav Bagley, and Benjamin Wolters. "Childcare in 35 States: What we know and don't know. Quantifying the supply of, potential need for, and gaps in child care across the country." November 2021. Bipartisan Policy Center. <https://childcaregap.org/report.html>
- ^{xviii} MTDPHHS Early Childhood Services Bureau needs assessment. September 2019.
- ^{xix} Annual child care expenditures estimated based on weekly child care costs reported by the U.S. Census Household Pulse Survey from January to May 2023. Median household income reported by 2022 1-Year Estimates American Community Survey (in 2022 dollars).
- ^{xx} Child Care Aware® of America's Catalyzing Growth: Using Data to Change Child Care Report Series, 2022.
- ^{xxi} 2022 American Community Survey 1-Year Estimates. Table B25058.
- ^{xxii} Child Care Aware® of America's Catalyzing Growth: Using Data to Change Child Care Report Series, 2022. Median household income reported by 2022 1-Year Estimates American Community Survey (in 2022 dollars).
- ^{xxiii} <https://www.govinfo.gov/content/pkg/FR-2016-09-30/pdf/2016-22986.pdf>
- ^{xxiv} MTDPHHS Early Childhood Services Bureau needs assessment. September 2019.
- ^{xxv} MTDPHHS Early Childhood Services Bureau needs assessment. September 2019.