

## Michigan's Child Care Desert (Updated December 2024)

The Child Care Desert Map below shows how many children were competing for one slot in a nearby licensed child care facility suitable for their age. An area having three or more children competing for one slot, or without providers, is considered to be a 'child care desert,' following the methodology of the Center for American Progress. Child Care Desert Ratios are determined by dividing the estimated number of slots by the population by census tract. Population information is provided by the U.S. Census Bureau and its 2018-2022 American Community Survey 5-Year Estimates. These calculates are specific to which 'Select Age Served' is selected.

Licensed child care providers are classified by different license types. A center is a provider operating outside of a home, while group and family homes operate within a home setting. Group homes are licensed to serve up to 12 children and family homes are licensed for up to six children. The estimated number of slots is calculated by a licensed provider's capacity per ages served (i.e., its total licensed capacity divided by the number of ages served between 0 to 11). The ages served are based on what ages a provider is licensed to serve.

Limitations of the available data have led to assumptions and limitations that affect the accuracy of the map. Even with these limitations, the map provides a baseline picture of Michigan's child care situations.

1. To capture how many children were competing for one slot, we assumed that all families in the ACS data who have children of the specified age need and want child care from licensed providers. The number of children competing for slots is therefore overestimated.
2. Licensed child care providers that served children in multiple age groups were assumed to have slots evenly distributed across age groups. All providers were assumed to be operating at full capacity. These assumptions result in an overestimation of available slots, especially for younger age groups, as many providers did not serve at full capacity due to staffing and other challenges.
3. Unlicensed, license-exempt, and informal child care providers are not captured in the data. These providers do increase the capacity of the child care ecosystem as a whole. However, the Child Care Desert Map was designed to track the availability specifically of licensed providers.

These estimates depend on which 'Select Age Served' is chosen; Overall looks at slots for 0 to 11YOs, Infants/Toddlers 0 to 2YOs, Preschoolers 3 to 5YOs, and School Age Kids 6 to 11YOs. The estimated number of providers calculates the number of providers that are licensed to serve a specific age group. This information is provided by the Michigan Licensing and Regulatory Affairs daily. Below are sample calculations for 0 to 11YOs:

**Capacity Per Ages Served** =  $(Total\ Licensed\ Capacity) / [(1\ if\ serves\ 0YOs;\ if\ not,\ 0) + (1\ if\ serves\ 1YOs;\ if\ not,\ 0) + (1\ if\ serves\ 1YOs;\ if\ not,\ 0) + (1\ if\ serves\ 2YOs;\ if\ not,\ 0) + (1\ if\ serves\ 3YOs;\ if\ not,\ 0) + (1\ if\ serves\ 4YOs;\ if\ not,\ 0) + (1\ if\ serves\ 5YOs;\ if\ not,\ 0) + (1\ if\ serves\ 6YOs;\ if\ not,\ 0) + (1\ if\ serves\ 7YOs;\ if\ not,\ 0) + (1\ if\ serves\ 8YOs;\ if\ not,\ 0) + (1\ if\ serves\ 9YOs;\ if\ not,\ 0) + (1\ if\ serves\ 10YOs;\ if\ not,\ 0) + (1\ if\ serves\ 11YOs;\ if\ not,\ 0)]$ .

**Number of Slots** =  $(Capacity\ for\ Ages\ Served) * [(1\ if\ serves\ 0YOs;\ if\ not,\ 0) + (1\ if\ serves\ 1YOs;\ if\ not,\ 0) + (1\ if\ serves\ 1YOs;\ if\ not,\ 0) + (1\ if\ serves\ 2YOs;\ if\ not,\ 0) + (1\ if\ serves\ 3YOs;\ if\ not,\ 0) + (1\ if\ serves\ 4YOs;\ if\ not,\ 0) + (1\ if\ serves\ 5YOs;\ if\ not,\ 0) + (1\ if\ serves\ 6YOs;\ if\ not,\ 0) + (1\ if\ serves\ 7YOs;\ if\ not,\ 0) + (1\ if\ serves\ 8YOs;\ if\ not,\ 0) + (1\ if\ serves\ 9YOs;\ if\ not,\ 0) + (1\ if\ serves\ 10YOs;\ if\ not,\ 0) + (1\ if\ serves\ 11YOs;\ if\ not,\ 0)]$ .

**Number of Providers** = *Distinct Count of Providers Whose Capacity Per Ages Served > 0.*

The Child Opportunity Level is provided by [diversitydatakids.org](https://diversitydatakids.org) and Brandeis University as a tool to estimate the resources and opportunities available for children in a geographic area. It looks at three domains specific to Michigan: social and economic capacity, health and environment, and education. ‘Very High’ means an area has a lot of resources available, while ‘Very Low’ means there are few resources. These estimates apply to all youth from 0 to 18YOs.

Using population estimates from the U.S. Census Bureau and its 2018-2022 American Community Survey 5-Year Estimates, census tract populations were divided into five percentiles. ‘Very Low’ represents 20% of tracts with the smallest populations, while ‘Very High’ represents the 20% of tracts with the largest populations in the state. These calculates are specific to which ‘Select Age Served’ is selected.

The geographic type of each census tract was determined using the Department of Education’s (2021) classification of ZIP codes’ geography. The proportion of a census tract’s intersection with a ZIP code was determined using the R Statistic software. This proportion was assumed to mirror a ZIP code’s classification as either a city, suburb, rural area, or town. Census tracts were classified based on their largest proportion of a specific geographic classification (as either a city, suburb, town or rural).

Census tracts are classified as ‘Urgent’ or ‘High Priority’ based on their county’s Child Care Urgency Level. These classifications were determined in September 2022 by MSU’s Community Evaluation Programs. To learn more, visit the **Areas with High Needs and Urgency Map** at [cep.msu.edu/projects/child-care-mapping-project/maps-and-charts/areas-with-high-needs-and-urgency](https://cep.msu.edu/projects/child-care-mapping-project/maps-and-charts/areas-with-high-needs-and-urgency).

## References:

- [diversitydatakids.org](https://diversitydatakids.org) (2024). Child Opportunity Index 3.0 database. Institute for Child, Youth and Family Policy at the Heller School for Social Policy and Management at Brandeis University. Retrieved from [diversitydatakids.org/child-opportunity-index](https://diversitydatakids.org/child-opportunity-index)
- Malik, R., & Hamm, K. (2017, August). Mapping America's child care desert. *Center for American Progress*. <https://www.americanprogress.org/wp-content/uploads/sites/2/2017/09/ChildcareDesert-report2.pdf>
- Manson, S., Schroeder, J., Van Riper, D., Knowles, K., Kugler, T., Roberts, F., & Ruggles, S. (2023). IPUMS National Historical Geographic Information System: Version 18.0 [2022 Census Tract GIS Shape Files]. Minneapolis, MN: IPUMS. Retrieved from [doi.org/10.18128/D050.V18.0](https://doi.org/10.18128/D050.V18.0)
- U.S. Census Bureau (2022). Population Under 18 Years by Age. American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B09001. Retrieved from [data.census.gov/table/ACS5Y2022.B09001?q=B09001&g=050XX00US26127](https://data.census.gov/table/ACS5Y2022.B09001?q=B09001&g=050XX00US26127)
- U.S. Department of Education (2021). Education Demographic and Geographic Estimates Program (EDGE): Locale Boundaries. National Center for Education Statistics. Retrieved from [nces.ed.gov/programs/edge/Geographic/LocaleBoundaries](https://nces.ed.gov/programs/edge/Geographic/LocaleBoundaries)