



# Closing the Gap:

An Assessment of Indiana's  
Early Learning Opportunities

2022 Annual Update

Early Learning Indiana  
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Early Learning  
INDIANA

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# Background and Key Findings

In 2021, Early Learning Indiana (ELI) released the inaugural *Closing the Gap* report, which closely examined four factors comprising the Early Learning Access Index: capacity, quality, affordability and choice.

- 1. CAPACITY** – how sufficient the capacity of the early learning programs is in the geographic area, based on estimated need for care. This describes what percentage of children – who may need care in the area – can be served by the existing capacity.
- 2. QUALITY** – how pronounced the capacity of the programs rated level 3 or level 4 on Paths to QUALITY™ is in the geographic area. This describes how much high-quality care might be prioritized in any given area, based on the availability of high-quality capacity over low-quality capacity.
- 3. AFFORDABILITY** – how the average cost of care in the area compares to median family incomes of the population and the prevalence of programs offering subsidized care. This describes how accessible care is to area families based on the proportion of income they would have to spend to enroll in local care options, and if subsidized care options are readily available in their area.
- 4. CHOICE** – how much choice families have among program characteristics that may be preferential. The presence of infant and toddler care options, availability of a variety of program types and availability of programs offering non-traditional hours all factor into this element.

Within the Access Index, each element was assigned a weight to indicate how much it influences the overall score. Capacity and quality each carry a weight of 30%. Affordability and choice are each weighted at 20%. To analyze

these factors, ELI leveraged a geographic radial approach. Drawing upon its understanding that families generally prefer to locate early learning opportunities within 20 minutes of their location, ELI established geographic boundaries within 10 miles of the population center of each census tract.

The Access Index has a lowest possible score of 0 and a highest possible score of 100. To streamline findings and provide perspective on the relativity of Access Index scores, ELI developed three categories to indicate whether the overall access level is adequate, moderate or inadequate. In areas with scores less than 60, overall access was deemed to be inadequate, while areas with scores ranging from 60 to 80 were deemed to have moderate access and areas with scores 80 or higher were deemed to have adequate access.

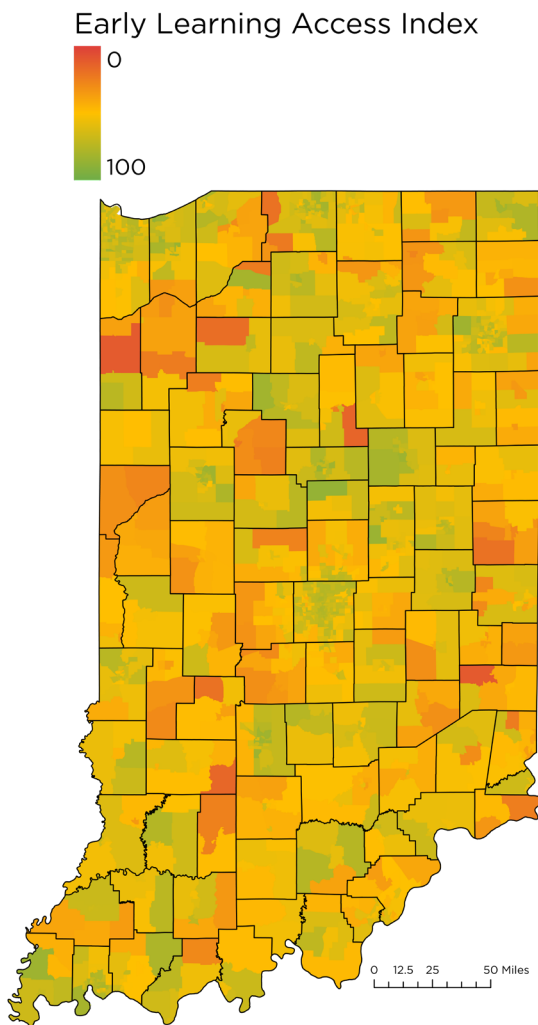
Early Learning Indiana is committed to regularly updating its Early Learning Access Index to evaluate the progress that has been made as stakeholders across Indiana work to improve access to high-quality early care and education settings. In this 2022 *Closing the Gap* update, the statewide Early Learning Access Index has improved from 60.6 in 2021 to 62.2 in 2022. This improvement was driven in part through improved data quality but more importantly by growth in overall capacity and an increase in high-quality capacity. Significant variation remains statewide at the county and tract level, with local Access Index scores ranging from 10.1 to 88.0. Capacity sufficiency also increased statewide by nearly six percentage points, and improvement in the number of children able to be served through high-quality care grew by three percentage points. Counteracting these positive strides were decreasing affordability scores with costs of care rising and fewer programs accepting subsidies. Elements of choice also saw fluctuations, but those were less pronounced than changes in the other access indicators.

# Access Index

The statewide Early Learning Access Index increased between 2021 and 2022 from 60.6 to 62.2. While this presents overall growth in access, there was significant variation statewide at both the county and tract level. Twenty-four percent (24%) of Indiana counties and 51.4% of tracts have moderate access, compared to only 14% and 46.9% respectively in 2021. No counties have adequate access, and only 3.6% of tracts are considered adequate – an increase from 2.6% in 2021.

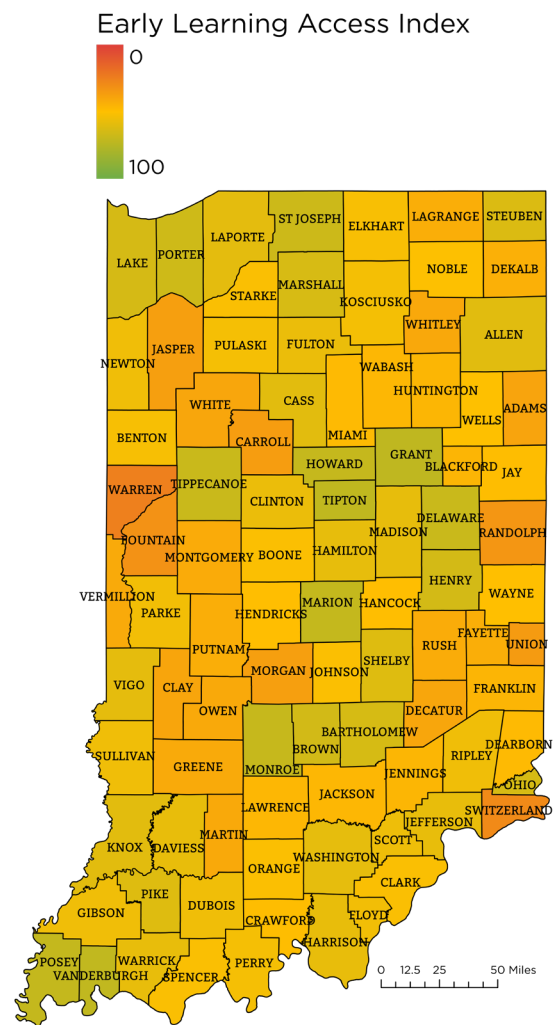
Maps 1 and 2 show the 2022 Access Index scores at the tract and county levels. Colors trending toward green temperatures represent higher scores, while red temperatures indicate lower scores.

**Map 1**  
Early Learning Access Index  
by Census Tract



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

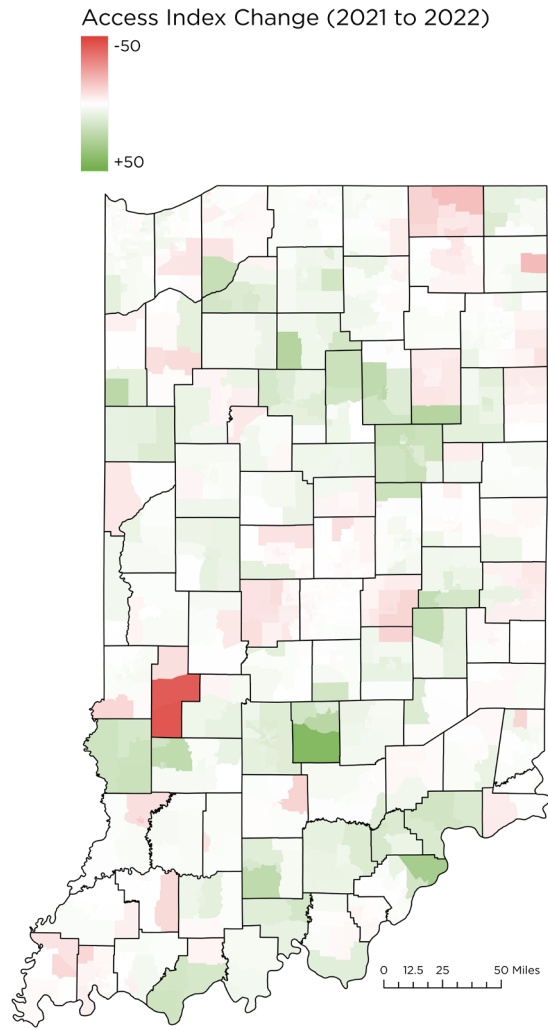
**Map 2**  
Early Learning Access Index  
by County



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

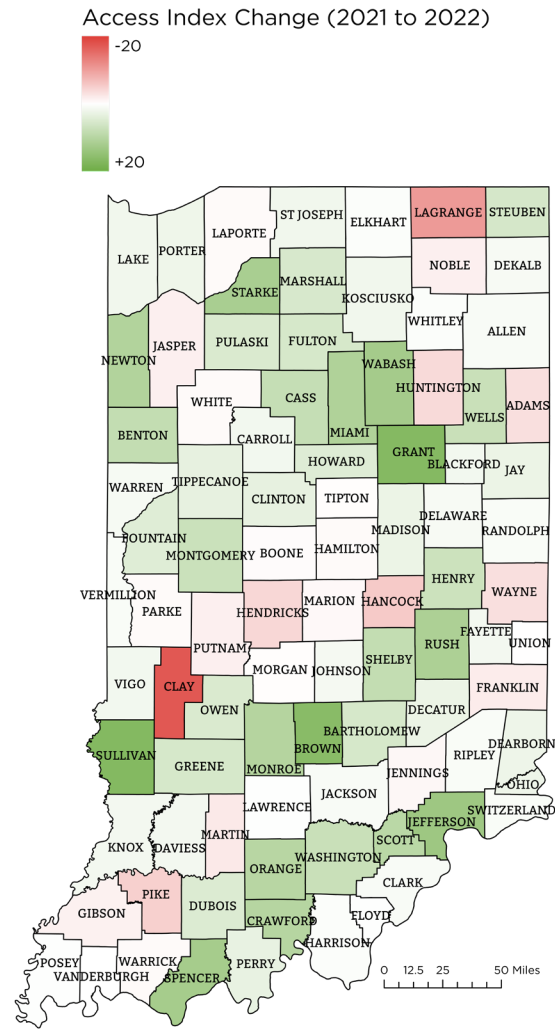
Maps 3 and 4 demonstrate the overall change in the Access Index at the tract and county levels. Areas with green shading represent increases in Access Index scores, while red areas indicate decreases. There were more areas that remained stable or demonstrated improvement than areas in which access declined.

**Map 3**  
Early Learning Access Index  
Change by Census Tract



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

**Map 4**  
Early Learning Access Index  
Change by County



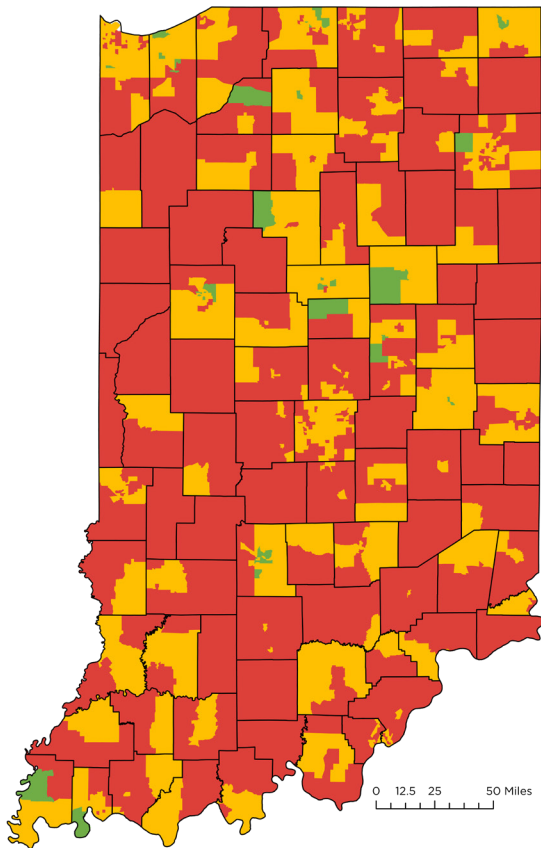
Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

Map 5 illustrates the prevalence of tracts with inadequate Access Index scores (below 60), moderate Access Index scores (60-80) and adequate Access Index scores (80 or higher). Forty-five percent of tracts were found to have inadequate access, 51.4% had moderate access and only 3.6% had adequate access.

### Map 5 Early Learning Access Index Groups by Census Tract

Early Learning Access Index Groups

- Inadequate
- Moderate
- Adequate



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022



Table 1 shows the 10 counties with the highest and lowest Access Index scores, along with their respective change amounts. While Grant, Monroe and Clay counties saw marked changes to their Access Index scores, the majority of access score changes were more moderate. On average, counties saw overall growth in access by about 2.9 points.

**Table 1**

HIGHEST ACCESS COUNTIES			LOWEST ACCESS COUNTIES		
County	Access Index Score	Change	County	Access Index Score	Change
Grant	72.7	+17.0	Warren	25.2	+1.4
Tipton	72.1	-0.3	Switzerland	28.8	+0.9
Vanderburgh	71.8	0.0	Fountain	32.3	+4.4
Marion	70.8	-0.7	Randolph	33.9	+0.9
Posey	70.4	+0.3	Union	35.8	-0.1
Howard	70.3	+4.7	Carroll	36.5	+1.8
Monroe	69.8	+10.4	Morgan	37.1	-0.3
Delaware	69.0	+1.2	Jasper	37.2	-1.7
Tippecanoe	68.9	+3.3	Adams	39.3	-3.4
St. Joseph	67.7	+1.9	Clay	39.7	-17.5

Table 2 shows the counties with the highest rates of growth and decline since 2021. Twenty-five counties (27%) saw a decline in their overall access score. The average change amount among counties with decreased access scores was -2.8 points. Only one county, Vanderburgh, saw no change to their access score. Sixty-six counties (72%) saw growth in access scores, with an average growth amount of 5.1 points.

**Table 2**

GROWTH		DECLINE	
County	Change	County	Change
Sullivan	+17.2	Clay	-17.5
Grant	+17.0	LaGrange	-10.6
Brown	+16.6	Hancock	-5.6
Jefferson	+13.6	Pike	-4.9
Wabash	+12.6	Hendricks	-4.1

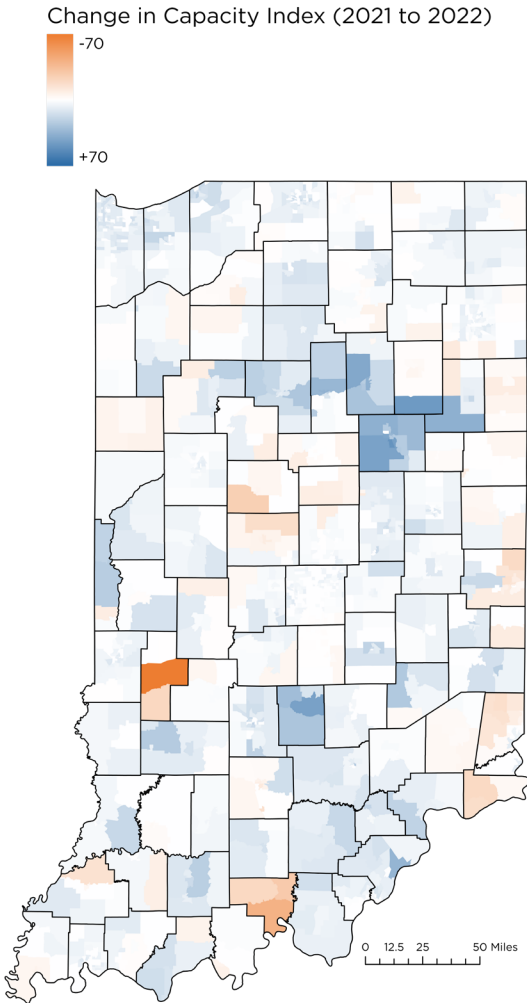
The Access Index is a composite score, which takes into account the access dynamics of capacity, quality, affordability and choice. As such, those factors influence one another at times enhancing and at other times diminishing the effect of one another, demonstrating a high degree of inter-reliability between factors. In Sullivan County, where we saw the highest amount of growth, this can be attributed to overall capacity gains through new programs opening, existing programs increasing capacity and programs becoming high-quality, therefore increasing high-quality capacity. In Clay County, which had the greatest decline in overall access, this change was fueled by high-quality program closures and decreased affordability due to increasing costs of care.

# Capacity

The first factor comprising the Early Learning Access Index is capacity. The Capacity Sufficiency Rate (CSR) estimates the number of children who may need care and can be served through existing local capacity. Overall improvement was observed in CSRs since the 2021 *Closing the Gap* report. The CSR for the state increased from 55.5% to 61.2%. CSRs ranged from 11% in Benton County to 105.5% in Marion County. Nearly 66% of Indiana counties have CSRs less than 50%.

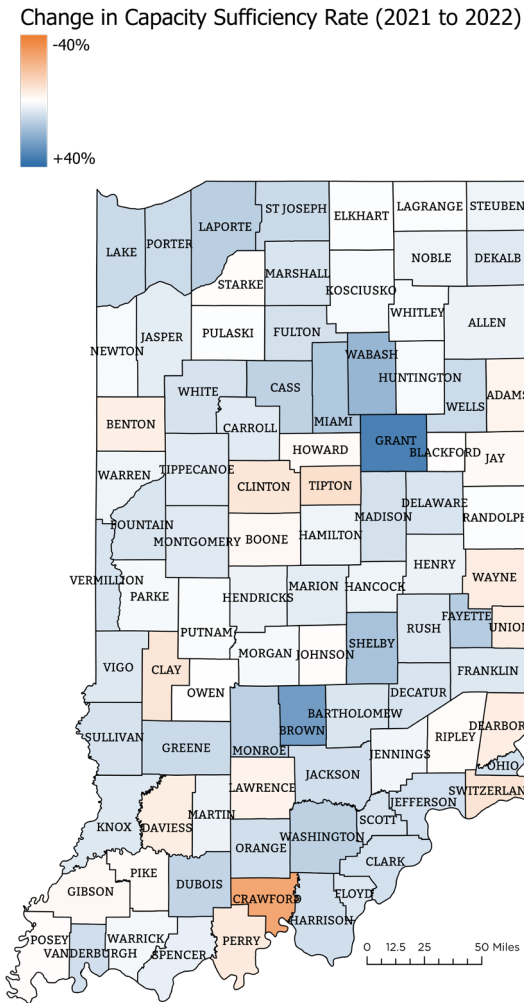
Maps 6 and 7 illustrate the impact of capacity changes at the county and tract levels from 2021 to 2022. Orange shading represents decreases in CSRs, and blue shading represents gains in CSRs. Overall there was more CSR growth than decline, with an average CSR increase of 4.1% by county.

**Map 6**  
Change in Capacity Index  
by Census Tract



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

**Map 7**  
Capacity Sufficiency Rate (CSR)  
Change by County



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

Table 3 shows the counties with the highest and lowest capacity sufficiency rates, along with their respective change amounts since 2021. Twenty-three counties (25%) had CSR decreases, with the average decrease being 5%. Sixty-nine counties (75%) had CSR increases, with the average increase being 7.1%. Capacity decreases are typically due to program closures. Increases can be attributed to new programs opening, or programs expanding their capacity. In some cases, CSRs increased due to new or more accurate capacity data being made available that wasn't previously captured. In areas where existing capacity was already low, program-level changes such as new or closed programs can have a tremendous impact on CSR, whereas areas that have a lot more total capacity are less affected by program and capacity fluctuations.

**Table 3**

HIGHEST CAPACITY SUFFICIENCY			LOWEST CAPACITY SUFFICIENCY		
County	CSR	Change	County	CSR	Change
Marion	105.5%	+5.1%	Benton	11%	-4.8%
Ohio	99.9%	+8.4%	Crawford	17.1%	-27.5%
Bartholomew	88.3%	+7.1%	Jasper	20.5%	-4.8%
Pike	88.1%	-1.5%	Switzerland	21.2%	-8.3%
Vanderburgh	85.0%	+8.7%	Martin	23%	-3.6%



The Quality component looks at the prevalence of programs and capacity rated at Levels 3 or 4 on Paths to QUALITY™, the state of Indiana’s voluntary quality rating system. The percentage of Indiana’s high-quality capacity remained consistent with only a very slight increase since the 2021 report, from 46.1% to 46.4%. The percentage of children who can be served through high-quality capacity saw a more pronounced increase, growing from 25.7% to 28.4%. This is due to an overall increase in capacity. Despite this slight improvement, over 72% of Indiana counties only have enough high-quality capacity to serve less than a quarter of area children. Table 4 shows the counties able to serve the highest and lowest percentages of children through existing high-quality capacity.

**Table 4**

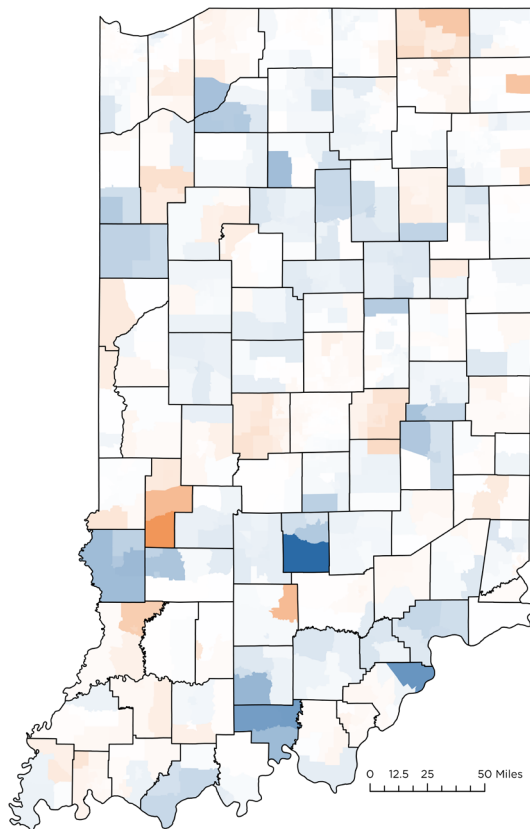
HIGHEST		LOWEST	
County	% Able to be Served within High-Quality Care	County	% Able to be Served within High-Quality Care
Marion	49.1%	Switzerland	0.0%
Grant	48.7%	Carroll	2.2%
Vanderburgh	47.2%	Warren	2.9%
Delaware	44%	Randolph	4%
Monroe	43.1%	Morgan	5.1%

Adequate high-quality care remains elusive to communities and families, presenting an ongoing opportunity for tremendous growth. In a 2022 Survey of Family Awareness of Early Childhood Education (ECE), conducted in partnership with SMARI and Trendy Minds®, the quality rating was ranked as the top influence when choosing an ECE program among families actively seeking or those who anticipate seeking care in the future. In fact, 48% of respondents indicated they would only consider a Paths to QUALITY™ Level 3 or Level 4 program when seeking care. Given the lack of high-quality care available in our current ECE landscape, many families will struggle to find and enroll in care that aligns with their quality expectations.

Maps 8 and 9 demonstrate the overall quality changes at the county and tract levels since 2021. Overall, the percentage of high-quality care increased by about 3.6% per county. Forty counties (43.5%) saw a decrease by an average of 5.1% to their percentage of high-quality care. Fifty-one counties (55.4%) saw an increase by an average of 10.6% to their percentage of high-quality care.

**Map 8**  
Change in High-Quality Care  
Percentage by Census Tract

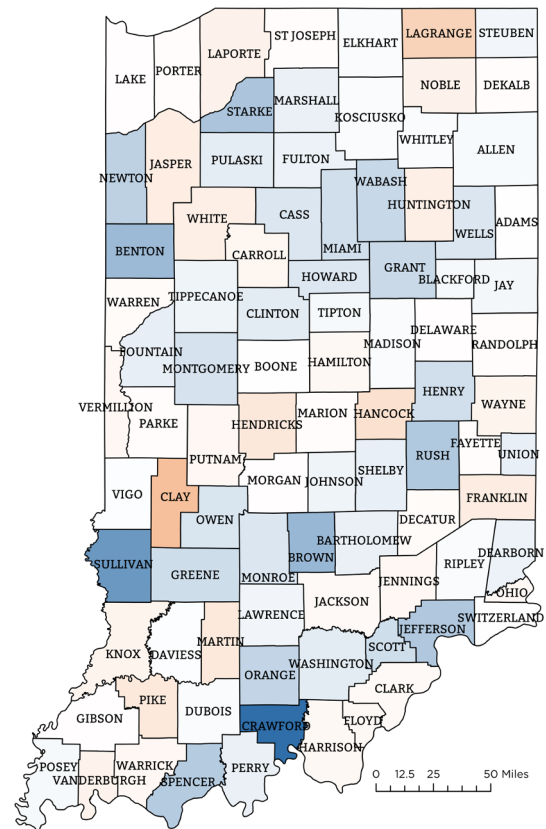
Change in Percent of High-Quality Capacity (2021 to 2022)



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

**Map 9**  
Change in High-Quality Care  
Percentage by County

Change in Percent of High-Quality Capacity (2021 to 2022)



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

# Affordability

Affordability is comprised of the following factors: the overall cost-to-income ratio which compares median family incomes to area market rates for providers, and the percentage of area programs accepting subsidies, which includes Head Start/Early Head Start, Child Care Development Fund (CCDF) vouchers or On My Way Pre-K vouchers.

The statewide cost-to-income ratio has unfortunately increased since 2021, from 11.8% to 12.4%. The income data used in both rounds of analysis was the same, which means that while slight, there was an overall increase in the cost of care. Thirty-eight percent of programs analyzed had increased their rates since 2021, with the average increase totaling over \$20.00 per week. This is not surprising given the overall inflation rates, which peaked at 40-year highs in 2022; early learning providers certainly feel these effects on their operations as the cost of everything from staffing to meals and supplies has increased. Families are also facing increased costs for everyday necessities like gas and groceries, meaning their budgets must stretch farther than they did even just one year ago.

Compounding the issues of increased cost of care is a decrease in the number of programs offering some form of subsidized child care. That number now sits at 79.7% compared to 83.6% in 2021. Among programs approved to accept CCDF vouchers, 71.7% had at least one child enrolled utilizing a voucher; this is up from about 50% in 2021. Efforts are being made systemically to transition qualifying families who were receiving *Build, Learn, Grow* scholarship funds to CCDF vouchers and to more efficiently refer families with vouchers to care providers with vacancies. While these efforts are helpful to families in the near term, these overall trends are a concern for future affordability of child care.

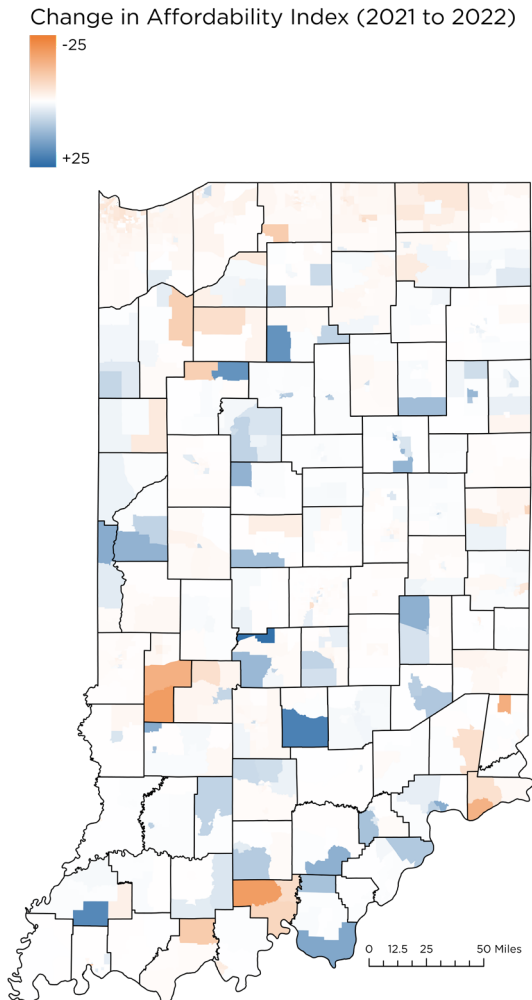
Affordability scores are lowest in urban areas, where cost of care is higher and median family incomes are lower. In Indiana, these urban tracts also have the state's largest concentrations of Black and Hispanic/Latino populations. Median family incomes among underrepresented minority families tend to be lower than the average of all families, meaning affordability of care may be disproportionately affecting minority populations.

The challenge of affordability further exacerbates access to high-quality settings of care. Crawford County is a relevant example of this relationship. The county had the largest overall increase in the percentage of high-quality care, and the greatest decrease in affordability.



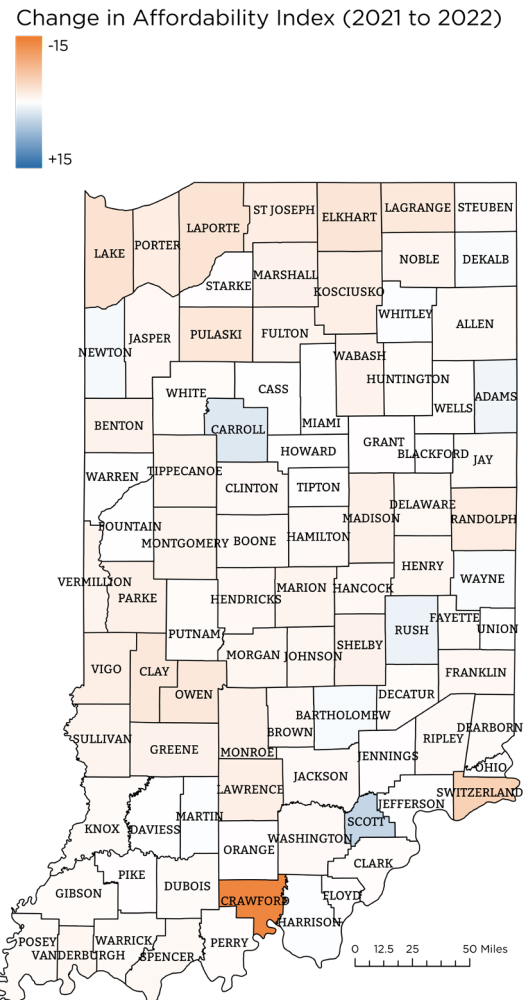
Maps 10 and 11 demonstrate the change since 2021 in both cost-to-income ratios and subsidized care availability.

### Map 10 Change in Affordability Index by Census Tract



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

### Map 11 Change in Affordability Index by County



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

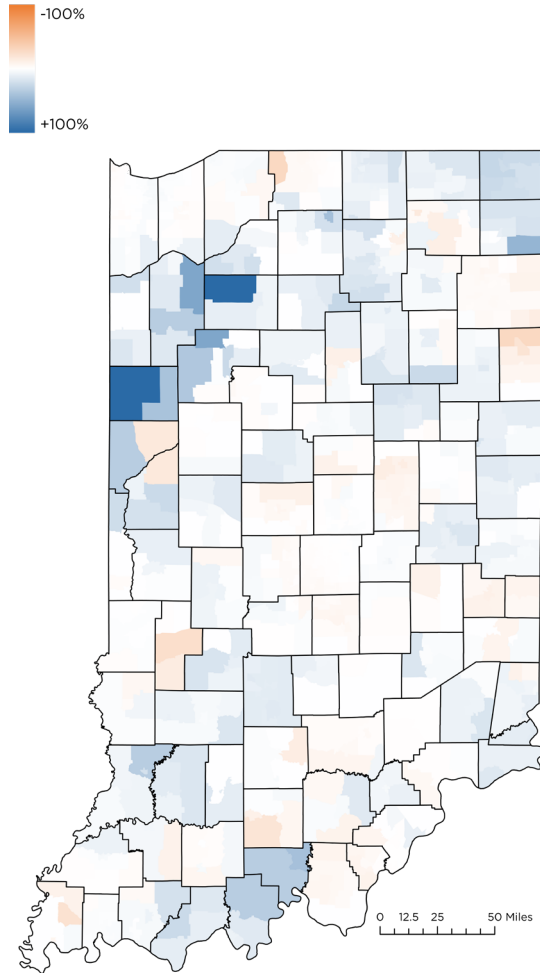
The Early Learning Access Index component of choice includes three variables: infant and toddler care availability, prevalence of programs offering care with non-traditional hours and variety in program types, or auspices. Infant and toddler care availability saw a slight increase from nearly 70% of programs serving infants and toddlers in 2021 to 71.7% in 2022. Providing care for infants is the least profitable age group, with many providers having either razor-thin profit margins or operating at a loss within this age group. In challenging economic times and when faced with staffing burdens (infant and toddler classrooms require lower staff-to-child ratios), it is reasonable to think this might be the first type of care for providers to eliminate in order to keep the rest of their business afloat. While the overall percentage of programs offering infant and toddler care has increased, this is a vulnerable care type and efforts to not only maintain, but increase capacity in this area should continually be a priority.

In an effort to more deeply understand the state of access to care for families with infants and toddlers, we projected infant and toddler capacity rates statewide using current enrollment estimates. Exact figures for capacity by age group statewide are difficult to ascertain. Using enrollment data collected monthly over the past year from a majority of providers, we estimated that among programs that serve infants and toddlers, approximately 40% of their overall capacity is allocated for infants and toddlers. Using this assumption, we applied that percentage statewide to determine an overall capacity sufficiency rate (CSR) for infants and toddlers. This analysis revealed that the statewide median CSR for infants and toddlers is 36%.



## Map 12 Change in Infant/Toddler Care Availability by Census Tract

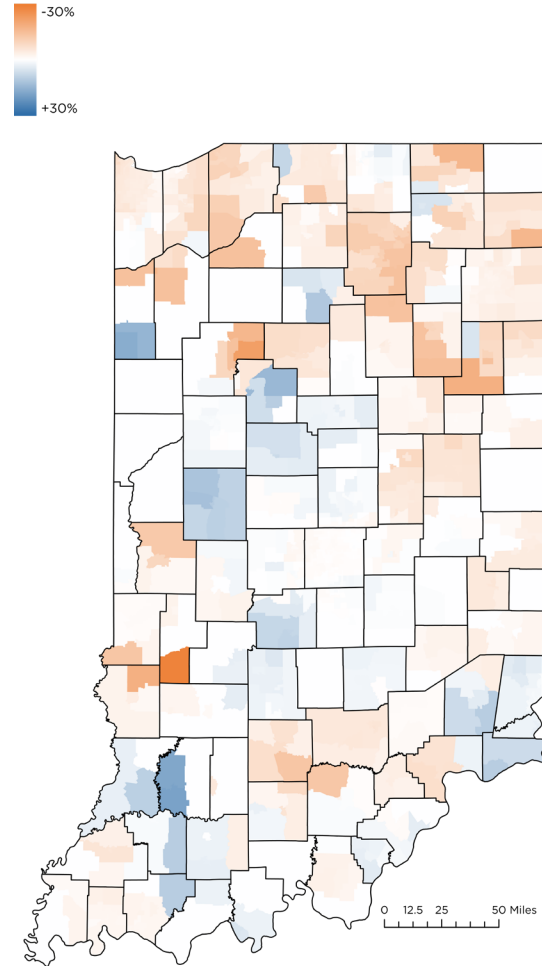
Change in Infant/Toddler Availability (2021 to 2022)



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

## Map 13 Change in Non-Traditional Hours Availability by Census Tract

Change in Non-Traditional Hours Availability (2021 to 2022)



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2022; Child Care Aware of America, National Data System, Indiana, 2022; Indiana Department of Education, INview, 2022

Changes in infant and toddler care availability at the census tract level can be seen in Map 12.

The prevalence of care being offered during non-traditional hours took a minor dip from roughly 28% to 26.1% of all programs offering non-traditional hours; tract-level changes are represented in Map 13. Care during non-traditional hours is not as in demand as care during the traditional hours of 6:00 AM to 6:00 PM. However, ensuring that this supply is available near employers who staff during evening, overnight or weekend shifts, can better support employees who may also need child care options during those shifts.

The statewide median Auspice Score remained consistent at .637 (on a scale from 0 to 1), meaning variation among different settings of care (school-based, licensed child care centers, family child care homes, etc.) has not seen any notable changes since the 2021 report. Having variation among program types allows families to make comparisons between program settings and empowers them to choose the setting that they are most comfortable with for their child. Areas lacking sufficient variation do not allow for these important considerations, and limit parent choice. Combined, these factors indicate that there was little to no growth observed in the choice component in the past year.

# Workforce Impact

Although not directly factored into the Early Learning Access Index, we would be remiss to discuss access in today's current climate without addressing the current status of the ECE workforce. Staffing within ECE programs has always been a challenging issue due to chronically high rates of turnover and traditionally low wages. Recruiting and retaining qualified team members remains a significant barrier to access in the wake of COVID-19.

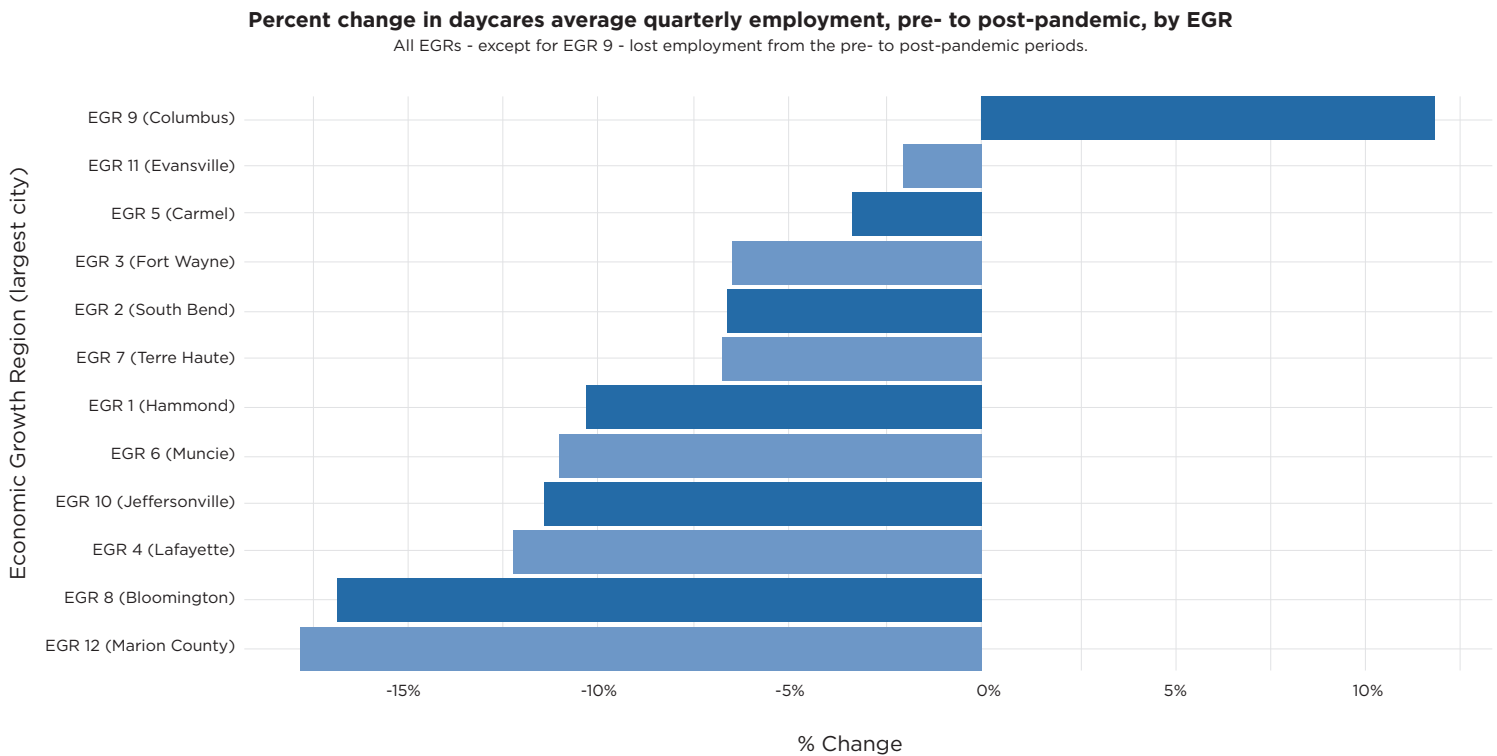
Data from the Bureau of Labor Statistics Quarterly Census of Employment and Wages via the Indiana Department of Workforce Development indicates that labor force participation in the child day care services and related industries category is

struggling to recover to pre-pandemic levels. Current projections indicate that, while some recovery has occurred since the lowest levels of industry employment in Quarter 1 of 2020, this industry has lost roughly 9% of its workers statewide since 2017. Those losses are even more pronounced regionally. Among Indiana's 12 economic growth regions (EGRs), six have seen industry losses upwards of 10%, five have had losses less than 10%, and only one EGR has demonstrated any gains in labor force participation within the industry.

Figure 1 demonstrates these regional differences with the % change indicated from pre- to post-pandemic.

## Figure 1

Source: BLS QCEW



Over the past year, Indiana providers have consistently reported an average of more than 3,000 open teaching positions per month. These shortages are forcing providers to close off capacity because they don't have adequate staffing to maintain sufficient adult-to-child ratios. In a November 2021 survey of providers, 50% of responding center-based programs and 20% of responding home-based programs indicated they had, in fact, reduced their program's capacity due to workforce shortages. Those reductions totaled over 7,700 lost seats, 89% of which were located within center-based programs. A follow-up survey in July 2022 indicated that for high-quality, center-based programs in particular, this trend has not only continued but accelerated, indicating that the workforce crisis is still significantly impacting providers' ability to operate at maximum capacity.

In addition to the obvious impact on families' decreased ability to enroll in programs, providers face financial burdens due to lost revenue and increased recruitment and retention costs. Roughly one-third of programs surveyed indicated that they were offering hiring and/or stay bonuses for staff, and 80% of programs had increased base wages as a hiring or retention incentive. The most recent census data related to labor force participation rates (LFPR) indicates that labor force participation among females with young children (under 6) is declining. 2021 LFPR rates among females with young children dropped three percentage points from the 2017-2019 average. Data from the IPUMS CPS Current

Population Survey indicates that 27.1% of females in Indiana aged 25-54 with children under 5 indicate that they are not looking for work because they "can't arrange child care." Workforce shortages are fueling capacity shortages and may be a key contributor to keeping women with young children out of the workforce.

Capacity sufficiency reported in *Closing the Gap* is based on licensed capacity, which is the maximum number of children who can be served within the program at one time. As providers elect to close off classrooms and reduce capacity due to staffing shortages or other operational challenges, their licensed capacity remains the same. To demonstrate the effect of these reductions on the capacity component of access, we modeled a 10% capacity reduction across all programs to demonstrate the impact of lost seats on capacity sufficiency rates. The 10% reduction was based on monthly data reported by providers related to current capacity, vacancies and enrollments. If we assume this 10% capacity reduction, the statewide capacity sufficiency rate drops from 61.2% to 55.1%. Seventy-four percent (74%) of Indiana counties would be able to serve fewer than 50% of children who may need care, as opposed to 66% of counties under this same mark using licensed capacity estimates. This would also impact overall Access Index scores throughout the state, albeit less significantly, given that the capacity component comprises just 30% of the overall Access Index score.



# Closing the Gap In Action

While the challenges facing early care and education in Indiana are great, we remain committed to the belief that the opportunity to positively impact the children and families who rely upon it is greater. In the past year, the *Closing the Gap* report and associated interactive tools have proven to be essential resources as communities seek to understand access barriers for families and expand access within their communities.

Through hundreds of consultations with community partners, providers, states and media outlets, we have leveraged *Closing the Gap* data to facilitate a broader understanding of the access dynamics unique to various local communities and promoted improvement strategies based on those dynamics. Below are a series of general strategy recommendations to address each access component, with examples of specific projects that have been funded through the first round of grants to follow. These strategies demonstrate how *Closing the Gap* can be leveraged to improve access to care for our littlest learners.

## Addressing Capacity Gaps

Where capacity is low, a community's first priority should be to increase baseline capacity through additional programs or the expansion of existing high-quality programs. Alleviating workforce shortages or budgetary constraints which have led to capacity reductions may also be effective. In these areas, consider assessing vacancy rates among current providers to determine their overall fill rate and if they typically operate by filling seats from a waitlist, as this will provide additional context to justify capacity building.

## Addressing Quality Gaps

Quality expansion can happen in a variety of ways. Working with local programs that are already high quality to expand their capacity or working with lower quality programs to become high quality will both improve quality scores in communities. Similarly, opening new programs which are high quality will improve both capacity and quality scores. Programs may struggle to reach high-

quality status due to lack of staff who meet the education requirements, so addressing staff education and professional development needs can also support quality expansion. When focusing on quality, it is important to note that quality care is expensive to provide and costs families more to attend. Ensuring that the cost of quality care is not prohibitive for families, especially low-income and ALICE (Asset Limited Income Constrained, Employed) families, is essential.

## Addressing Affordability Gaps

Assessing cost contributors and understanding the proportion of families who will or will not qualify for subsidy programs can create a pathway to developing targeted interventions to address affordability. When expansion of quality care occurs, market rates for those programs are likely to be higher, making high-quality programs less affordable for families. Expansion of programs which are eligible and actively accepting CCDF vouchers will facilitate greater access to care for low-income families. Generating support for funding that could help address affordability gaps through both public and private sources, especially in communities with high concentrations of racial and ethnic minorities where affordability scores are among the lowest, and working with employers to implement dependent care and flexible savings accounts to offset the costs of child care may be effective ways to reduce the cost barriers families face when accessing care.

## Addressing Choice Gaps

Working with existing providers to offer care during shifts and hours that align with work schedules of area employers can improve access to non-traditional hours of care, where it is determined to be in demand. Partnering with a program to expand ages served to offer infant and toddler care improves access for families with very young children. When choice is limited due to lack of program type variation, decisions about capacity expansion should be reflective of family and community needs related to this preference.

# Closing the Gap Grants

Through two *Closing the Gap* grant competitions, generously funded by Lilly Endowment Inc., Early Learning Indiana has been able to fund 32 projects, which upon completion will add more than 1400 seats to the Indiana early childhood education landscape. Successful applicants justified the need for their project through the use of *Closing the Gap* data combined with their local expertise. Examples of first round grantees and the way they are improving access in their communities are below; more information about grant projects funded and recipients can be found on the [Closing the Gap grants webpage](#).

The Adams County Economic Development Corporation (ACEDC), in partnership with MERIT Early Learning Center and the King's Kingdom, has set out to add 58 new child care seats across two child care centers. Behind the drive to create these new child care seats is the current workforce shortage in the county. The ACEDC decided to dive into what was causing the shortage and traced it back to the need for child care. With these additional seats, parents can re-enter the workforce without having to worry about child care.

The Greene County Community Foundation has a newer coalition focused on helping their local providers move through the Paths to QUALITY™ (PTQ)

system and connecting them to the resources and support they need to better serve their families. Currently, all five school systems in Greene County have a preschool program, and the coalition has set out to create 18 new preschool seats. The coalition is also continuing to support booster sessions for an ongoing PTQ cohort they've organized.

Focused on families who are at risk of or currently experiencing homelessness, Family Promise of Hendricks County has joined forces with TOTally Kids Child Care of St. Mark's. Coming together and aligning their services allows them to meet family needs through both designated funds for families served through Family Promise and a sliding scale that provides reasonable tuition to all families in the community.

With an urgent need for more space and classrooms, Scott County School District 2 is adding 160 new child care seats to better serve the families of Scott County. The school district will not only add new classrooms, but also therapy rooms and indoor activity centers. In addition to providing more seats, the district will also obtain and maintain Paths to QUALITY™ Level 3 to continue providing the best care.



# Conclusion

While producing this first annual update to the *Closing the Gap* report, we have observed fluctuations overall in both the Access Index and the individual component scores. A year is not enough time to make bold statements about trends, and true growth at this level takes time. However, it remains important to continually provide new and accurate data, especially when working on an issue as vital to Indiana's economic health as access to high-quality early care and education. It is our hope that communities will continue to engage with this resource and the interactive tools on the Early Learning Indiana website to understand and evaluate access in their communities in conjunction with the vital local context that only they can fully understand.

We invite you to study and question access in your community and how it has changed since 2021. What factors do you know of that may have contributed to that change? If changes have trended in a positive direction, can you continue to build upon that success? If they have trended negatively, what resources can come together in your community to stabilize or improve the access dynamics at play? The following appendix details county-level Access Index scores and component factors, with an indication as to which way the Access Index has changed since 2021. We look forward to more conversations and opportunities to partner with your communities to develop solutions for Hoosier early learning providers, communities, families and children.

Interested in Early Learning Indiana presenting to your organization or discussing this methodology for your community?

Please reach out to: [Access@EarlyLearningIndiana.org](mailto:Access@EarlyLearningIndiana.org)



# Appendix 1: County Access Statistics

**Table A-1: County Access Statistics**

County	Early Learning Access Index	CSR	High-Quality Cap. Rate	Cost-to-Income Ratio	Subsidized Capacity for Eligible Children	Infant/Toddler Program Availability	Auspice Score	Non-Traditional Hours Availability
Adams	▼ 39.3	34.2%	31.6%	10.9%	78.8%	58.8%	0.206	23.5%
Allen	▲ 60.5	52.5%	49.3%	11.8%	209.3%	66.2%	0.912	29.7%
Bartholomew	▲ 64.1	88.3%	36.0%	10.7%	315.2%	77.3%	0.770	13.3%
Benton	▲ 52.8	11.0%	90.9%	11.3%	51.2%	100.0%	0.139	0.0%
Blackford	▲ 45.7	34.0%	32.1%	10.8%	145.9%	76.5%	0.672	17.6%
Boone	▼ 51.3	37.8%	40.9%	9.3%	353.5%	74.1%	0.676	17.5%
Brown	▲ 65.8	49.8%	85.8%	10.1%	372.9%	66.7%	0.325	0.0%
Carroll	▲ 36.5	36.9%	5.9%	9.5%	90.9%	63.3%	0.806	20.0%
Cass	▲ 60.1	49.9%	58.7%	11.3%	153.0%	54.5%	0.693	18.2%
Clark	▲ 51.6	63.6%	25.8%	12.2%	316.5%	68.0%	0.946	16.9%
Clay	▼ 39.7	40.5%	15.4%	10.3%	170.8%	62.5%	0.715	28.1%
Clinton	▲ 56.8	44.7%	45.7%	11.7%	218.3%	73.5%	0.879	26.5%
Crawford	▲ 49.1	17.1%	91.1%	10.6%	64.0%	50.0%	0.007	0.0%
Daviess	▲ 57.9	52.1%	38.9%	8.8%	213.4%	88.5%	0.648	30.8%
Dearborn	▲ 48.0	34.3%	36.0%	9.9%	182.0%	71.4%	0.588	28.6%
Decatur	▲ 39.9	31.9%	16.2%	10.8%	172.2%	77.3%	0.773	31.8%
DeKalb	▲ 44.1	44.6%	33.2%	9.6%	238.9%	58.3%	0.268	10.4%
Delaware	▲ 69.0	80.0%	55.0%	15.0%	282.9%	73.0%	0.910	12.5%
Dubois	▲ 55.4	42.5%	47.5%	8.7%	250.4%	58.8%	0.765	23.5%
Elkhart	▲ 52.6	33.3%	45.3%	14.0%	115.2%	76.0%	0.677	39.4%
Fayette	▲ 43.2	71.9%	9.3%	11.1%	179.9%	47.8%	0.592	17.4%
Floyd	▲ 54.4	73.4%	24.2%	9.5%	404.1%	66.9%	0.871	17.1%
Fountain	▲ 32.3	32.0%	21.0%	10.8%	155.6%	25.0%	0.480	0.0%
Franklin	▼ 45.8	30.3%	34.1%	10.2%	153.1%	70.8%	0.532	33.3%
Fulton	▲ 56.8	38.4%	48.5%	8.2%	180.8%	73.9%	0.665	30.4%
Gibson	▼ 55.3	67.4%	32.6%	9.4%	199.1%	70.7%	0.599	17.1%
Grant	▲ 72.7	63.2%	77.0%	12.8%	244.5%	65.5%	0.597	21.8%
Greene	▲ 41.6	50.4%	17.3%	11.0%	199.6%	81.7%	0.371	11.7%
Hamilton	▼ 58.5	53.0%	41.7%	8.3%	647.2%	74.4%	0.801	26.3%
Hancock	▼ 49.5	33.4%	35.8%	10.7%	264.3%	75.3%	0.847	28.8%
Harrison	▲ 58.2	48.1%	55.0%	8.1%	260.0%	54.5%	0.730	6.8%
Hendricks	▼ 49.5	37.7%	35.6%	10.1%	369.2%	72.0%	0.858	18.7%
Henry	▲ 65.5	40.1%	73.8%	12.5%	168.9%	79.5%	0.576	12.0%
Howard	▲ 70.3	61.0%	69.8%	12.7%	228.9%	63.3%	0.701	28.3%
Huntington	▼ 46.3	39.0%	38.5%	12.4%	134.9%	65.1%	0.403	18.6%
Jackson	▲ 46.6	51.0%	27.5%	10.1%	214.3%	52.7%	0.820	14.5%
Jasper	▼ 37.2	20.5%	32.4%	10.8%	104.9%	57.9%	0.549	5.3%
Jay	▲ 49.0	24.8%	42.5%	11.2%	100.3%	85.7%	0.752	14.3%
Jefferson	▲ 58.0	34.8%	65.1%	9.6%	185.6%	58.6%	0.501	13.8%
Jennings	▼ 46.4	36.9%	26.7%	10.2%	215.1%	77.4%	0.274	67.7%

## Table A-1: County Access Statistics (continued)

County	Early Learning Access Index	CSR	High-Quality Cap. Rate	Cost-to-Income Ratio	Subsidized Capacity for Eligible Children	Infant/Toddler Program Availability	Auspice Score	Non-Traditional Hours Availability	
Johnson	▲	51.2	31.8%	47.2%	11.1%	239.6%	67.6%	0.867	9.6%
Knox	▲	59.9	63.1%	42.4%	9.1%	221.3%	87.2%	0.539	12.8%
Kosciusko	▲	53.5	35.3%	50.1%	10.5%	174.0%	63.8%	0.618	25.9%
LaGrange	▼	43.2	26.6%	34.6%	8.8%	133.1%	56.0%	0.293	44.0%
Lake	▲	64.9	65.0%	51.9%	16.2%	272.2%	72.7%	0.750	44.1%
LaPorte	▼	59.7	56.6%	46.5%	14.8%	185.6%	71.9%	0.613	46.6%
Lawrence	▲	46.8	33.7%	35.0%	10.7%	130.0%	75.0%	0.608	21.4%
Madison	▲	58.4	51.5%	52.7%	16.4%	194.6%	73.5%	0.920	8.6%
Marion	▼	70.8	105.5%	46.5%	15.8%	354.7%	72.1%	0.780	22.6%
Marshall	▲	63.8	42.1%	64.0%	12.4%	178.1%	73.8%	0.876	21.4%
Martin	▼	41.1	23.0%	29.2%	8.7%	141.6%	80.0%	0.280	30.0%
Miami	▲	47.8	46.1%	35.4%	13.5%	185.3%	56.9%	0.690	22.4%
Monroe	▲	69.8	68.3%	63.6%	10.8%	292.5%	74.8%	0.753	5.8%
Montgomery	▲	42.0	57.7%	24.2%	9.6%	218.5%	48.1%	0.249	7.4%
Morgan	▼	37.1	41.5%	12.2%	12.9%	170.9%	67.5%	0.850	11.8%
Newton	▲	55.4	29.2%	66.4%	13.5%	140.1%	54.5%	0.531	18.2%
Noble	▼	50.6	27.1%	51.6%	10.6%	179.6%	56.3%	0.570	27.1%
Ohio	▲	64.1	99.9%	37.9%	10.8%	592.3%	64.7%	0.201	23.5%
Orange	▲	51.2	34.9%	43.9%	10.0%	176.5%	68.0%	0.445	36.0%
Owen	▲	41.3	45.9%	21.9%	12.8%	142.5%	77.8%	0.525	4.4%
Parke	▼	54.5	66.7%	32.6%	10.2%	198.9%	80.3%	0.271	24.2%
Perry	▲	53.1	45.1%	45.8%	10.5%	127.0%	60.0%	0.425	30.0%
Pike	▼	61.5	88.1%	31.4%	7.9%	263.1%	68.2%	0.548	22.7%
Porter	▲	66.9	46.4%	61.3%	10.2%	325.8%	74.5%	0.748	47.4%
Posey	▲	70.4	44.3%	75.9%	7.8%	331.2%	71.1%	0.615	25.6%
Pulaski	▲	53.5	46.6%	35.6%	13.7%	187.5%	86.7%	0.654	40.0%
Putnam	▼	43.0	32.2%	28.4%	8.8%	161.0%	67.9%	0.587	21.4%
Randolph	▲	33.9	39.1%	10.2%	10.5%	96.7%	63.6%	0.641	0.0%
Ripley	▲	55.4	30.0%	51.2%	10.3%	155.8%	80.8%	0.327	50.0%
Rush	▲	42.4	39.7%	27.4%	10.1%	134.5%	61.9%	0.695	4.8%
St. Joseph	▲	67.7	67.3%	52.2%	12.7%	250.4%	75.7%	0.847	39.6%
Scott	▲	56.3	36.7%	58.3%	10.1%	118.6%	59.1%	0.576	18.2%
Shelby	▲	61.4	76.8%	37.6%	12.3%	339.9%	71.7%	0.892	18.7%
Spencer	▲	51.8	36.7%	44.6%	7.2%	188.4%	57.9%	0.491	31.6%
Starke	▲	51.6	32.6%	47.6%	13.8%	111.3%	68.0%	0.858	20.0%
Steuben	▲	62.8	44.8%	56.1%	8.2%	312.2%	86.4%	0.544	27.3%
Sullivan	▲	55.2	46.1%	43.6%	8.8%	222.9%	80.0%	0.445	24.0%
Switzerland	▲	28.8	21.2%	0.0%	11.5%	20.3%	66.7%	0.633	50.0%
Tippecanoe	▲	68.9	66.2%	55.9%	12.6%	311.7%	82.0%	0.772	34.6%
Tipton	▼	72.1	52.1%	75.7%	8.1%	326.2%	62.1%	0.697	27.6%

## Table A-1: County Access Statistics (continued)

County		Early Learning Access Index	CSR	High-Quality Cap. Rate	Cost-to-Income Ratio	Subsidized Capacity for Eligible Children	Infant/Toddler Program Availability	Auspice Score	Non-Traditional Hours Availability
Union	▼	35.8	23.8%	31.9%	5.9%	178.5%	37.5%	0.285	0.0%
Vanderburgh	▬	71.8	85.0%	55.5%	13.9%	314.4%	74.1%	0.827	21.2%
Vermillion	▲	41.5	46.3%	20.5%	10.0%	161.0%	75.0%	0.260	19.2%
Vigo	▲	59.2	62.9%	48.0%	13.9%	216.3%	83.9%	0.200	26.2%
Wabash	▲	46.5	55.8%	34.5%	10.2%	293.5%	38.7%	0.436	6.5%
Warren	▲	25.2	23.1%	12.3%	13.9%	102.2%	33.3%	0.613	0.0%
Warrick	▼	58.1	47.0%	43.6%	8.1%	359.5%	76.3%	0.912	21.4%
Washington	▲	58.6	58.1%	42.9%	8.8%	264.3%	60.5%	0.809	26.3%
Wayne	▼	49.9	50.0%	31.9%	9.5%	135.4%	64.6%	0.771	16.7%
Wells	▲	50.2	48.2%	42.2%	11.0%	183.6%	66.7%	0.323	10.0%
White	▼	40.1	37.2%	19.8%	10.5%	81.5%	73.3%	0.743	20.0%
Whitley	▲	41.0	34.4%	23.0%	10.3%	183.5%	64.6%	0.667	24.6%

# Appendix 2: Methodology

To analyze the state of ECE access in Indiana, ELI focused on a geospatial approach. Using geographic information system (GIS) software, ELI created layers of relevant data and analyzed those layers individually and in relationship to one another. This analysis examined four categories of contributing factors for access:

1. Capacity

2. Quality

3. Affordability

4. Choice

ELI used these four categories to develop an Early Learning Access Index, a formula consisting of weighted combinations of variables that range from 0 (worst) to 1 (best). The Early Learning Access Index is defined as:

*Access Index (I) = 30% Capacity + 30% Quality + 20% Affordability + 20% Choice*

*Capacity = c*

*Quality = q*

*Affordability = [(2f + s)/3]*

*Choice = [(t + a + h)/3]*

*where*

*c = score (0-1) derived from CSR*

*q = score (0-1) derived from rate of high-quality capacity*

*f = score (0-1) derived from cost-to-income ratio*

*s = score (0-1) derived from rate of subsidized care availability*

*t = score (0-1) derived from infant/toddler availability*

*a = Auspice Score (0-1)*

*h = score (0-1) derived from non-traditional hours availability*

***I = 30c + 30q + 20[(2f + s)/3] + 20[(t + a + h)/3]***

The following narrative describes in detail how ELI examined relevant data in each category to develop this formula. Each term in the equation represents one of the four categories, and the coefficients are the weights ELI has applied to each category. Other experts in the industry could argue a different set of weights in this formula, but ELI defined these weights as such to allow for emphasis on capacity (*c*) and quality (*q*) without devaluing the importance of affordability ( $[(2f + s)/3]$ ) and choice ( $[(t + a + h)/3]$ ). The variables that contribute to the Early Learning Access Index are derived from the relevant data and defined based on ratios, statewide averages and standard deviations so that each variable is normalized to a 0-to-1 range. After laying out each data point and subsequent variables, this section concludes with a review of the Early Learning Access Index.

**CAPACITY** ELI has developed a defined approach to understanding the effective capacity available to serve each area of the state. This approach is referred to as the Capacity Sufficiency Rate (CSR); the CSR incorporates a variety of layers of data necessary to obtain an accurate picture of supply throughout the state.

Within this analysis, ELI has defined demand as all children (under age 6) whose adult caregivers are active in the workforce. The U.S. Census Bureau's annual American Community Survey (ACS) collects this data. The most recent five-year estimates from 2019 are used here to identify the number of total children in each census tract<sup>[1]</sup> in Indiana who are under age 6 as well as the number of those children who have all caregivers in the labor force. The Indiana Family and Social Services Administration manages the Regulated Child Care System (RCCS), a database of all licensed ECE programs and the large majority of other registered or license-exempt programs, such as ministries and Head Start/Early Head Start programs. ELI geocoded the addresses of every program to plot them on the map of Indiana. Capacity estimates for programs are based on a hierarchy of available data; if a program does not

have a value in the first field available, the next field is used, and so on. This hierarchy is as follows:

1. "Capacity" in RCCS – refers to the licensed capacity of the program
2. "Total Desired Capacity" in the Child Care Aware of America National Data System (NDS) for Indiana
3. "Recommended Capacity" in RCCS, used to estimate capacity in ministries that do not have a licensed capacity
4. The sum of "Head Start Capacity," "Early Head Start Capacity" and "Migrant Capacity" as shown for only Head Start/Early Head Start programs (and seasonal migrant programs) in RCCS

To supplement its understanding of available supply, ELI obtained a list of all school-based pre-K programs from the Indiana Department of Education's (IDOE) INview portal. These programs were cross-referenced with the RCCS data to remove any duplication between the two sources. The remaining programs were added to the RCCS supply for this analysis. Capacity for these programs is defined as the current pre-K enrollment at the time the data was obtained, as total capacity data was not available from this data source. Therefore, it should be assumed that the capacity estimates for public and private school-based pre-K programs, represent a minimum capacity for each program.

In the 2022 update of *Closing the Gap*, ELI added additional steps in the estimate of capacity across all programs. For any of the programs in RCCS that are also school-based pre-K programs in the IDOE data, if there is no indicated capacity for these programs using the RCCS and NDS data, the capacity is substituted with the pre-K enrollment from IDOE. For all other programs without capacity data, ELI assumed a minimum of 10 seats for all programs except license-exempt home-based programs, which have a capacity of 5. The null capacity values for these programs was

<sup>[1]</sup> U.S. Census data is compiled at the block level. A blockgroup is a contiguous section of blocks. Blockgroups are further compiled into tracts. Tracts do not cross county boundaries, so all counties have their own collection of tracts. Tracts are used as the geographic frame of reference for the majority of this analysis.

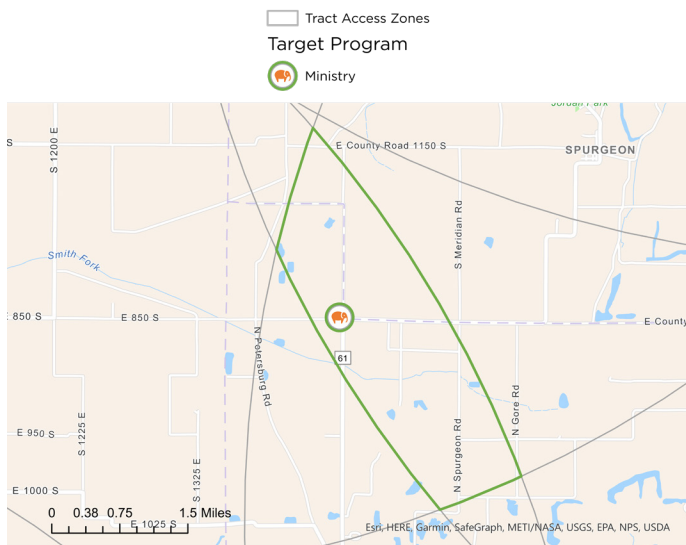
replaced with this minimum value, understanding that actual capacity might still be greater if the data for such capacity was available. These steps help to improve the estimated minimum capacity available across all programs included in the analysis.

With demand and supply both defined and calculated, the effectiveness of the supply can be assessed using the CSR. The CSR is defined as the effective calculated capacity of all programs within a 10-mile radius of the population center<sup>[2]</sup> of a given census tract divided by the sum of all children under age 6 with working caregivers in the tract. The 10-mile radius is an estimate of the maximum distance most families would be willing to travel for care. Furthermore, the effective capacity is an estimate of a program’s calculated capacity distributed equally among all of the tracts that the program may serve. This is determined by the number of tracts whose 10-mile radius encompasses the given program. For example, Map A-1 shows a program that has a capacity of 42 and is within 10 miles of the population centers of 4 different tracts. That program’s effective

capacity is 10.5 (42 divided by 4), which would be aggregated with other effective capacities for a given tract and the sum rounded to a whole number. This prevents capacity from being duplicated and illustrates a more accurate picture of how much capacity is actually available to the families living within a given area. This method allows us to understand sufficiency in areas wider than an individual tract but more granular than the county level. This is especially useful in more urban counties like Marion and Lake, where many census tracts will not have any programs because the sizes of the tracts are much smaller and the population in those tracts is likely to be mobile and utilize care in other nearby areas. It also allows for a certain level of commuting, such as in rural areas like Pulaski or Lawrence counties, where a single town might serve as a hub for most of the county.

In general, the CSR gauges how well the capacity or supply in a given area is able to meet the demand. If the CSR is 100% or more, then there is likely no need for additional capacity. On the other hand, if the CSR is less than 50%, for example, then the area may need to increase its capacity to effectively serve all children who may be in need of care. The CSR ( $x_c$ ) is used as the only contributing factor to the variable  $c$  in the Early Learning Access Index:

## Map A-1 Effective Capacity of a Program



Sources: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates; Indiana Family and Social Services Administration, RCCS, 2021; Child Care Aware of America, National Data System, Indiana, 2021; Indiana Department of Education, INview, 2021

*If CSR ( $x_c$ ) is:  
<1, then  $c$  is  $x_c$   
≥1, then  $c$  is 1*

<sup>[2]</sup> The population center of a tract is defined here as the geographic center of the most populated blockgroup within the tract. Using the population center is a more effective approach to understanding where the majority of a tract’s residents would travel to for care.

**QUALITY** Quality is assessed by calculating the capacity of those programs that the state of Indiana considers high-quality (Levels 3 or 4 on Paths to QUALITY™). The percentage of high-quality care is determined by dividing the high-quality capacity by the total capacity defined in the capacity analysis. Low percentages indicate that the available capacity is not located within high-quality programs.

The formulas used in the Closing the Gap analysis are derived from the state of access in August 2021, when the first analysis was completed. The formulas are kept the same in order to measure relative change across all localities over time. The statewide average rate of high-quality care among tracts in 2021 was 44%, meaning that the majority of available care for any given area is likely lower-quality programs. To account for outliers that may affect the appropriate range of analysis in relation to this average, ELI utilized standard deviations to assess the appropriate comparison ranges across many of the variables in this report. This method is useful for understanding how drastically the data deviates from the average.<sup>[3]</sup> Using two standard deviations to set the comparison range allows for inclusion of the vast majority of records in the data, based on the statistical understanding of a normal distribution, and it leaves only the outliers outside of the range. These outliers are then treated equally as minimum or maximum values within whatever variable is being set. The percent of high-quality capacity ( $x_q$ ), relative to the statewide average (0.44) and two standard deviations (0.32), is the contributing factor to the variable  $q$  in the Early Learning Access Index:

*If the rate of high-quality capacity ( $x_q$ ) is:*  
 *$\leq 0.12$ , then  $q$  is 0*  
 *$> 0.12$  and  $< 0.76$ , then  $q$  is  $[(x_q - 0.12)/0.64]$*   
 *$\geq 0.76$ , then  $q$  is 1*

This calculation demonstrates that a rate less than 12% would not have enough high-quality capacity to contribute at all to the Early Learning Access Index. Alternatively, based on the trends throughout the state, any tract with at least 76% high-quality capacity would obtain the full value of quality in the Early Learning Access Index calculation. It is worth noting that participation in Paths to QUALITY™ is voluntary, so if programs do not opt in, they cannot meet the Indiana definition of a high-quality program, no matter how highly the program might rate in alternative assessments.

**AFFORDABILITY** There are two pieces in this analysis related to affordability: the cost-to-income ratio of a tract and the rate of estimated subsidy-eligible children that can be served by programs that offer subsidized care. In looking at affordability as a cost-to-income ratio, median annual family income for families with children by tract is an important data point. This data is available at the tract level from the same 2019 ACS five-year estimates described previously.

Rates of care charged by programs are collected in the National Data System (NDS) for Indiana. Programs throughout the state are asked to disclose their market rates every six months. For this analysis, the average full-time, weekly cost of care for all programs<sup>[4]</sup> was calculated within the same 10-mile radius for each census tract.

<sup>[3]</sup> Herries, J. (2020). Better Breaks Define Your Map's Purpose. ArcUser: The Magazine for Esri Software Users, Fall 2020. Redlands, CA: Esri.

<sup>[4]</sup> Some programs do not have any market rate data available; others have rates in other time categories (hourly, daily, monthly) or as part-time instead of full-time. This analysis utilizes only the rates available in the full-time, weekly category.

The cost-to-income ratio is defined at the tract level as the annualized<sup>[5]</sup> average cost of full-time, weekly care in the tract's 10-mile radius divided by the median annual family income for the tract. These calculations demonstrate the effective percentage of income for families in each community that would be used for one child's care; this does not account for families that may need care for multiple children. The statewide average cost-to-income ratio among tracts in 2021 was 0.15, meaning that families throughout the state are likely to spend somewhere around 15% of their gross annual income on care for one child. The cost-to-income ratio ( $x_f$ ), relative to the statewide average (0.15) and two standard deviations (0.26), contributes to the variable  $f$  in the Early Learning Access Index:

*If the cost-to-income ratio ( $x_f$ ) is:  
<0.41, then  $f$  is  $[1 - (x_f/0.41)]$   
 $\geq 0.41$ , then  $f$  is 0*

Using this calculation for the variable  $f$ , a cost-to-income ratio of 41% or higher per child represents very low affordability and would have 0 points toward the Early Learning Access Index in this portion of the affordability term. Any cost-to-income ratio less than 41% would garner a proportional score on the variable  $f$ .

The rate at which subsidized care can serve children from lower-income families is an important supplemental factor to general affordability. By looking at the availability of subsidized care, we can better understand if lower-income families might still have access to care in areas where care may be less affordable. In this component, subsidized care is defined as a program that falls in one (or more) of the following categories: Child Care and Development Fund (CCDF) voucher acceptance eligibility, On My Way Pre-K participation, Head Start participation or Early Head Start participation. All four of these programs provide subsidies to make care available to families who might otherwise not be able to afford care for their children. The estimate of eligible children is drawn from the percentage of the general population that falls under 125% of the federal poverty level, understanding that the profile of children in an area does not necessarily match that of the general population. However, this provides a rough estimate that can still help to understand the possible number of eligible children in any given area. The subsidized care component looks at the percent of estimated subsidy-eligible children in the tract that can be served by programs offering some form of subsidized care (per the above definition) in the tract's 10-mile radius. While this calculation is only an estimate of the sufficiency at which subsidized care is made available to families who may need it, it certainly helps provide a general understanding of the status of subsidized care throughout the state. The percent of eligible children that can be served by subsidized care ( $x_s$ ) contributes to the variable  $s$  in the Early Learning Access Index:

*If the subsidized care ratio ( $x_s$ ) is:  
<1, then  $s$  is  $x_s$   
 $\geq 1$ , then  $s$  is 1*

<sup>[5]</sup> Weekly averages are multiplied by 52 to estimate the average annual cost of care.

The calculation for variable  $s$  simply means that any subsidized care rate that is 100% or higher gives the tract the full possible value of the variable, whereas anything less is simply the same proportion as the ratio indicates (i.e., a ratio of 30% would get 0.3 points out of 1 possible point).

In the Access Index, ELI has given the cost-to-income ratio twice the weight of the rate of subsidized care when measuring affordability. Doing so places greater importance on the cost of programs, which affects all who seek care, than the availability of specific subsidies, which typically affects a smaller proportion of families. This method still allows subsidized care availability to influence overall affordability, while demonstrating that program cost is more influential for all families.

**CHOICE** Compared with the three categories described above, choice is much more complex to define and calculate. In assessing child care options,

Choice has been separated into three subcategories: infant/toddler care availability, auspice variation and non-traditional hours availability.

For most programs in RCCS, there is data about the age groups that are served. Many programs may offer care for only preschool/pre-K and others may offer only infant/toddler care; still others might serve children of all ages. Using this data, ELI calculated – within each tract’s 10-mile radius – what percent of programs offer care for infants (less than 1 year old) and/or toddlers (1 or 2 years old). These percentages are used as a general gauge of the availability of infant/toddler care throughout the state. The statewide average availability rate of infant/toddler programs among tracts in 2021 was 69%, meaning that most tracts in the state have around two-thirds of accessible programs within a 10-mile radius offering care of infants and/or toddlers. The infant/toddler availability rate ( $x_t$ ), relative to the statewide average (0.69) and 2 standard deviations (0.26), contributes to the variable  $t$  in the Access Index:

*If the infant/toddler availability rate ( $x_t$ ) is:*  
 *$\leq 0.43$ , then  $t$  is 0*  
 *$> 0.43$  and  $< 0.95$ , then  $t$  is  $[(x_t - 0.43)/0.52]$*   
 *$\geq 0.95$ , then  $t$  is 1*

With the availability of programs like pre-K and Head Start programs focused on specific age groups, it is not reasonable to expect that all programs in any given area will serve infants and/or toddlers. Thus, this calculation allows full credit to areas that have at least 95% of programs serving infants and/or toddlers, based on the above average and standard deviations. Alternatively, anything less than 43% is considered insufficient and does not get any credit in variable  $t$ .

Auspice variation is the most complicated piece of this analysis. In Indiana there are many different auspices for child care settings. In this analysis, we observe the following auspices: Centers (exempt or licensed), Ministries, Homes (exempt or licensed), Local Education Affiliates (LEAs), Head Start/Early Head Start Programs and Other School-Based Pre-K Programs (not already included in the previous RCCS auspices). Among those, the latter three are specialized auspices that often encompass smaller portions of available care. Thus, this analysis focuses on the rate at which the former three (Centers, Ministries and Homes) exist among the available programs throughout the state. For each tract (using the 10-mile radius method consistent with the rest of the analysis described above), each of these three auspices is calculated separately as a percentage of the total programs in the area. Since the statewide ratio of auspices is not a balance of these three, they are each assigned scores relative to the statewide average, and these scores are averaged out to create an Auspice Score ( $a$ ).

Statewide, the average ratio of centers in 2021 was 19%, 16% for ministries and 48% for homes. In absolute numbers of programs, homes are much more prevalent throughout Indiana than centers or ministries. For each tract, the ratio is then compared to the average, within a range of two standard deviations. The standard deviations for each auspice are 0.1 for centers, 0.09 for ministries, and 0.16 for homes. Each of these three auspices is assigned a score from 0 to 1, based on the above relationships to the respective averages and standard deviations. Here are the calculations for each auspice:

*If the ratio of centers ( $x_{centers}$ ) is:*

*$<0.19$ , then the centers score ( $a_{centers}$ ) is  $(1 - [(0.19 - x_{centers})/0.19])$   
 $\geq 0.19$  and  $<0.39$ , then the centers score ( $a_{centers}$ ) is  $(1 - [(x_{centers} - 0.19)/0.2])$   
 $\geq 0.39$ , then the centers score ( $a_{centers}$ ) is 0*

*If the ratio of ministries ( $x_{ministries}$ ) is:*

*$<0.16$ , then the ministries score ( $a_{ministries}$ ) is  $(1 - [(0.16 - x_{ministries})/0.16])$   
 $\geq 0.16$  and  $<0.34$ , then the ministries score ( $a_{ministries}$ ) is  $(1 - [(x_{ministries} - 0.16)/0.18])$   
 $\geq 0.34$ , then the ministries score ( $a_{ministries}$ ) is 0*

*If the ratio of homes ( $x_{homes}$ ) is:*

*$\leq 0.16$  or  $\geq 0.8$ , then the homes score ( $a_{homes}$ ) is 0  
 $>0.16$  and  $<0.8$ , then the homes score ( $a_{homes}$ ) is  $[1 - (|x_{homes} - 0.48|/0.32)]$*

These respective scores are averaged out to obtain the overall Auspice Score ( $a$  in the Early Learning Access Index):

$$a = [(a_{centers} + a_{ministries} + a_{homes})/3]$$

Just like the respective scores for each auspice, the overall Auspice Score also ranges from 0 (low variation) to 1 (high variation). The premise of the Auspice Score is that an area with higher variation indicates that families have more types of care to choose from when looking for options. An area with a lower variation would have fewer auspices to choose from, so families could be enrolling in their second-choice auspice, for example, because there may not be any programs of their preferred auspice in the area.

Wrapping up the choice analysis is a much simpler aspect: the availability of non-traditional hours. RCCS maintains data on the operating hours and days of the week for most programs in the database. ELI used this data to identify which programs are known to be “non-traditional.” A non-traditional program is defined as one which meets one (or more) of the following criteria: opens earlier than 6 a.m., does not close until 7 p.m. or later, stays open overnight or operates on Saturdays and/or Sundays. Just as with infant/toddler care, ELI used this information to calculate the percent of programs offering non-traditional hours within each tract’s 10-mile radius. The non-traditional hours availability rate ( $x_h$ ), relative to the statewide average (0.27) and 2 standard deviations (0.34), contributes to the variable  $h$  in the Early Learning Access Index:

*If the non-traditional availability rate ( $x_h$ ) is:  
 $<0.61$ , then  $h$  is  $(x_h/0.61)$   
 $\geq 0.61$ , then  $h$  is 1*

With the demand for non-traditional hours likely to be relatively low (compared with overall demand), ELI does not utilize a calculation that maximizes at a 100% non-traditional availability rate. Instead, the maximum allotment of points on variable  $h$  is set at any non-traditional availability rate greater than or equal to 61% (based on the average and standard deviation above). Anything less than 61% receives a proportional score, relative to the 61% maximum.

**EARLY LEARNING ACCESS INDEX** With all of the factors above defined (and the respective variables calculated), ELI developed an Early Learning Access Index that scores every tract from 0 (low access) to 100 (high access), according to a system of weights applied to each of the four categories:

$$I = 30c + 30q + 20[(2f + s)/3] + 20[(t + a + h)/3]$$

where

$c$  = score (0-1) derived from CSR

$q$  = score (0-1) derived from rate of high-quality capacity

$f$  = score (0-1) derived from cost-to-income ratio

$s$  = score (0-1) derived from rate of subsidized care availability

$t$  = score (0-1) derived from infant/toddler availability

$a$  = Auspice Score (0-1)

$h$  = score (0-1) derived from non-traditional hours availability

In this formula, capacity is weighted at 30%, quality at 30%, affordability at 20% and choice at 20%. Capacity and quality are single-factor variables, but affordability and choice include additional calculations to determine the value that is applied to the weight. Affordability combines the cost-to-income ratio (applied twice [2f]) with the subsidized care rate and averages the values. By counting cost-to-income ratios twice, the Access Index places a priority on this universal understanding of affordability while still accounting for the availability of subsidized care. Choice is a simple average of the three contributing factors: infant/toddler availability, Auspice Score and non-traditional hours availability.

Overall, the Early Learning Access Index creates a holistic understanding of the state of early childhood education access in Indiana. It places an emphasis on capacity and quality while also accounting for additional factors (affordability and choice) that are often overlooked.

# Early Learning

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