



Early Childhood in Colorado

A Shared Commitment to Children and Families

Monitoring and Measuring
Progress in Colorado's
Early Childhood

Areas of Opportunity



2019

MONITORING AND MEASURING PROGRESS IN COLORADO'S EARLY CHILDHOOD AREAS OF OPPORTUNITY

TABLE OF CONTENTS

SECTION	PAGE
▶ Introduction and Acknowledgements	2
▶ Background	3
▶ Identifying the Indicators	5
▶ Data Baseline	
▶ Improve access to high quality early care and education for all families.	9
▶ Elevate the early childhood workforce to ensure coordinated career pathways and appropriate compensation.	17
▶ Support improved family health and economic security through a Two-Generation approach	20
▶ Data Development Agenda: Identifying Data Gaps	23
▶ Appendices	26

INTRODUCTION AND ACKNOWLEDGEMENTS

This report was developed as a technical resource on the indicators selected to measure progress on the Colorado Early Childhood Leadership Commission's (ECLC) Areas of Opportunity, 2018. It includes the methods, selected indicators, data gaps, and baseline data for each of the Areas of Opportunity. The ECLC wishes to express gratitude to members of the Data Subcommittee and its partners who participated in this important process.

Charlotte Brantley, Co-Chair, Data Subcommittee Clayton Early Learning	Anji Gallanos Colorado Department of Education	Jennifer O'Brien Colorado Department of Education
Susan Steele, Co-Chair, Data Subcommittee Buell Foundation	Christina Gotfredson Gary Community Investments	Nick Ortiz Colorado Department of Education
Renee Alarcon Colorado Department of Human Services	Sheridan Green Clayton Early Learning	Amanda Pelletier Early Childhood Leadership Commission
Carsten Baumann Colorado Department of Public Health and Environment	Shannon Hagerman University of Colorado Denver	Phil Perrin Denver Early Childhood Council
Stacy Buchanan Qualistar Early Learning	Kristina Heyl Early Childhood Leadership Commission	Lydia Prado Barton Institute for Philanthropy and Social Enterprise
Emily Bustos Denver Early Childhood Council	Stacey Kennedy Colorado Department of Human Services	Brett Reeder Colorado Department of Human Services
Mary Alice Cohen Colorado Department of Human Services	Ian Kleats Colorado Department of Human Services	Keller Anne Ruble Gary Community Investments
Brian Conly Colorado Department of Human Services	Mark Kling Colorado Family Resource Center Association	Stuart Sims Colorado Family Resource Center Association
Tracie Corner Denver Early Childhood Council	Laura Knudtson Parent Possible	Tracey Stewart Gary Community Investments
Heather Craiglow Colorado Department of Human Services	Whitney Leboeuf University of Denver	Antoinette Taranto Colorado Department of Health Care Policy and Finance
Miriam Estrada Mental Health Colorado	Zarah Levy Clayton Early Learning	Michael Taylor Early Learning Ventures
Kayla Frawley Clayton Early Learning	Maegan Lokteff Grand Beginnings	Giorgianna Venetis Colorado Department of Human Services
	Hanna Nichols The Civic Canopy	Rick Winter Early Childhood Council Leadership Alliance

Thank you to Heather Matthews for guiding us through this work.

BACKGROUND

COLORADO'S EARLY CHILDHOOD LEADERSHIP COMMISSION

The ECLC is Colorado's statutorily recognized state advisory council for early childhood. The role of the ECLC is to be a statewide leader, subject matter expert and champion of best and promising practices throughout the state. The ECLC is comprised of 20 individuals representing parents, business, five state departments, school districts, local municipalities, foundations, nonprofits and other important early childhood stakeholders. The ECLC serves as the trusted and proactive early childhood champion for high quality, outcome-focused learning and development, health and well-being, and family support and education for pregnant women and children birth through age eight and their families. The ECLC:

- Develops strategies to monitor and align efforts that increase the access, quality and equity of services through the Early Childhood Colorado Framework;
- Assists in the development of public-private partnerships to coordinate and enhance services and supports and;
- Champions the use of relevant data and makes recommendations to the Governor's Office, the General Assembly and state agencies.

ECLC DATA SUBCOMMITTEE

The purpose of the ECLC Data Subcommittee is to promote the sharing and use of common data for planning and accountability by state programs and agencies that support young children. The Subcommittee works to ensure the interagency data system infrastructure allows for statewide needs assessments concerning the quality and availability of early childhood services. The Subcommittee also monitors progress across early childhood systems, supports continued collection of data, and evaluates progress on the ECLC's strategic priorities in order to leverage and connect existing data efforts and encourage effective data use in decision-making.

ECLC AREAS OF OPPORTUNITY

While Colorado has experienced progress in the early childhood sector, there are still challenges that must be addressed at the local and state level to ensure everyone has access to the services and supports that optimize the well-being of their child and family. Further, with a new Colorado administration, the ECLC sought to unite Colorado's early childhood community around priorities that could be readily communicated and represent the areas most ready for implementation and continued investment. The ECLC encourages efforts to support and enhance the following three Areas of Opportunity (Areas).

▶ IMPROVE ACCESS TO HIGH QUALITY EARLY CARE AND EDUCATION FOR ALL FAMILIES

High quality early care and education environments provide a stable place for children to grow and thrive, allowing them to build the strong foundation of cognitive and social-emotional skills they need to be prepared to succeed in school and develop life-long positive outcomes. Unfortunately, the availability of high quality services is severely lacking and poses a significant expense to families. Additional investments are needed to deliver services through a combination of programs, providers and settings, including licensed family and center-based child care programs, public schools, informal family/friend/neighbor care and other community-based organizations. This mixed delivery system provides early childhood care and education options that ensure wherever children are cared for, they are in high quality, supportive environments. Particular attention should be paid to infant and toddler care, which is significantly more difficult for families to access and afford.

▶ ELEVATE THE EARLY CHILDHOOD WORKFORCE TO ENSURE COORDINATED CAREER PATHWAYS AND APPROPRIATE COMPENSATION

Early childhood educators provide the critical foundation for children in out-of-home care to develop the literacy and social-emotional skills they need to succeed in school. The early care and education sector is a cornerstone of local and state economic health, enabling parents to work and provide for their families while employing a large workforce of educators. However, as professional development opportunities and expectations for these educators have increased, compensation lags behind most other industries, and communities throughout Colorado are facing significant challenges recruiting and retaining a stable early childhood workforce. Ensuring that Colorado has a qualified, consistent and diverse early childhood workforce is critical to supporting the healthy development of children and maintaining a thriving economy.

▶ SUPPORT IMPROVED FAMILY HEALTH AND ECONOMIC SECURITY THROUGH A TWO-GENERATION APPROACH

Parents are their children's first and most important teachers. Ensuring that parents have the health and economic supports they need to provide a nurturing home environment and meet their children's basic needs is essential for a child's healthy development. Children who are cared for in stable environments with access to health services, nutritious foods, safe water, stable housing and high quality learning environments are better able to develop the skills they need to succeed in school and thrive in their communities. Unfortunately, many children are living in environments without these basic supports, which research suggests can lead to poor mental and physical health, less success at school and work, and lower socioeconomic status in adulthood. Colorado should continue to support family health and economic security through state and local programs and ensure that interventions provide opportunities for both children and caregivers.

IDENTIFYING THE INDICATORS

PURPOSE

After identifying the three Areas of Opportunity, the ECLC committed to identifying a process to explicitly track progress over the next four years. This task was entrusted to the ECLC Data Subcommittee, which simultaneously identified data gaps, specifically related to each of the Areas.

METHODS

The ECLC Data Subcommittee spent three months with the support of a consultant during 2018-2019 identifying indicators that would best measure progress on each of the Areas in four years. The process began by developing an initial list of available indicators for each of the Areas. This involved accessing an indicator inventory that had been previously developed by the Early Childhood Colorado Partnership in their Shared Data Agenda. The process continued through several key informant interviews with subject matter experts in early care and education, early education workforce, health and well-being, and economic security. The resulting list of indicators were reviewed by the Data Subcommittee and assessed for relevance and robustness of information that could be gleaned from the indicator.

Following that process, the Data Subcommittee requested greater definition of the Areas from the ECLC in order to be more precise in the selection of indicators. The consultant worked with the ECLC and stakeholders to identify desired outcomes for each of the Areas, drawing many from the Early Childhood Colorado Framework, while others were derived from relevant current Colorado efforts.

ECLC OUTCOMES BY AREA OF OPPORTUNITY

<p><i>Improve access to high quality early care and education for all families.</i></p>	<ul style="list-style-type: none"> ● A supported, funded mixed-delivery system exists to meet family needs. ● Adults understand and support children's learning and development, including social and emotional. ● Early care and education options meet the needs, expectations of families. ● Families, including those with high needs, experience timely and coordinated services and supports. ● Families have affordable child care options. ● Family engagement and leadership opportunities exist within programs, schools, and communities. ● Families advocate for high quality comprehensive services and supports that lead to future success.
<p><i>Elevate the early childhood workforce to ensure coordinated career pathways and appropriate</i></p>	<ul style="list-style-type: none"> ● Early care and learning providers have higher compensation across all early childhood settings. ● Early childhood educators obtain higher levels of training and professional development, measured through formal education and the Professional Development Information System. ● Education, coaching and ongoing training exist for caregivers, teachers and other professionals (aligned with Colorado's early childhood competencies). ● Clear, consistent qualifications and career pathways exist for individuals in the early childhood profession.

compensation.	<ul style="list-style-type: none"> • Early care and education providers of color and of diverse cultures are actively recruited/encouraged/incentivized to become early care and education professionals. • Turnover rates among early learning and education providers across all formal care settings are reduced.
<i>Support improved family health and economic security through a Two-Generation approach.</i>	<ul style="list-style-type: none"> • Family engagement and leadership opportunities exist within programs, schools, and communities. • Family knowledge and capacity support children's healthy development and learning. • Families advocate for high quality comprehensive services and supports that lead to future success. • Education, employment, housing, financial and legal supports contribute to family economic security. • Families, including those with high needs, experience timely and coordinated services and supports. • Family-friendly policies and practices exist in the workplace. • Economic policies positively impacting families are enhanced or maintained (e.g. Earned Income Tax Credit). • Services and supports promote the well-being and resiliency of parents and caregivers and children. • Settings and practices promote strong relationships, social and emotional development, appropriate nutrition and physical activity.

Next, building upon the outcomes, a small group of Data Subcommittee members and additional subject matter experts worked together to develop themes in the outcomes. The themes were used to develop a comprehensive list of existing indicators. The indicators in the comprehensive lists were then critiqued by the full Data Subcommittee using Results Based Accountability criteria in order to identify three to five indicators per Area.

**RESULTS BASED
ACCOUNTABILITY
CRITERIA**

Proxy Power: Does the indicator say something of central importance to the result?

Communication Power: Does the indicator communicate to a broad range of audiences?

Data Power: Is quality data available on a timely, consistent, reliable basis?

While the Areas related to early care and education (ECE) and workforce were narrower in focus and more concrete, the third Area related to family health and economic security through a Two-Generation approach was more complex and required a different approach. For example, the initial, comprehensive lists of indicators for ECE and workforce included 8-10 indicators; while the comprehensive list for health and Two-Generation approach included approximately 25 indicators. In order to recognize and communicate the complexity of this Area without including too many indicators, the Data Subcommittee chose to use an existing, related index, which incorporates multiple factors into one measurement. The Data Subcommittee members committed to continuing to explore this area based on more discussion and guidance from the ECLC to identify future process or qualitative indicators.

SELECTED INDICATORS BY AREA OF OPPORTUNITY, INCLUDING SOURCE

<p><i>Improve access to high quality early care and education for all families.</i></p>	<p>Accessibility</p> <ul style="list-style-type: none"> • Percent of eligible children age three to five who were able to participate in Head Start or Colorado Preschool Program by region (Colorado Department of Education & Colorado Department of Human Services, Office of Early Childhood) • Number of licensed child care slots compared to Colorado children up to 12 months, 1-2 year olds, 3-5 year olds by region (include child care deserts map) (Colorado Department of Human Services, Office of Early Childhood) <p>Affordability</p> <ul style="list-style-type: none"> • Percent of children in low income homes able to participate in Colorado Child Care Assistance Program (Colorado Department of Human Services, Office of Early Childhood) <p>Meeting Needs of Families</p> <ul style="list-style-type: none"> • Percent of families that quit a job, did not take a job, or changed a job because of problems with child care (Colorado Department of Labor and Employment) <p>Quality</p> <ul style="list-style-type: none"> • Percent of licensed providers attaining a level 3-5 in Colorado Shines (Colorado Department of Human Services, Office of Early Childhood)
<p><i>Elevate the early childhood workforce to ensure coordinated career pathways and appropriate compensation.</i></p>	<p>Compensation</p> <ul style="list-style-type: none"> • Child care worker wage increase when adjusted for inflation (Bureau of Labor Statistics) • Percent of ECE professionals who received public benefits for low income families (Colorado Workforce Survey) <p>Workforce Diversity</p> <ul style="list-style-type: none"> • ECE worker diversity across roles compared to children in care (American Community Survey, Colorado Workforce Survey)

<p><i>Support improved family health and economic security through a Two-Generation approach.</i></p>	<p>Opportunity Index</p> <ul style="list-style-type: none"> • Economy • Education • Health • Community <p>Process/Qualitative Measures TBD (See Appendix C)</p>
---	---

While the Opportunity Index served as a good starting point for measuring this Area of Opportunity, the Subcommittee has continued to refine the desired outcomes and has developed a set of associated key indicators. A list of these indicators has been included as Appendix C, and the data for these indicators will be used to track progress in this Area in subsequent monitoring and reports.

IMPROVE ACCESS TO HIGH QUALITY EARLY CARE AND EDUCATION FOR ALL FAMILIES

High quality ECE environments provide a stable place for children to grow and thrive, allowing them to build the strong foundation of cognitive and social-emotional skills they need to be prepared to succeed in school and develop life-long positive outcomes. Unfortunately, the availability of high-quality services is severely lacking and poses a significant expense to families, creating barriers to stable employment. Additional investments are needed to deliver ECE services through a combination of programs, providers and settings, including licensed family and center-based child care programs, public schools, informal family/friend/neighbor care and other community-based organizations. This combination, frequently referred to as a mixed delivery system, provides early childhood care and education options that ensure wherever children are cared for, they are in high quality, supportive environments. Particular attention should be paid to infant and toddler care availability, which is significantly more difficult for families to access and afford.

ACCESSIBILITY

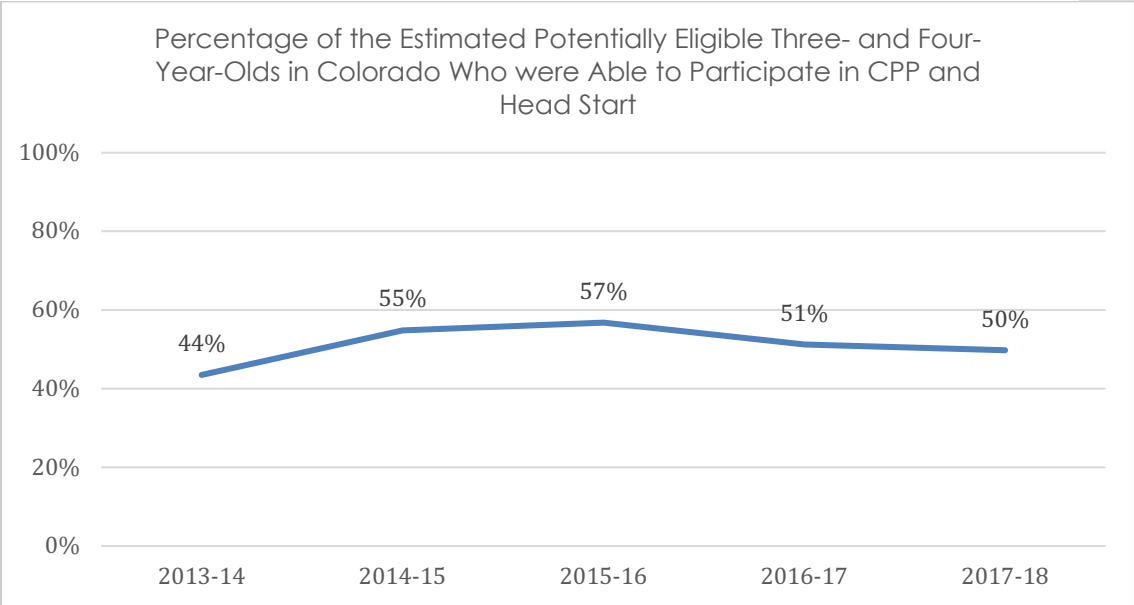
Here, accessibility of high-quality ECE is measured by the potential ability of eligible children to participate in two publicly-funded preschool programs: Head Start and Colorado Preschool Program (CPP)¹. While this method presents some challenges and limitations, these are the best data available to develop an estimate of access among potentially eligible preschool-age children.

Figure 1, below, shows that over five school years (2013-2018), the statewide percentage of potentially eligible three- and four-year-olds able to participate in the CPP or Head Start briefly increased, then decreased (though it did not return to the 2013 level). Further analysis shows the number of authorized CPP positions increased 21 percent over this period, driven by an expansion of 5,000 positions in 2014-15. However, Head Start enrollment decreased 17 percent during that same 5 year period. The increase in CPP and decrease in Head Start equates to a net increase of nine percent across these publicly-funded preschool programs.

A closer look at the potentially eligible population shows an increase in three- and four-year old children who are potentially eligible for these programs. This accounts for the decreased percentage of potentially eligible children able to participate, despite an absolute net increase in capacity. At the time of this report, approximately half of the potentially eligible three- and four-year-olds are able to participate in these public programs.

¹ Source: CPP Position Allocations: Preschool through Third Grade Office, CO Department of Education; At-Risk Factor: Public School Pupil Membership (School Finance Unit, CO Department of Education); Head Start Enrollment: Head Start Program Information Report (Head Start Collaboration Office, CO Department of Human Services); Population of Three- and Four-Year-Olds, State Demography Office, CO Department of Local Affairs

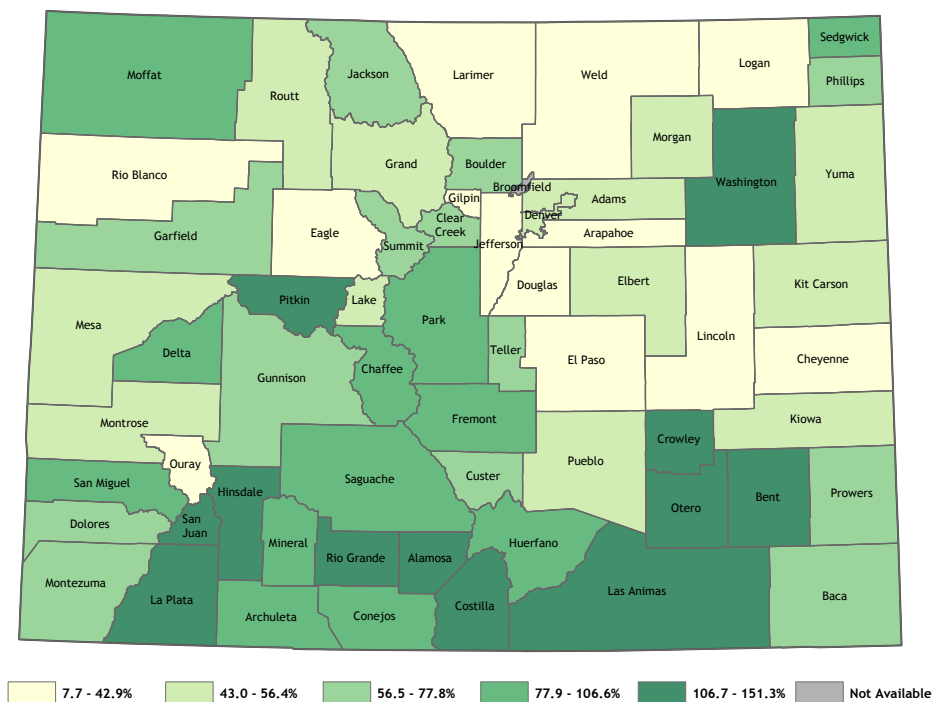
Figure 1: Statewide Access to CPP and Head Start Programs by School Year, 2013-2018 (Colorado Department of Education and Colorado Department of Human Services)



Colorado counties vary significantly in the degree to which they are able to serve the potentially eligible population with publicly funded preschool programs. There is also variability in how communities utilize CPP positions. This analysis assumes that all CPP positions are used maximally to serve the greatest possible number of preschoolers, with one half-day position per child. However, actual preschool enrollment through CPP is lower since some communities may serve children full day using two CPP positions. In addition, from 2013-2018, some CPP positions known as Early Childhood At-Risk Enhancement (ECARE) positions were able to be used to serve full-day kindergarteners. The model in Figure 1 assumes all CPP positions were used for preschoolers. However, if only preschool head counts were considered in the numerator during these years (i.e., if ECARE-funded kindergarteners had been removed), the percentages would be lower. This model also assumes that 20 percent of Head Start-funded children are dually enrolled in CPP (in CPP and another program), based on estimates from prior analysis.

Figure 2: Access to CPP and Head Start Programs by County, 2019 (Colorado Department of Education, Colorado Department of Human Services)^{2 3}

Percentage of the Estimated Potentially Eligible Three- and Four-Year-Olds in Colorado Who were Able to Participate in CPP and Head Start



Another means of arriving at ECE accessibility is through licensed child care capacity, which is measured through the number of licensed child care slots compared to the number of Colorado children. Mapping this capacity geographically provides a demarcation of child care deserts in Colorado. The child care desert maps shown below divides licensed capacity by age: infants (up to 12 months old), toddlers (1-2 years old), and children ages 2-5 years old (preschoolers). These designations were created in order to capture the most accurate count due to challenges in data collection. It is noteworthy that licensed capacity is not actually a measure of supply as it does not account for informal care settings; nor does the child population reflect demand as it does not consider parent preference or need, or that **parents may cross county** boundaries to seek care. However, this measurement offers a proxy for where there may be greater needs.

² Results cannot be determined for Broomfield county through this methodology. CPP position allocations are determined at the school district level. School districts are coded to the county in which the majority of the population reside, although district boundaries can overlap counties. Due to this coding methodology, no districts are mapped to Broomfield county.

³ Estimates of children who may qualify for CPP and Head Start become less stable in rural communities with fewer children. >100% capacity is due to the fact that we are estimating access and do not have access to verifiable data on the true population of children who may qualify for CPP and Head Start based on all combined eligibility factors.

Figure 4: Toddler Child Care Deserts by County, December 2018 (Colorado Department of Human Services)⁴

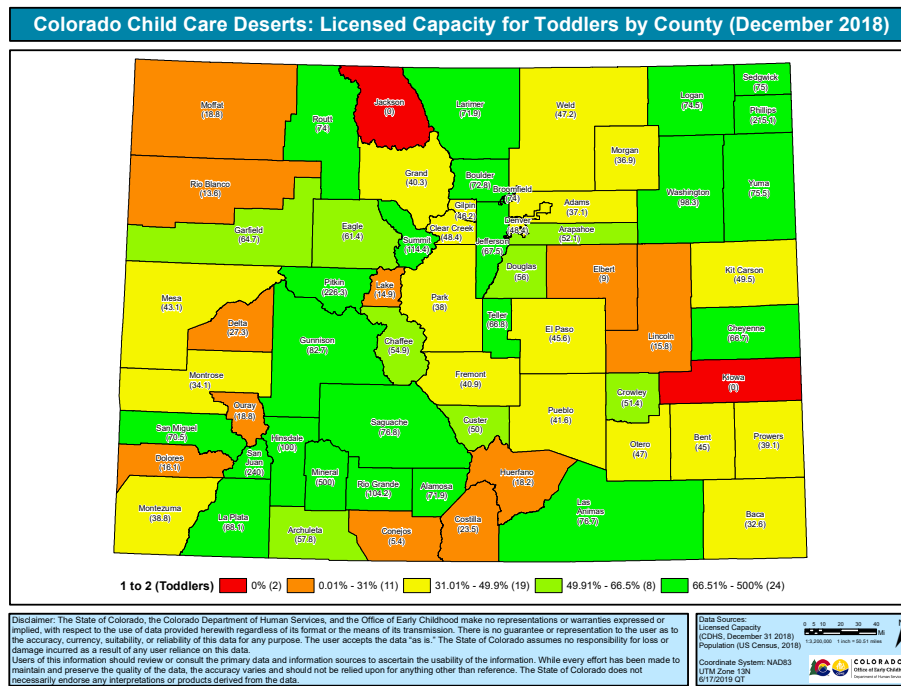
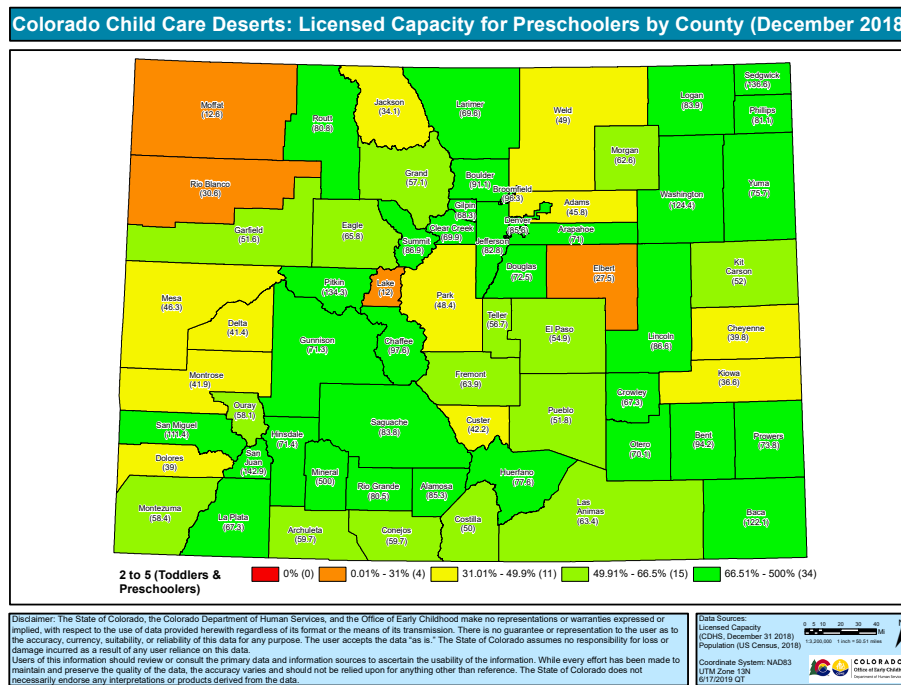


Figure 5: Preschool Child Care Deserts by County, December 2018 (Colorado Department of Human Services)⁴

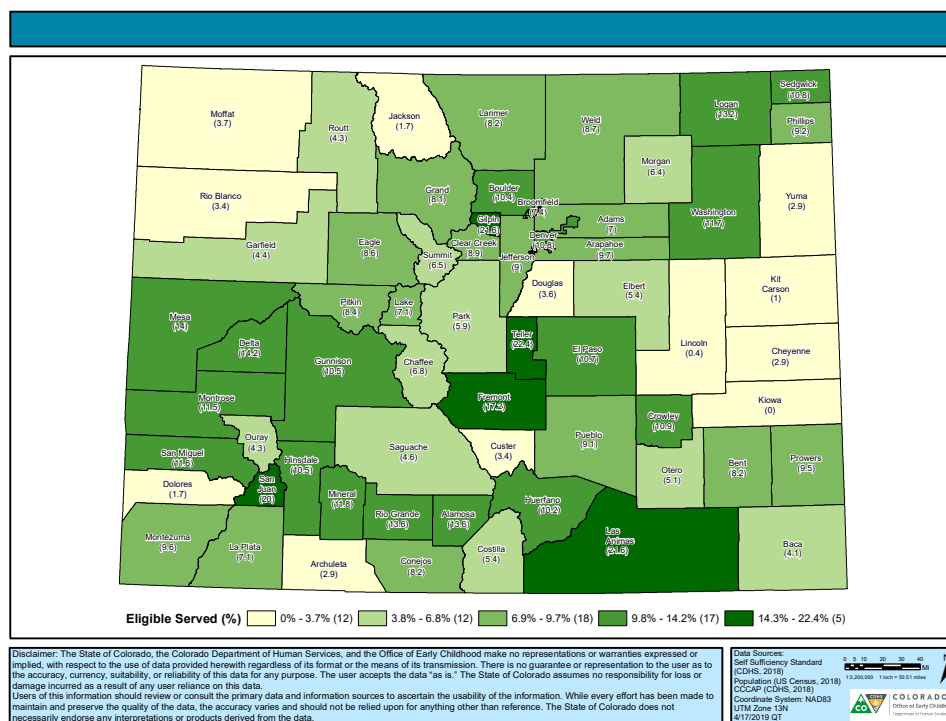


AFFORDABILITY

For this report, affordability is measured by the percent of families with income not meeting the Self Sufficiency Standard (SSS)⁵ for their area who are able to participate in the Colorado Child Care Assistance Program (CCCAP).⁶ Since child care is recognized as a considerable factor in cost of living for families with young children, and is accounted for in the SSS, this measure provides a sense of the number of families who would benefit from CCCAP compared with those who receive it. Also, each Colorado county determines its own methodology for distribution of CCCAP funds. As such, it is difficult to ascertain a statewide measure of eligibility and of those receiving support.

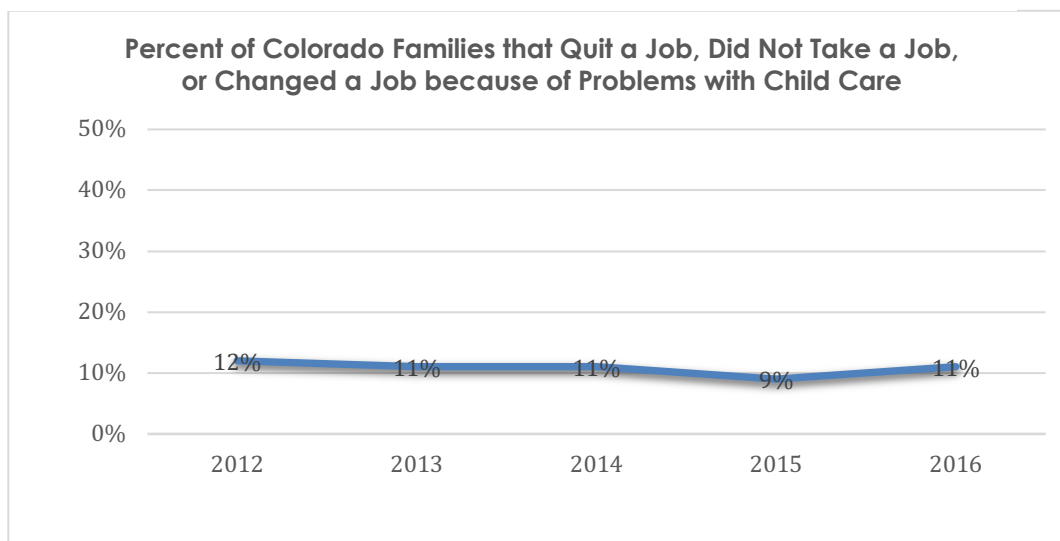
The data indicate that in most Colorado counties, approximately 4 to 14 percent of families who would benefit from CCCAP actually receive it. Families would likely benefit from expansion of services, because when families do not have access to stable care, it is harder for them to work productively and consistently. We do not have data as to whether families would benefit more from an expansion of family eligibility criteria or from expansion in the total number of settings or providers who accept CCCAP reimbursement.

Figure 6: Colorado Child Care Assistance Program Eligible Served, 2019 (Colorado Department of Human Services)



MEETING THE NEEDS OF FAMILIES

Figure 7: Impact of child care on family employment.
(Colorado Child Health Survey, 2012-2016)



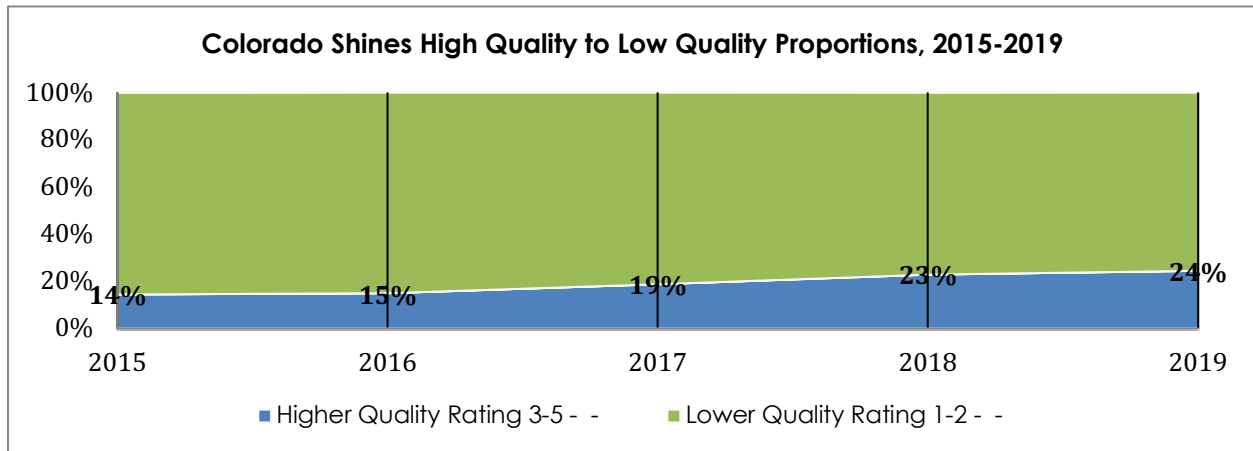
There is a need for additional assessment of the degree to which existing ECE services are meeting the needs of families. Current data are very limited to accurately assess this factor, though anecdotal evidence suggests that families struggle greatly to meet their time, affordability, and quality needs. The Colorado Child Health Survey previously asked families if parents had ever quit a job, did not take a job, or changed a job because of problems with child care. From 2012-2016, the percentage of families who responded positively to this question ranged from 9 to 12 percent, indicating little change over that five-year period with approximately 1 in every 10 parents surveyed reporting this challenge. This, again, is a limited measure of the impact of child care on families. Additional analysis or assessment through the Colorado Child Care Assistance Program might further illuminate economic barriers of families due to the “cliff effect”, that is when a family’s income changes and exceeds eligibility criteria for a program⁷. Cliff effect may cause a family to lose benefits, or to decline a financial opportunity in order to avoid losing benefits.

EARLY CARE AND EDUCATION QUALITY

The standard benchmark of high quality for licensed child care facilities is a Colorado SHINES Quality Rating Information System (QRIS) rating of level 3 or higher on a scale from 1-5. Though all licensed facilities must participate in SHINES to be licensed, some facilities do not actively participate in quality rating improvement efforts. This may mean some centers are delivering high quality care though they aren’t rated as such. Despite participation challenges, this is the best available measure of quality. Between 2015-2019, Colorado increased its percentage of levels 3-5 rated, licensed child care facilities by ten percentage points (as shown in Figure 8), increasing from 14 percent to 24 percent.

⁷ Aspen Institute. (2018). Reducing the cliff effect to support working families.
<https://ascend.aspeninstitute.org/reducing-the-cliff-effect-to-support-working-families/>

Figure 8: Colorado Shines High Quality to Low Quality Proportions, 2015-2019
(Colorado Department of Human Services)



SUMMARY: IMPROVE ACCESS TO HIGH QUALITY EARLY CARE AND EDUCATION FOR ALL FAMILIES

1. While the data do not currently present a full picture of ECE access and quality in Colorado, a few observations can be noted.
 - Overall, ECE supports and services do not likely meet demand and needs of Colorado families.
 - Families with infants and toddlers may be most likely to struggle to find and afford quality ECE services.
2. Less can be determined about meeting the needs of families and quality of ECE settings.
3. There are significant data gaps in each of the factors measured for this Area of Opportunity. Specific needs include:
 - A more precise measure of ECE demand and need across settings and sectors.
 - More accurate reporting on utilization of publicly funded slots.
 - A deeper assessment of the ECE needs of families and the degree to which those needs have been met by existing services.

ELEVATE THE EARLY CHILDHOOD WORKFORCE TO ENSURE COORDINATED CAREER PATHWAYS AND APPROPRIATE COMPENSATION.

Early childhood educators provide the critical foundation for children in out-of-home care to develop the literacy and social-emotional skills they need to succeed in school. The early care and education sector is a cornerstone of local and state economic health, enabling parents to work and provide for their families while employing a large workforce of educators. However, as professional development opportunities and expectations for these educators have increased, compensation lags behind most other industries, and communities throughout Colorado are facing significant challenges recruiting and retaining a stable early childhood workforce. Ensuring that Colorado has a qualified, consistent and diverse early childhood workforce is critical to supporting the healthy development of children and maintaining a thriving economy.

WORKFORCE COMPENSATION

In 2018, the median annual child care worker wage in Colorado was \$26,880, approximately two-thirds of Colorado's 2018 median annual wage of \$42,307⁸. There has been minimal increase in wage over the five-year period, increasing from \$22,970 to \$26,880. More importantly, salaries have not kept pace with inflation as compared with 2018 dollars (Figure 1), meaning that child care workers have had less spending power despite a small increase in wages. Figure 9 also demonstrates that median child care worker salaries in the Denver Metro area are, overall, higher than the state median. This suggests lower salaries in rural areas. This follows a similar wage trend nationwide, where most wage increases have been seen for higher-paid workers.⁹ A report by the Center for the Study of Child Care Employment also notes that states with minimum wage increases have typically seen greater increases in child care worker wages.¹⁰ However, this does not appear to be the case in Colorado.

⁸ Colorado Department of Labor and Employment. (2018). Statewide Occupational Wages.

<https://www.colorado.gov/pacific/cdle/news/colorado-occupational-employment-and-wages-2018>

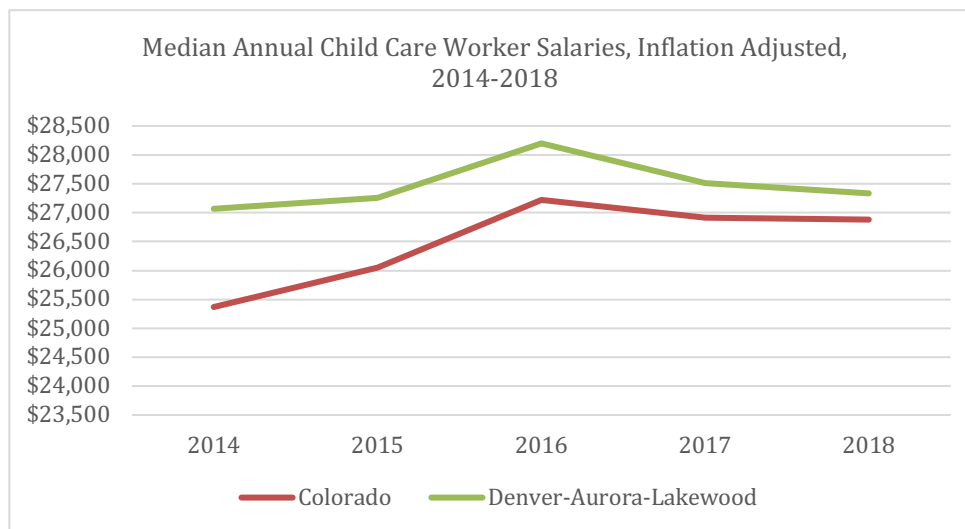
⁹ Pew Research Center. (2018). For most U.S. workers, real wages have barely budged in decades.

<http://www.pewresearch.org/fact-tank/2018/08/07/for-most-us-workers-real-wages-have-barely-budged-for-decades>

¹⁰ Center for the Study of Child Care Employment. (2018). Early Childhood Workforce Index 2018.

<https://www.packard.org/wp-content/uploads/2018/07/Early-Childhood-Workforce-Index-2018.pdf>

**Figure 9: Inflation Adjusted Child Care Worker Salaries,
(Bureau of Labor and Statistics, Occupational Employment Statistics, 2014-2018)**



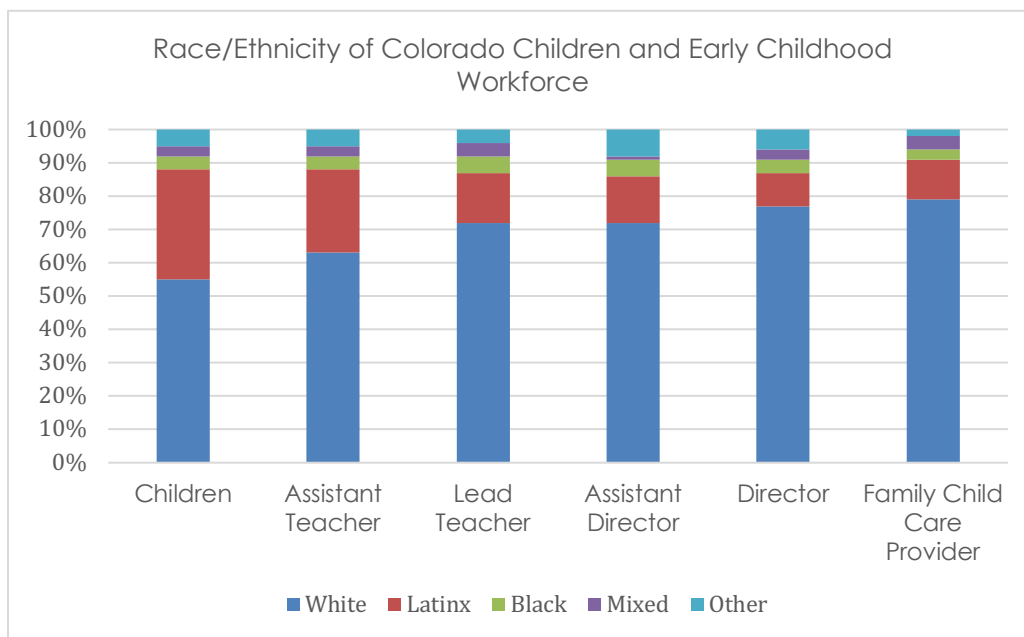
Further, it is important to consider the ability of ECE providers to make ends meet in their communities. In the 2017 Colorado Workforce Survey, teachers and family child care providers were asked about any low-income public subsidies or financial support they currently utilize (e.g. Supplemental Nutrition Assistance Program, Section 8 Housing vouchers, public housing, Medicaid, Temporary Assistance for Needy Families (TANF), or free or reduced lunches). Findings include that, "Approximately 32 percent of teachers across service sectors and job roles and 31% of the family child care providers reported that they received at least one form of public assistance due to their low-incomes." It is noteworthy that this survey did not include the Earned Income Tax Credit as a public subsidy category. If it had been included, the rate would likely have been closer to the national reporting of 46 percent.¹¹

WORKFORCE DIVERSITY

While diversity in the ECE workforce varies by setting, a great majority of the workforce identify as white, non-Hispanic. In Colorado, children of non-white race and ethnicity comprise approximately 45 percent of the population. Early childhood professional representation of Black, Latinx, Mixed, and other races and ethnicities as identified in the Colorado Early Childhood Workforce Survey range from 37 percent (assistant teacher) to 21 percent (family child care provider). The proportional representation decreases in higher levels of authority and pay, suggesting structural inequities in opportunity.

¹¹ Diana D. Schaack & Vi-Nhuan Le. (2017). Colorado Early Childhood Workforce Survey 2017: At the Heart of the Matter: The Compensation of Colorado's Early Educator Workforce.

Figure 10: Child and Early Childhood Workforce Race/Ethnicity
 (American Community Survey, Colorado Early Childhood Workforce Survey)



SUMMARY: ELEVATE THE EARLY CHILDHOOD WORKFORCE TO ENSURE COORDINATED CAREER PATHWAYS AND APPROPRIATE COMPENSATION

1. While the data do not currently present a full picture of workforce pathways and compensation in Colorado, a few observations can be noted.
 - ECE provider salaries have not kept pace with inflation and many ECE provider salaries are low enough to warrant access of public benefits in order to make ends meet.
 - Diversity of ECE providers varies by position and the field of ECE providers is generally less diverse than Colorado’s children.
2. There are significant data gaps for this Area of Opportunity. Specific needs include:
 - More comprehensive data on provider salaries and demographics.
 - Colorado data on salaries by sector and setting, which would provide deeper insight into areas of greater need. Some national data is available.
 - Colorado data on salaries by race and ethnicity, which would illuminate disparities that may impact workforce diversity.
 - Professional Development Information System data could be strengthened to provide more comprehensive race and ethnicity data of child care providers.
 - Colorado data on languages spoken by providers, which would further understanding of equity issues in child care.

SUPPORT IMPROVED FAMILY HEALTH AND ECONOMIC SECURITY THROUGH A TWO-GENERATION APPROACH

Parents are their children's first and most important teachers. Ensuring that parents have the health and economic supports they need to provide a nurturing home environment and meet their children's basic needs is essential for a child's healthy development. Children who are cared for in stable environments with access to health services, nutritious foods, safe water, stable housing and high quality learning environments are better able to develop the skills they need to succeed in school and thrive in their communities. Unfortunately, many children are living in environments without these basic supports, which research suggests can lead to poor mental and physical health, less success at school and work, and lower socioeconomic status in adulthood. Colorado should continue to support family health and economic security through state and local programs and ensure that interventions provide opportunities for both children and caregivers.

OPPORTUNITY INDEX

As previously noted in this report, this Area required a different approach to measurement given the high complexity of the factors included in the Area, and the difficulty in limiting the number of indicators. The Data Subcommittee determined that the Opportunity Index¹², produced through Child Trends and Opportunity Nation, incorporates indicators similar to those that were identified during their selection process. The use of an index provides a simpler means of communication while maintaining an authentic measure of the complexity. The Opportunity Index measures across "four dimensions of community well-being": economy, education, health, and community. The Data Subcommittee found that the Opportunity Index best captured the risk and protective factors that impact the relationships and environments in which young children develop.

A complete list of indicators for the Opportunity Index can be found in Appendix B of this report.

In 2017, Colorado Ranked number 25 of 50 states and the District of Columbia on the overall Opportunity Index, with a score of 54.1 out of 100, staying approximately the same in both rank and score as 2016. Colorado scored highest in its Economy Score at 60.9, and lowest in its Health Score at 49.9. Colorado scores Overall and for Education and Community are relatively similar to national averages. Colorado scores higher for Economy and lower for Health than national scores. Colorado's economic strengths include relatively high median household income, lower poverty rate, and access to broadband internet service. Factors contributing to Colorado's lower Health Score include a higher low-birthweight rate and higher rate of deaths related to alcohol/drug abuse or suicide.

¹² Opportunity Index, Child Trends and Opportunity Nation, <https://opportunityindex.org/>

More locally, Overall Opportunity Index scores were highest in Boulder, Douglas, Eagle, Gunnison, Pitkin, and Routt Counties. Overall scores were lowest in Fremont, Montezuma, and Pueblo Counties. Overall Scores could not be generated for several rural and frontier counties.

Figure 11: 2017 Colorado and National Opportunity Index Scores (Out of 100)

	Colorado	National	Difference
Overall Score	54.1	52.4	+1.7
Economy Score	60.9	52.9	+8.0
Education Score	54.7	54.4	+0.3
Community Score	50.7	46.8	+3.9
Health Score	49.9	55.5	-5.6

The indicators used to measure the Opportunity Index are not specific to young children. However, the well-being of both family and community, (i.e. the relationships and environments that surround young children) were noted by the Data Subcommittee to be particularly pertinent to child outcomes in this Area.

Within the Economic Score, one might question whether all Coloradans enjoy the economic benefits captured by the score since there is no comparison between sub-populations and demographic characteristics.

NEXT STEPS TO IDENTIFY INDICATORS

While the Opportunity Index served as a good starting point for measuring this Area of Opportunity, the Subcommittee has continued to refine the desired outcomes and has developed a set of associated key indicators. A list of these indicators has been included as Appendix C, and the data for these indicators will be used to track progress in this Area in subsequent monitoring and reports.

SUMMARY: SUPPORT IMPROVED FAMILY HEALTH AND ECONOMIC SECURITY THROUGH A TWO-GENERATION APPROACH

1. The Opportunity Index places Colorado 25th of 50 states in Overall Opportunity, with its Health Score lagging slightly.
2. Examining opportunity more locally highlighted differences between counties, with more affluent communities scoring higher. Neighborhood level data were not available but would likely illuminate greater differences between metropolitan areas. This approach also fails to examine differences between populations.
3. This Area of Opportunity will require further narrowing and specificity of outcomes in order to develop indicators. The Data Subcommittee anticipates identifying process measures or intermediate measures for this Area in order to better capture progress on implementation of Two-Generation approaches and other aspects of this very broad area.

DATA DEVELOPMENT AGENDA: IDENTIFYING DATA GAPS

WHAT IS A DATA DEVELOPMENT AGENDA?

An important component of this process was initiating a Data Development Agenda for the ECLC. Results Based Accountability¹³ defines this as “measures for which you might want to invest resources to develop quality data that would be available on a timely basis”. In some cases, existing indicators or data collection methods may not go far enough to answer important questions with sufficient precision to inform early childhood efforts. In other cases, the data to answer relevant questions do not exist. The Data Subcommittee has begun to identify these gaps as they relate to the Areas of Opportunity and will continue this work into 2020. Themes emerged in data needs and the Data Development Agenda is developed according to those themes. Additional notes are included in the summary of each Area of Opportunity on specific data development needs related to each.

ECLC DATA DEVELOPMENT AGENDA

Early Care and Education	<ul style="list-style-type: none"> • Transforming the Workforce – deeper understanding of current ECE workforce demographics* • Index: child care affordability** • % eligible population enrolled in Early Head Start** • Data collected on informal or unlicensed care settings*** • Use of culturally relevant/diverse curricula • Measure of retention in ECE workforce • Various indicators (e.g. quality, total compensation, etc.) across sectors/settings of a mixed delivery system
Families	<ul style="list-style-type: none"> • Meeting child care needs of families*** • Impact of stressors on parent-child bond • Family engagement, leadership, advocacy • Impact of “stacking” of basic needs barriers • Assessment of implementation of policies supporting families • Availability of relevant supports/services for families
Tracking and	<ul style="list-style-type: none"> • Tracking and monitoring of screening, referral, evaluation, services for Early

¹³ Clear Impact, (2016). What is Results Based Accountability? <https://clearimpact.com/results-based-accountability/>

Monitoring	Intervention/Child Find systems****
Equity	<ul style="list-style-type: none"> Indicators across prioritized populations (e.g. children with special needs, families experiencing homelessness, etc.) to measure status and progress of all children

*In progress through Colorado Department of Human Services, Colorado Department of Education, Barton Institute/CEAL

**In progress through Colorado Department of Human Services

***Point-in-time data in progress through Preschool Development Grant.

****In progress through Colorado Early Childhood Screening and Referral Policy Council

DATA PARTNERSHIPS AND OPPORTUNITIES

As previously mentioned, proxies or limited data have been used in several cases in the absence of the “right” data. Partnerships in the following agencies or sectors might support access to data that more accurately measures the indicators.

- Data Champion - While there are individual data champions in the early childhood landscape, there has been no lead entity to step forward to comprehensively address early childhood data gaps, needs, and quality in Colorado. This role would require the right expertise, resources, and interagency support.
- Workforce and Labor - In two instances, the data may have been available through workforce or labor sources: 1) measuring the impact of child care access and affordability on the current workforce, 2) measuring workforce salaries and benefits.
- Workforce Pathways - Due to challenges with existing databases, the Subcommittee was not able to identify an appropriate indicator for workforce pathways. While an initial conversation with the community college system did not reveal immediate opportunities, further conversation over time may provide shared understanding of the need with higher education. Further work with the Professional Development Information System (PDIS) would also benefit this effort.
- Preschool Development Grant - The needs assessment currently under way (2019) for the Preschool Development Grant may provide additional assessment and analyses to inform ECLC Areas of Opportunity.
- Equity - Concepts of equity and strategies to this end require a shared learning process and understanding. In order to deepen the Areas of Opportunity, engage in a learning process to more clearly determine the ECLC's intent and desired outcomes of equity across the state.

PROCESS RECOMMENDATIONS

The process of obtaining the data for this report required several months. Some of the analyses were new, and at times there was a need to develop consensus. In the future, accessing the data should be more streamlined. However, the following recommendations should help with that process.

- Prioritize and actively pursue the Data Subcommittee data development agenda in partnership with other Colorado entities who share an interest in shared measurement and have data development agendas.
- Monitor progress through these indicators and update progress on the Data Development Agenda, annually. Also, capture intermediate milestones in efforts.
- Develop memoranda of understanding with agencies holding data in order to streamline annual requests.

APPENDIX A: COMPREHENSIVE LIST OF INDICATORS BY AREA OF OPPORTUNITY

IMPROVE ACCESS TO HIGH QUALITY EARLY CARE AND EDUCATION FOR ALL FAMILIES

Supply and Accessibility (geography)

1. # of children age birth to five living in households where all available parents are working (Census)
2. % of eligible children age three to five who were able to participate in Head Start or Colorado Preschool Program by region (Colorado Department of Education)
3. # licensed child care slots compared to Colorado children up to 12 months, 1-2 year olds, 3-5 year olds by region (include child care deserts map) (Colorado Department of Human Services)
4. % of families living in child care deserts (Colorado Department of Human Services/Center for American Progress)

Affordability

1. % children in low income homes able to participate in Colorado Child Care Assistance Program (Colorado Department of Human Services)
2. % of families spending less than 10% of their income on child care, market rate compared to self-sufficiency index (Colorado Department of Human Services)

Meeting Needs

1. % of families that quit a job, did not take a job, or changed a job because of problems with child care (Colorado Child Health Survey)
2. Average % of children with developmental delays in population vs. percent receiving services through Part C/Part B in Colorado (Colorado Department of Human Services/Colorado Department of Education)

Quality

1. % of licensed providers attaining a level 3-5 in Colorado Shines (Colorado Department of Human Services)

Engagement and Advocacy (Data Development)

ELEVATE THE EARLY CHILDHOOD WORKFORCE TO ENSURE COORDINATED CAREER PATHWAYS AND APPROPRIATE COMPENSATION

Compensation

1. % of ECE professionals earning a living wage by region, sector, setting (Professional Development Information System/Department of Labor)
2. % of ECE professionals who received public benefits for low income families (Colorado Workforce Survey)

Professional Development and Competencies

1. % of ECE professionals in PDIS working directly with young children at each level of the Early Childhood Professional Credential; # who have initiated level I (Professional Development Information System)
2. Credential achieved by provider race/ethnicity (Professional Development Information System)

Diversity

1. ECE worker diversity compared to children in care OR Diversity in providers across settings (American Community Survey, Colorado Workforce Survey, Colorado Kids Count)

Retention

1. % of ECE professionals remaining in the profession after 3 years (Professional Development Information System)

SUPPORT IMPROVED FAMILY HEALTH AND ECONOMIC SECURITY THROUGH A TWO-GENERATION APPROACH

Aggregate Measures

1. Opportunity Index (Opportunity Nation/Child Trends)
2. Social Capital Index (Social Capital Project)
3. Prosperity Now Scorecard

Family Knowledge and Understanding of Child Development and Resources (Data Development)

Advocacy and Leadership

1. # of family-friendly family economic stability bills passed by the Colorado legislature (or selection of most impactful)

Risk/Resiliency

1. % of parents with children ages 1-8 who have concerns about a child's emotions, concentration, behavior, or ability to get along with others (Colorado Child Health Survey)
2. % of parents with young children reporting poor mental health in the past month (Behavioral Risk Factors Surveillance Survey)
3. Children born at healthy birth weight (Birth Certificate)
4. Children at risk for developmental delay (Colorado Kids Count)
5. % of children receiving a developmental screen (EPSDT)
6. % of women screened for pregnancy-related depression (Pregnancy Risk Assessment Monitoring System)
7. Number/rate of confirmed cases of child maltreatment

Community Assets and Social Capital (Environments, Relationships)

1. Opportunity Index (Opportunity Nation/Child Trends)
2. Social Capital Index (Social Capital Project)

Economic Security

1. % of families with children with income exceeding self-sufficiency standard (Colorado Center on Law and Policy)
2. % of families with young children earning a living wage (Living Wage Calculator MIT)
3. % of families receiving eligible tax credits (Earned Income Tax Credit, health care)
4. % of lower-income families that have enough liquid assets to weather an income interruption for at least 3 months (Census/Survey of Income and Program Participation)
5. % of lower-income families that have increased opportunities to build longer-term savings and assets (Survey of Income and Program Participation)
6. % of lower-income families who are banked and actively saving (Census/Survey of Income and Program Participation)

Housing

1. % of households with children spending more than 30% of income on housing (American Community Survey/Equity Index by race, ethnicity)
2. % of families with children evicted or at risk of eviction (Colorado Judicial Branch/Colorado Center on Law and Policy)
3. % of families with children experiencing homelessness (Housing and Urban Development)
4. % of families with children feeling safe in their neighborhood (Voter data)


Other Basic Needs

1. % of children living in food deserts (Colorado Kids Count)
2. % of eligible population in WIC/SNAP/TANF (Program)
3. % of eligible child population in Medicaid (Colorado Department of Health Care Policy and Finance)
4. % of mothers using Medicaid for prenatal care (Colorado Department of Health Care Policy and Finance)

APPENDIX B: OPPORTUNITY INDEX INDICATORS

For additional information on Opportunity Index indicators and sources, please visit www.opportunityindex.org

ECONOMY	Jobs	Unemployment rate (percentage of the population ages 16 and older who are not working but available for and seeking work)
	Wages	Median household income (in 2010 dollars)
	Poverty	Percentage of the population below the federal poverty level (the amount of pretax cash income considered adequate for an individual or family to meet basic needs)
	Income Inequality	80/20 ratio (ratio of household income at the 80th percentile to that at the 20th percentile)
	Access to Banking Services	Number of banking institutions (commercial banks, savings institutions and credit unions) per 10,000 residents
	Affordable Housing	Percentage of households spending less than 30 percent of their income on housing-related costs
	Broadband Internet Subscription	Percentage of households with subscriptions to broadband internet service
EDUCATION	Preschool Enrollment	Percentage of 3- and 4-year olds attending preschool
	High School Graduation	On-time high school graduation rate (percentage of freshmen who graduate in four years)
	Postsecondary Education	Percentage of adults ages 25 and older with an associate degree or higher
HEALTH	Low Birth Weight	Percentage of infants born weighing less than 5.5 pounds
	Health Insurance Coverage	Percentage of the population (under 65) without health insurance coverage
	Deaths Related to Alcohol/Drug Use and Suicide	Deaths attributed to alcohol or drug poisoning, or suicide (age-adjusted rate per 100,000 population)
COMMUNITY	Volunteering	Percentage of adults (ages 18 and older) who reported they volunteered during the previous year
	Voter Registration	Percentage of adults ages 18 and older who are registered to vote
	Youth Disconnection	Percentage of youth (ages 16-24) not in school and not working
	Violent Crime	Incidents of violent crime reported to law enforcement agencies (per 100,000 population)
	Access to Primary Health Care	Number of primary care physicians (per 100,000 population)



	Access to Healthy Food	Number of grocery stores and produce vendors (per 10,000 population)
	Incarceration	Number of people incarcerated in jail or prison (per 100,000 population 18 and older)

APPENDIX C: EMERGING INDICATORS FOR SUPPORT IMPROVED FAMILY HEALTH AND ECONOMIC SECURITY THROUGH A TWO-GENERATION APPROACH

A small group from the Subcommittee has identified promising indicators for this area of opportunity.

Economy

1. Percent of the Colorado population below poverty line (American Community Survey)
2. Households spending less than 30% of household income on housing costs (American Community Survey)

Education

3. On-time high school graduation rate (Opportunity Index)
4. Maternal education level (Pregnancy Risk Assessment Monitoring System)

Health

5. Number of stressors reported during pregnancy (Pregnancy Risk Assessment Monitoring System)
6. Low birth weight: infants born weighting less than 5.5 pounds (Opportunity Index)

Community

7. Food insecurity, as measured by grocery stores and produce vendors per 10,000 population (Opportunity Index)

Data Development - The subgroup also discussed a future indicator of parental engagement, potentially from future public school data; and collecting mother's income and insurance status from PRAMS.