COLORADO **HEALTH** INSTITUTE

Informing Policy. Advancing Health.

Risk, Reach, and Resources

An Analysis of Colorado's Early Childhood Mental Health Investments

NOVEMBER 2018

About the Colorado Health Institute:

The Colorado Health Institute, which produced this analysis, is a nonprofit and independent health policy research organization that is a trusted source of objective health policy information, data, and analysis for the state's health care leaders. The Colorado Health Institute is primarily funded by the Caring for Colorado Foundation, Rose Community Foundation, The Colorado Trust and the Colorado Health Foundation.

CHI staffers contributing to this report

Alexandra Caldwell, co-author

Tamara Keeney, co-author

Michele Lueck

Karam Ahmad

Brian Clark

Chrissy Esposito

Cliff Foster

Joe Hanel

Jalyn Ingalls

Emily Johnson

Liana Major

Jackie Zubrzycki

Suggested Citation:
Colorado Health Institute. "Risk, Reach and Resources: An Analysis of Colorado's Early Childhood Mental Health Investments." November 2018.

Acknowledgments

This report is made possible by funding from Gary Community Investments, which includes The Piton Foundation. Gary Community Investments invests in for-profit and philanthropic solutions that improve the lives of Colorado's low-income children and their families.

Special thanks to the ECMH Finance Work Group:

Jordana Ash, Colorado Department of Human Services

Noah Atencio, Community First Foundation

Mandy Bakulski, Colorado Department of Public Health and the Environment

Shannon Bekman, Mental Health Center of Denver

Bridget Burnett, Colorado Children's Healthcare Access Program

Colleen Church, Caring for Colorado

Whitney Connor, Rose Community Foundation

Lauren Freemire, Save the Children

Peggy Hill, National Mental Health Innovation Center

Bill Jaeger, Colorado Children's Campaign

Lauren Jassil, Community Reach Center

Lisa Montagu, Gary Community Investments

Gina Robinson, Colorado Department of Health Care Policy and Financing

Susanna Snyder, Colorado Department of Health Care Policy and Financing

Jennifer Stedron, Early Milestones Colorado

Ayelet Talmi, Children's Hospital Colorado

Christina Walker, Clayton Early Learning

Sue Williamson, Colorado Children's Healthcare Access Program

Claudia Zundel, Colorado Department of Human Services

Special thanks to those who served as expert key informants:

Julia Blomberg, Colorado Department of Human Services, Office of Early Childhood

Melissa Buchholz, University of Colorado Denver

Carissa Fralin, Colorado Department of Health Care Policy and Financing

Lisa Hill, Invest in Kids

Morgan Janke, LAUNCH Together

Lisa Matter, Colorado Department of Human Services, Office of Early Childhood

Heidi McCalsin, Colorado Department of Education

Christy Scott, Colorado Department of Human Services, Office of Early Childhood

Lisa Jansen Thompson, Early Childhood Partnership of Adams County

Heather Tritten, Parent Possible

Marc Winokur, Colorado State University

Risk, Reach, and Resources

An Analysis of Colorado's Early Childhood Mental Health Investments

PREFACE

Today's research and literature have established the importance of Early Childhood Mental Health (ECMH) to overall health outcomes, educational attainment, and other markers of well-being. Yet, this is a relatively recent development. Colorado, a forerunner in this field, has a long and successful track record of putting the science of ECMH into practice. The state is a known leader across the country for its innovative and collaborative efforts to support early social and emotional development.

Colorado's record includes long-standing public investments in ECMH consultation, public and private investments in integrated behavioral health, and success attracting federal dollars to community partnerships focused on ECMH.

Improving ECMH, however, presents a quandary for policy leaders, grant makers, and program directors. The quandary emerges because ECMH is a nascent field. As such, measuring our impact can be elusive. We have not developed, for example, a singular indicator that pinpoints which children might be most at risk. It's hard to know what to measure and understand when we have made the necessary improvements in promotion, prevention, treatment, and outcomes.

We need to continue to build the foundations that will help us achieve better outcomes by understanding what's at stake for parents and caregivers, young children, the ECMH workforce, and the policies and organizations that support this work. We need to build the capacity to quantify and qualify the entire ECMH system.

This report represents one of Colorado's — and the nation's — first attempts to do just that. It is the first significant step in the creation of a powerful and necessary tool to understand the impact of this field.

However, our findings reveal more questions than answers. How can we better identify the children and families in need of more support? Is there an appropriate number of touchpoints with the ECMH system for all children? What is the right mix of promotion, prevention, and intervention programs that offers equitable opportunities for healthy development? How will we know when we've made a sustainable impact? These are questions that remain unanswered.

Our report has limitations and constraints. The scope is limited to a dozen programs that exclusively focus on ECMH and not those with broader goals that might also include social-emotional supports. It is limited by what we can measure today. For example, we did not evaluate Colorado's clinical behavioral health treatment services or investments from public or private insurance carriers. Data contributions from primary and pediatric care were unavailable in our analysis timeframe. Eventual inclusion of these data will strengthen this work and provide an even more nuanced approach to ECMH risk and reach.

We also caution that the programs featured here should not be interpreted as an endorsement of them as more effective or valued than other programs. A team of experts identified these programs as having impact expressly on ECMH. They were also able to meet the rigorous data submission requirements established for the current analysis.

We have assessed risk, reach, and resources across the state. The interpretation of our results will lead to discussion and debate. This discourse has the power to move the field forward.

We also recognize that specific efforts captured in this


Brian Clark/CHI

report build on a foundation of work decades in the making by many sectors and partners in Colorado. A recent sample of contributions includes but is not limited to:

- 2015 ECMH Strategic Plan (from the Office of Early Childhood)
- LAUNCH Together (inspired by SAMHSA's Project LAUNCH from a group of ECMH funders)
- The State Innovation Model's inclusion of pediatric care (from the SIM Office)
- Children's Hospital Colorado First 1000 Days Campaign
- And many other organizations, programs, and system-strengthening initiatives.

This report is not only part of this foundation but is also part of a larger vision — that one day we will understand how ECMH impacts health, education and overall well-being; identify where there are gaps in our investments; and enable us to deliver services to all families in need.

This vision has been nurtured by many in Colorado, and a few exemplary leaders stand out. Jordana Ash, at the Office of Early Childhood, is chief among those. The ECMH Finance Work Group members — including service providers, policy leaders, advocates, funders, and other experts — also have provided significant insight and support. It has been an honor for the Colorado Health Institute to guide this first report.

Years from today, when the next iteration of this report is broader and deeper, we will thank those who envisioned it in the first place. With the release of this report, we are excited to take the first step on that journey.

Introduction

Nearly 609,000 children ages zero through eight live and play in Colorado.[1] But their young age does not grant immunity from poor mental health.

Some children are more at risk of experiencing poor mental health than others. A broad range of economic, family and mental health factors — like poverty, parental adverse childhood experiences, and maternal depression — predict poor mental health outcomes in young children.

Parents report that about 15.3 percent of Colorado's children needed mental health care or counseling in the past 12 months, but almost a quarter of those children (23.1 percent) did not receive it.[2]

In addition to the need for child mental health services, we also know that one way to address a child's mental health is to address the mental health needs of their parent. Research from the Colorado Health Institute finds that children whose parent has depression are more than twice as likely to experience overall poor mental health, need mental health care, and receive a mental health diagnosis.[3]

Colorado has met these needs head on. The state is fortunate to have leaders promoting early childhood mental health (ECMH) on multiple fronts, from direct interventions for children and their families, to training for people who work in early childhood settings, to parenting support initiatives, to efforts to strengthen the system and policies that form the backdrop of this important work.

But those approaches have evolved independently — by region, funding availability and leadership priorities. This data-driven analysis seeks to connect them into a comprehensive system that addresses the highest risk areas of the state.

Cause Effect Advisory Services, in partnership with the Colorado Office of Early Childhood (OEC) and with support from the Piton Foundation, retained the Colorado Health Institute (CHI) to conduct an analysis of Colorado's ECMH system — the risk it addresses, its reach or services provided, and the resources or investments supporting the system.

This analysis offers an additional tool to current and future governmental and non-profit leaders to focus their efforts to promote the social and emotional health of children statewide, and to ensure they are funded adequately.

To conduct the analysis, CHI partnered with the OEC and other ECMH leaders to select, research and analyze more than a dozen selected initiatives, programs and organizations promoting ECMH across Colorado — from home visiting programs like HealthySteps to systems-level initiatives like LAUNCH Together. Then we compared those programs with the risks they were mitigating — such as poverty and maternal depression — to identify gaps and opportunities for Colorado's ECMH leaders.

This analysis is not an environmental scan of the breadth of initiatives, programs, staff, models and organizations promoting ECMH in Colorado. It is also not a claims analysis of clinical therapies available for and used by children and their families. Clinical services are excluded here due to data availability from private insurance, out-of-pocket payments and public payers like Medicaid. Instead, this analysis uses quantitative and qualitative approaches to describe current funding, services and risk levels across the state to help ECMH leaders prioritize gaps and opportunities to strengthen the system.

It builds on critical work that has been happening for decades in Colorado — from Colorado's ECMH strategic plan, to the Early Childhood Colorado Framework, to the Young Minds Matter report and the Children's First 1,000 Days initiative. But this analysis is the first of its kind in Colorado. Compared to other states that have conducted similar studies, it is unique in its focus on mental health and its inclusion of philanthropic community data. It should be updated periodically to strengthen and refine the data analysis and to reflect the changing landscape.

Coloradans possess a growing momentum to promote wellness and strong minds and bodies for generations of children to come. This analysis can help channel that momentum.

Methods Overview and Study Limitations

We characterized the needs for ECMH investment using nine risk indicators — from family background indicators like poverty and maternal age, to mental health events and outcomes like maternal depression, and parental concern about their child's emotional health.

Research Questions

This analysis seeks to answer the following research questions:

1. **Risk:** Which areas of the state show the greatest need for ECMH services?
2. **Reach:** Where are ECMH services currently provided, and where are there gaps?
3. **Resources:** What are the sources and levels of funding for ECMH in Colorado?

Major Findings

1. A southern swath of the state — as well as Adams County — have the highest need for ECMH investment and services, according to an analysis of nine risk factors relating to family background and mental health.

2. Colorado's ECMH system is serving less than 10 percent of children aged zero to eight. No counties are providing services to more than a third of children, and more than half of Colorado's counties are serving fewer than one in 10. While no national standard or guideline currently suggests how many children should receive services, we speculate that serving only a third is inadequate. These low rates stand in stark contrast to utilization of primary care and preventive services.

3. Funding from private philanthropic leaders in Colorado made up 11 percent of the state's ECMH investments. Yet this overall number masks the importance of private philanthropy to some programs. In several cases, programs are solely funded by private dollars. This suggests that the wise investment of philanthropic dollars can serve as proof points before programs reach full scale or are sustained by public funding.

These findings offer Colorado's ECMH leaders critical insights into the current system of services and supports, and opportunities to strengthen it. And they have important implications for system scalability, investment optimization and urgency for action.

What's Included in This Analysis

This analysis selects 12 services and programs to analyze by funding and service provision.

Intervention and Treatment

Core Services

The Core Services Program is a statutorily established, state-funded program administered by the Colorado Department of Human Services to provide child and family programming such as therapy and home-based intervention when children and youth are at risk of out-of-home placement or are trying to return home after removal.

Preschool Special Education, Part B, Section 619

Preschool Special Education Part B, Section 619, is a federally funded program providing services for children with educational disabilities and their families. This analysis focuses only on Part B Section 619 of the Individuals with Disabilities Education Act, which provides services to children age three through five identified with an educational disability. This program may include some social-emotional or behavioral supports delivered as specialized instruction by special education teachers, and mental health services delivered by mental health professionals as an educationally related service. But the focus is broader than child mental health since it focuses on supporting children to access and benefit from general education.

Early Intervention Colorado Part C (Social-Emotional Services)

Early Intervention Colorado Part C is a federally funded program providing services for children with disabilities from birth through age two and their families as part of the Individuals with Disabilities Education Act.[4]

Targeted Supports and Services

ECMH Specialists and Consultants

ECMH specialists and consultants are early childhood mental health experts supported by private, federal, and state funds to provide ECMH consultation and build capacity in partnership with program staff in early childhood settings.

(EQIT) Expanding Quality in Infant Toddler Care Initiative

EQIT is a partnership between the Colorado Department of Education and the Colorado Department of Human Services, Division of Child Care, working to increase the quality and availability of responsive care for infants and toddlers statewide by developing the early childhood workforce development and other services.[5]

HealthySteps

HealthySteps is a pediatric primary care program that integrates a child development professional into the clinical pediatric practice environment to promote healthy early childhood development and effective parenting.[6]

Incredible Years

The Incredible Years is a series of trainings and programs for parents, teachers and children working to prevent and treat young children's behavior problems and promote their social, emotional, and academic competence.

Nurse Family Partnership

NFP is a home-visiting program for low-income first-time mothers. It offers services on maternal health, child health and economic security through pregnancy and two years following the child's birth.[7]

Parents as Teachers (PAT)

PAT is a home-visiting, parent education model offered to families with children from prenatal through kindergarten.

SafeCare

SafeCare is a parent support program focusing on parent-child interactions, home health and child health. It offers a series of trainings in the home or another convenient location for parents and caregivers with children age five and under.[8]

Systems Approaches

Project LAUNCH

Project LAUNCH is a federally funded program serving three southern Adams County school districts focusing primarily on Spanish-speaking families and families who identify as Hispanic/Latino. The program works on systems coordination, early childhood and clinical workforce development, and promotion of programs for young children from birth to age 8 and their families.[9]

LAUNCH Together

LAUNCH Together is a collaboration of eight Colorado-based foundations and communities working to improve social, emotional, behavioral, physical, and cognitive outcomes for children age zero through age eight and their families by enhancing existing prevention and health promotion practices and building coordinated community systems.[10]

In addition to these 12 programs and services, CHI also analyzed five organizations and initiatives providing policy leadership across the state. Those are described later in the report.

The scope of this analysis is narrow when it comes to defining early childhood mental health. Many programs and initiatives are not included here even though they have a critical impact on early childhood development. For example, programs like Head Start, preschool programming, and childcare services are excluded. That's not because these programs are unimportant to the development of young minds. It's because of this analysis's keen focus on mental health for young children — their needs, the risks, available services, and investments made.

We selected these programs and initiatives based on input from Colorado's early childhood mental health experts and philanthropic leaders. We used the criteria below to refine the categories and to create the most compelling and concise approximation of Colorado's early childhood mental health services and needs. Those criteria are based on expert opinion and research into similar initiatives and approaches, such as Dr. Geoffrey Nagle's research at the National Center for Children in Poverty and in his report, "*Early Childhood Risk and Reach in Louisiana*"[11]. This report also builds on an analysis of financing for early childhood services in Colorado conducted by the Children's Campaign in 2013.[12]

Selection Criteria:

- **Alignment.** They fit into the priority areas identified by Colorado's ECMH leaders, which are 1) education and support for caregivers and ECMH professionals, 2) promotion, prevention, intervention and treatment for children and families, and 3) local and state systems building.
- **Impact.** They are "proximate" to affecting early childhood mental health. That means broad poverty reduction programs are excluded, along with early childhood general education and childcare, and primary care services that do not include a mental health component.
- **Data availability.** Their ECMH-specific financing data are available — either service budgets or a prorated estimate of a larger initiative's budget. Items such as uncompensated care provided by parents and caregivers are not reimbursed or financed, so they are excluded.
- **Age focus.** They primarily focus on children age zero to eight and/or their parents.
- **Statewide focus.** They have potential for statewide scale — either in where services are delivered or the level at which the initiative is focused. That means, for example, programs provided to infants in only one county are excluded, as well as regional ECMH strategic planning efforts.
- **Longevity.** They are longstanding, critical components of Colorado's ECMH ecosystem.

Then we analyzed 12 ECMH programs, services and initiatives to help approximate the current level of investment and service provision in the state. Finally, we compared the reach and resources available through these 12 programs and initiatives with Colorado's ECMH risk to help identify gaps and opportunities to strengthen the system.

No indicator framework, service landscape or funding analysis will capture every predictor, interaction and dollar affecting young children's social and emotional health in Colorado. And focusing on risk does not mean that the resilience of children and the strength of the system serving them are not important. Many of the services and initiatives described in this report illustrate those strengths and promote that resilience.

This analysis is limited by several factors such as availability of data on numbers of children served, geographic allocation of budgets, and an ideal portion of children aged zero to eight who "should" be served by the programs analyzed. Our current analysis compares the numbers of children served with total number of children aged zero to eight, which is a proxy that allows us to compare service availability across counties. Also, the total number of children served includes only those available and reported by the 12 programs analyzed — and may include duplicate children who were served by multiple services analyzed.

Other limitations are explained throughout the report. Regardless, this report offers actionable analysis that identifies major opportunities in Colorado's early childhood mental health services and funding — especially for the places and people who need them the most.

Findings

Our analysis reveals that parts of Colorado are more at risk than others when it comes to ECMH needs — specifically a southern swath of the state and Adams County. And some of those counties with high risks of ECMH needs are not getting a proportionally high level of services and funding compared to other parts of the state (see Maps 2-4).

In addition, more than one in 10 dollars supporting those programs are from philanthropic grants that have historically offered a critical mechanism to initiate programming in high risk areas. Though many of those grants have resulted in long lasting, publicly supported programs, funding from the philanthropic community might not be sustained indefinitely.

Below is our detailed analysis. First, we describe Colorado's risk of needing services to promote mental well-being for children and their families. Then, we analyze the programs and initiatives that are addressing those risks — including their reach of service provision and the resources supporting them.

Findings: Risk

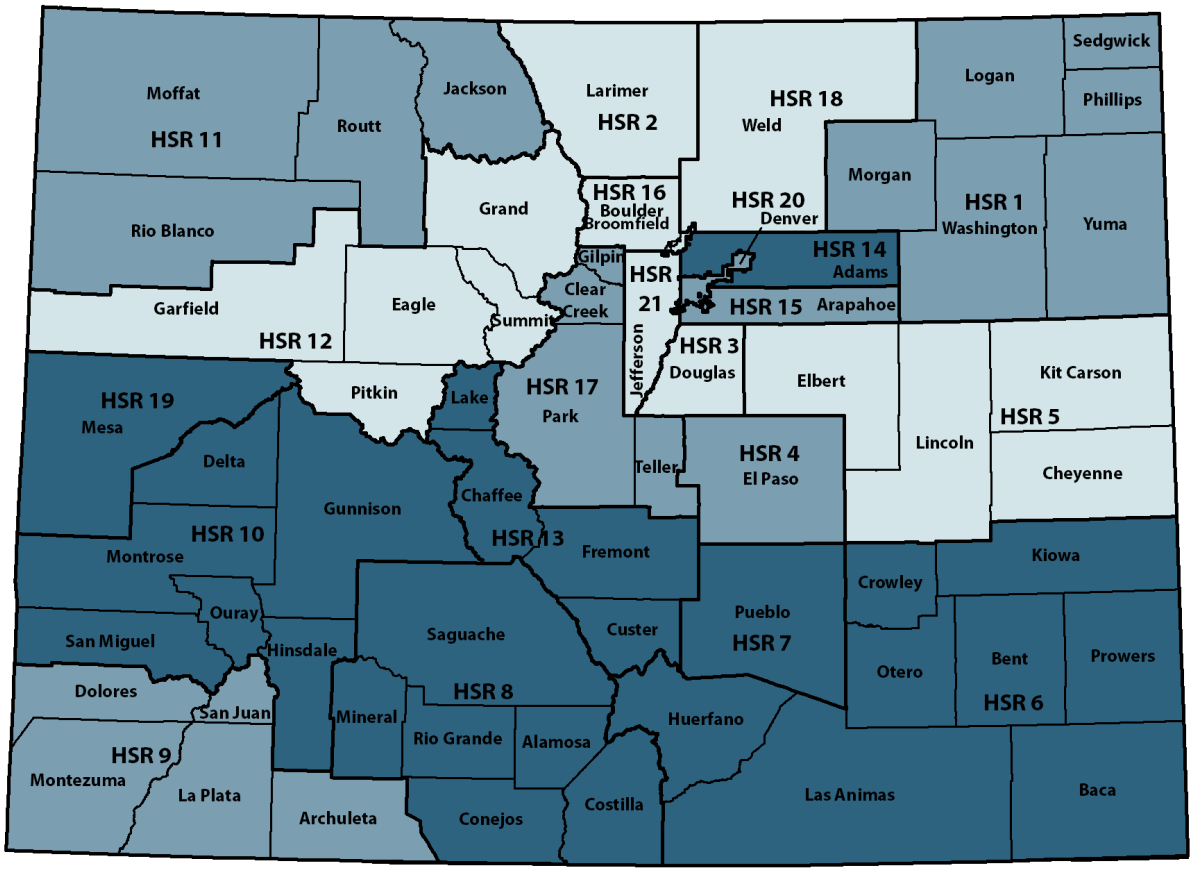
An analysis of ECMH risk factors — including nine data indicators on family background and mental health — shows a band of high-risk communities across a southern swath of the state as well as Adams County (see Map 1).

Risk scores vary widely, with Douglas County showing the lowest risk and the south Eastern Plains (Bent, Crowley, Huerfano, Las Animas, Otero, Kiowa, and Prowers counties) the highest risk.

The risk analysis began with the following questions: What are the needs of Colorado's families with young children? Where in the state do we find pockets of high need? To understand these needs, we selected nine indicators to measure at a sub-state level and used them to construct an index of need.


Brian Clark/CHI

Map 1. Early Childhood Mental Health Relative Risk Factors.



Lowest relative risk: score of 11 to 16

Medium relative risk: score of 17 to 20

High relative risk: score of 21 to 27

We selected these indicators from a longer list of available measures using the following criteria:

1. Does this directly capture the need for early childhood mental health services?
2. Do we have the data at a meaningful level and sample size?
3. Is the indicator trendable?
4. Can we compare this indicator at the health statistics region level or below?
5. Is this measure aligned with other initiatives?

The final indicators fall into two categories: family background and mental health. They are described in detail in the Appendix.

Family Background Risk Indicators

- Maternal age
- Maternal education
- Maternal depression
- Children living in households below 200 percent of the federal poverty level (FPL)
- Adult adverse childhood experience (ACE) scores

Mental Health Risk Indicators

- Suspension and expulsions for children in grades K-3
- Times in prior 12 months where child needed counseling or mental health care
- Parental concern of child's behavior, emotions, concentration, or ability to get along with others
- Child abuse and neglect

This approach aligns with other widely accepted measurement frameworks such as the Early Childhood Colorado Partnership (ECCP) Data Agenda; Colorado's Maternal and Child Block Grant Needs Assessment; and the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) priority populations. We approached the risk framework with guidance from a review of similar work in Louisiana, Pennsylvania, Minnesota, Maryland, and the District of Columbia.

Analysis

Colorado's high risk communities are spread throughout the state in a band stretching from Grand Junction in the west through Baca County at the state's southeastern corner. Adams County is the geographic outlier in the high-risk group — and it also has more children ages zero to eight than all the other high risk regions combined.

The scores in Table 4 of the appendix show a diversity of risk scores across the state. Douglas County (HSR 3) has the lowest risk, according to CHI's analysis. Other low-risk regions include the Denver metro counties of Jefferson, Boulder and Broomfield, the mountain resort communities in HSR 12, and the counties of HSR 5 on the central Eastern Plains.

The region with the highest risk score is HSR 6 in the southeast — Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero and Prowers Counties. The region scores in the highest percentile for each of the nine indicators.

Findings: Reach

Colorado communities with the highest risk for poor childhood mental health sometimes lack robust local services for children and their families.

CHI compared the number of programs available in a county to its risk score. This analysis reveals several counties with a discrepancy between their need for services and the number of available programs.

For example, the counties with the highest reach, or number of programs present, often are expected due to a large population like in the Denver metro area, or due to high risk scores like in parts of the San Luis Valley. But some regions — especially in the far southeast and Gunnison Valley — have few programs despite high risk scores. (See Map 2.)

Analysis

The 12 analyzed ECMH programs and initiatives provided services in 2017-18 to more than 50,000 children ages zero to eight, and another 12,000 families.

CHI analyzed program reach by the density of available programs and the portion of children aged zero to eight that were served by those programs.

Program Density: In terms of program density, some high-risk counties are benefiting from most programs analyzed while others have less access. For example, Lake County stands out as high risk for several reasons, including the highest rate of maternal depression in the state (18.3 percent of new mothers). But only five of the 12 programs and initiatives analyzed are available to provide services locally.

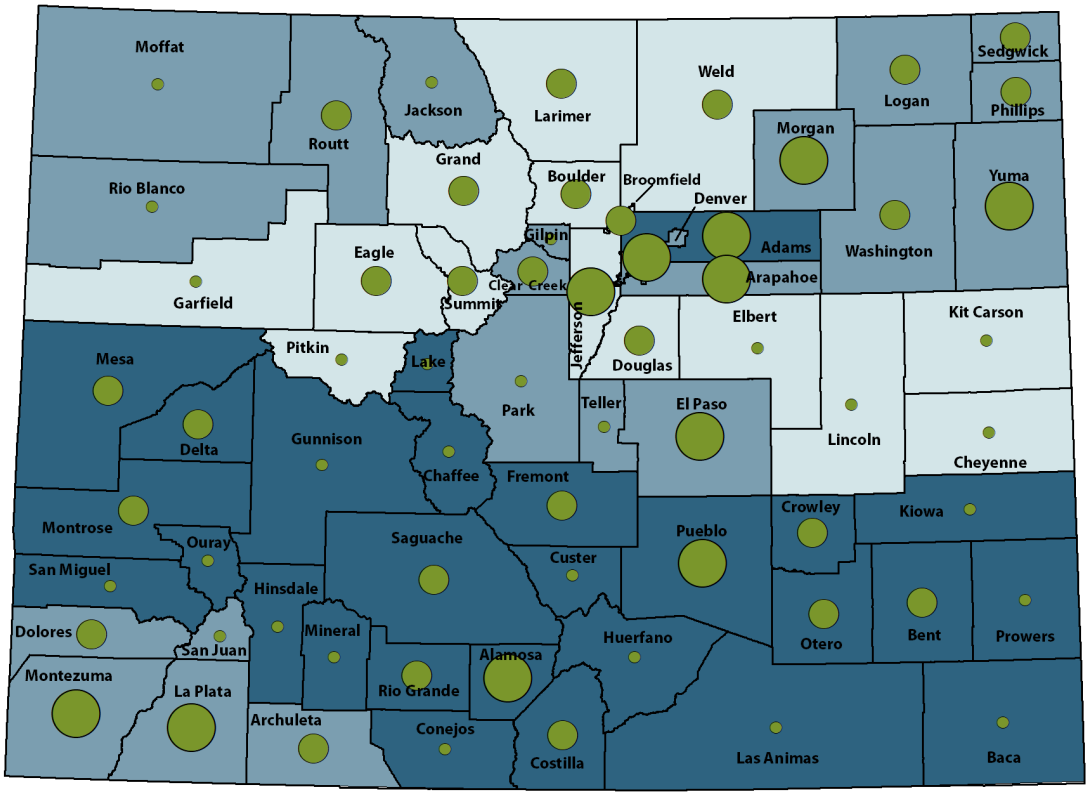
On the other hand, Alamosa County benefits from most of the programs and initiatives analyzed, from Nurse Family Partnership to HealthySteps to SafeCare. This high program density aligns with the region's high risk score — including one of the highest rates of suspensions and expulsions for young children in the state.

Program availability may vary from one county to another due to several factors such as population density, funding limitations, and programs that are tailored to or designated for a specific region. For example, LAUNCH Together is available in the five counties that won grants through a competitive application.

Proportion of Children Ages Zero to Eight Served: In addition to analyzing program density, CHI analyzed the proportion of children ages zero to eight served. On a statewide level, the system's service to these 50,000 children means that the ECMH system is providing services to roughly eight percent of all children ages zero to eight. That's compared to about 15.3 percent of parents who reported on the 2017 Colorado Child Health Survey they felt their child needed mental health care or counseling in the past 12 months.

The proportion of children ages zero to eight receiving services varies greatly across the state with a low of four percent in Jefferson County to a high of 32 percent in Grand County. Sometimes that's because

Map 2. Early Childhood Mental Health Risk Factors + Program Density.



of high need — like Pueblo with a high risk score and more than 13 percent of children served — or because there are so few children living there, like Jackson County, where almost a quarter (24 percent) of its 107 children received services (see Map 4 in Appendix).

More than half the ECMH services and programs support children and parents regardless of identified mental health needs — like the Nurse Family Partnership program that promotes healthy first-time pregnancies and stable early childhood for low-income families. Three programs are specifically designed for children who are at risk of behavior and mental health challenges, including Colorado's Early Intervention Part C and Core Services programs.

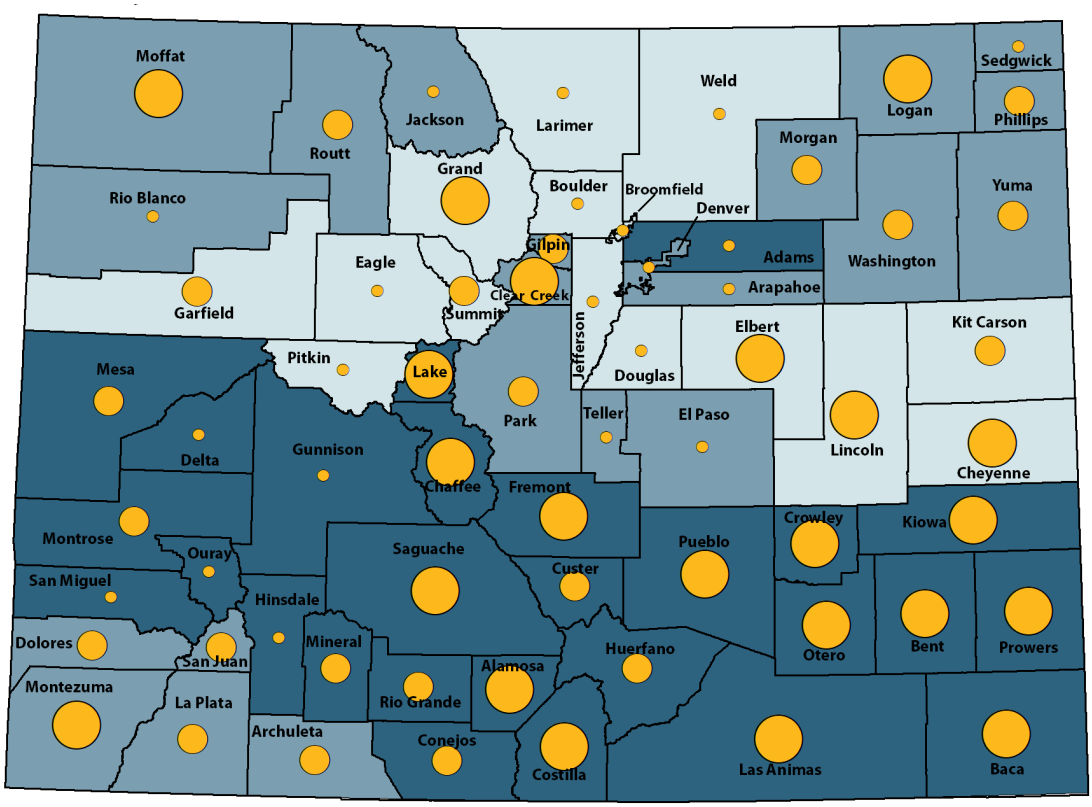
Insurance-supported or private pay clinical services for children — like therapy and counseling — are not included in this analysis because of the unavailability of data. Also, the same child might be counted twice if that child accessed multiple programs and initiatives in the same year.

This analysis approximates the portion of children age zero to eight reached by a given program or initiative, but it is not an eligible-but-not-enrolled analysis. That's because each program or initiative may have different eligibility criteria based on income, geography, or other factors.

Findings: Resources

About $62 million supported ECMH services for Colorado children, their parents and caregivers in 2017-18. Most of that money came from the state or federal government. Comparing the highest risk counties

Map 3. Early Childhood Mental Health Risk Factors + Resources.



Risk

- Lowest relative risk: score of 11 to 16
- Medium relative risk: score of 17 to 20
- High relative risk: score of 21 to 27

Resources

- Low Relative Concentration of Investments ($55-$118)
- Medium Relative Concentration of Investments ($119-$187)
- High Relative Concentration of Investments ($188-$430)

Table 1. Sources of Colorado's ECMH Investments

Public Funding		Private Funding	Total
Federal	State		
$13,178,077	$42,367,427	$6,814,844	$62,360,348
21%	68%	11%	100%

with their per capita investments for children age zero to eight reveals some regions of the state in need of additional investment. (See Map 3).

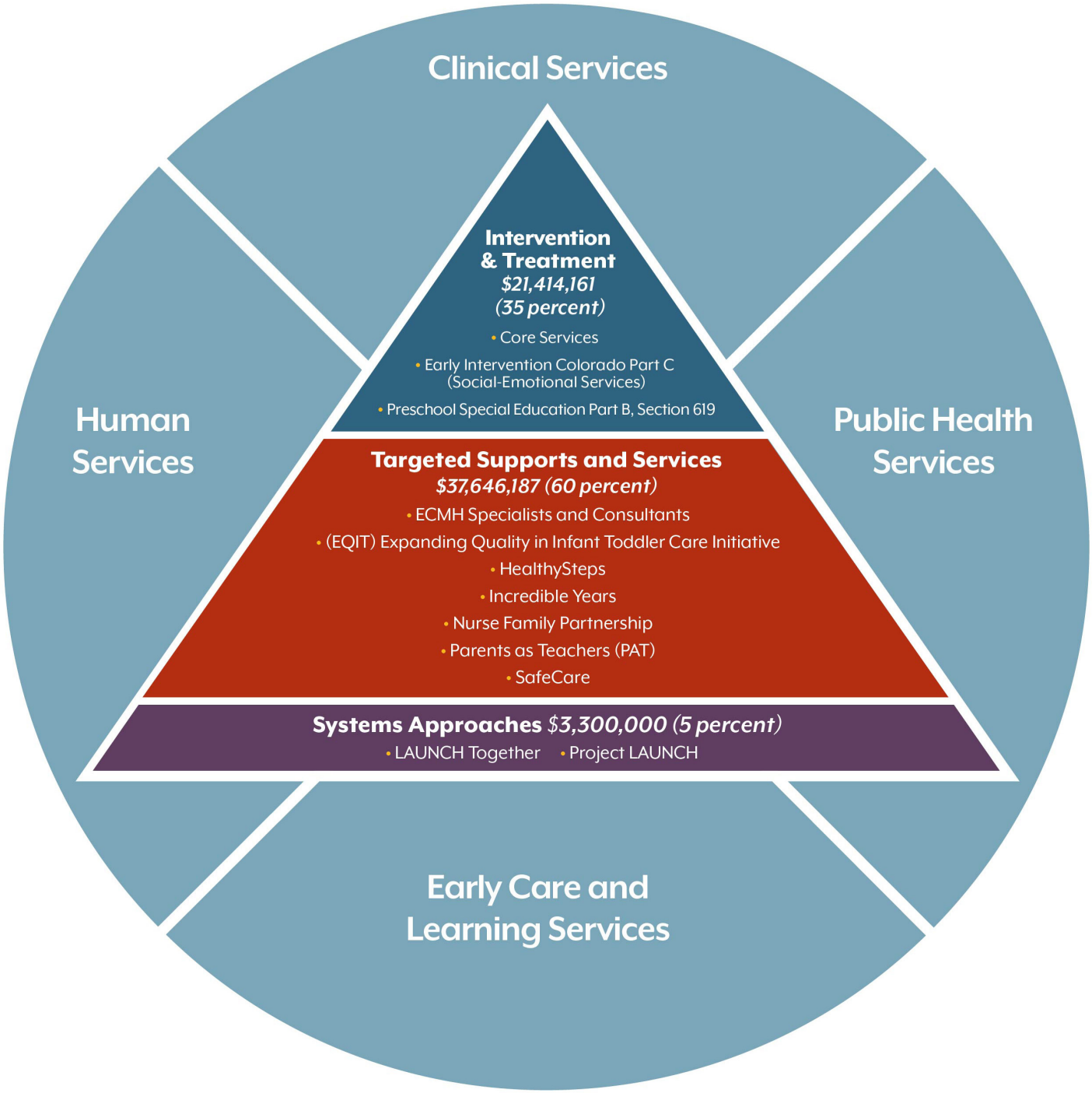
For example, Adams County's ECMH risk is high compared to other counties because of several factors including a high poverty rate, a significant number of children receiving suspensions or expulsions, and a high birth rate among teens with less than a high school education. While Adams County residents benefit from most of the 12 programs analyzed, ECMH per capita funding for children aged zero to eight is one of the lowest in the state, at $110 dollars.

Analysis

Colorado's total spending of $62 million on services going directly to children, their parents and caregivers in 2017-18 equates to about $102 per child age zero to eight living in Colorado.

Figure 1. Service Category Funding Analysis for Selected ECMH Programs.

Note: This figure categorizes the 12 ECMH programs included in this analysis, representing $62 million in funding. It excludes many important services and initiatives that impact ECMH—such as clinical, human, and public health services, as well as early care and learning services. Some programs cut across categories, like the LAUNCH initiatives which promote five cross-cutting strategies: screening in various child-serving settings, integration of behavioral health into primary care, mental health consultation in child-serving settings, enhanced home visiting with a focus on social and emotional well-being, and family strengthening and parent skills training.



Critical Action Steps for Colorado's Leaders

This analysis is based on service data, funding amounts and mental health risk indicators. CHI has used these sources in combination to characterize Colorado's ECMH needs and the extent to which those needs are being addressed.

This research reveals that statewide, the 12 programs analyzed are serving less than 10 percent of children aged zero to eight. Even in the best of cases, no county is providing services to more than a third of children. The funding supporting those programs, philanthropic investment and governmental funding combined, represent about $102 investment per child aged zero to eight.

The findings of this report may result from various causes. A county with low per capita investment might be attributed to a large population size or efficient programmatic spending, and not financial need or disadvantage. Similarly, a low program density county might reflect a legacy of an exceptionally strong program, and not a dire need for program diversity.

That said, this analysis surfaces important considerations for continued investment in ECMH.

While no standard enumerates how many services children should receive or the level of investment each child requires, we speculate that current levels are inadequate to meet the mental health needs of all children. If anything, all counties in Colorado need additional ECMH funding and support.

Even with these limitations and constraints, our analysis points to important questions regarding the advancement of ECMH services in Colorado.

Question One: Are enough ECMH services being provided in Colorado?

Our analysis suggests that Colorado is underinvested in ECMH services.

While the data we have cannot decidedly conclude this point, several comparisons and observations strongly suggest we are not investing adequately in ECMH.

One way to begin to address this question is to broadly compare access to and utilization of physical and mental health services. Given Colorado's commitment to ensuring parity in access to mental and physical health care, we might expect to see similar utilization patterns between ECMH services and wellness visits. According to the National Survey of Children's Health, 87.6 percent of Colorado children had a medical visit in 2016.[13] That includes both wellness and medically necessary visits, but the comparison is stark when contrasted with less than 10 percent of children receiving services from the 12 comprehensive programs analyzed in this report. Generally, this comparison suggests that the state has not yet achieved its goal of mental and physical health parity.

Another way to address this question is to compare current per capita spending levels to subsequent spending in the mental health system. This progression of thinking is based on the premise that investment in ECMH can prevent subsequent use of mental health services at later stages of child or adolescent development.

Colorado directs about $102 per child aged zero to eight for ECMH services and supports for children and their families analyzed in this report. Considering the cost of clinical services for children and their families, this level of investment may be inadequate. As one comparison, Colorado's CHP+ program spent about $2,207 per child in FY2016-17.[14]

A possible next step is to undertake a serious analysis aimed at answering the question: what mix of universal, targeted, and intervention services should all Colorado children receive and when? We can than begin to compare the Colorado experience to a benchmark or "gold standard."

Question Two: How can Colorado best leverage philanthropic investments?

About 11 percent of Colorado's ECMH investments are sourced from philanthropic funders. A reasonable question for policy makers working in ECMH is how we might collectively leverage this investment for maximum benefit.

Fortunately, Colorado has an established track record of using private philanthropic investments to incubate promising programs and scale evidence-based ones. In both cases, private investment is a way to ultimately leverage state and federal funding sources.

The Incredible Years is a case in point. It began as a privately supported program. After years of demonstrating its effectiveness preventing and treating young children's behavior problems and promoting their social, emotional, and academic competence, it is now benefiting from long term state funding.

LAUNCH Together has taken a different path, but still illuminates the power and potential of private investment. The program, a collaboration of eight Colorado-based foundations and communities now serving five Colorado counties, is based on an effective national program, Project LAUNCH (an initiative of the federal Substance Abuse and Mental Health Services Administration). Bringing an evidence-based program to Colorado communities is another example of effective private investment. In coming years, LAUNCH Together may seek long term federal and state funding for its continuation and sustainability.

In both cases, the challenge is how to convert successful philanthropic investments into continued, sustainable programming. A follow up to our analysis could be to study the best practices among such conversions.

Question Three: What do we make of counties with high risk and low services or investments, or low risk and high levels of services or investments?

Our analysis effectively identifies low risk, high reach counties and high risk, low reach counties. Yet what to conclude from these correlations is challenging.

- **Low Risk, High Reach Counties.** Jefferson County highlights this category where risk is relatively low and service reach is relatively high compared to other parts of the state. One conclusion might be that as a state we are overinvested in that community. But we caution against such a conclusion. Just as likely: high program density and investment leads to increased service access and utilization, and that reach is responsible, at least partially, for lower risk levels.

- **High Risk, Low Reach Counties.** Fourteen counties fall into this category where risk is relatively high and service reach is relatively low compared to other parts of the state: Baca, Chaffee, Conejos, Custer, Gunnison, Hinsdale, Huerfano, Kiowa, Lake, Las Animas, Mineral, Ouray, Prowers, and San Miguel. Again, a first blush conclusion may be that Colorado is underinvested in these communities. And that certainly may be the case. But six of those 14 counties (Baca, Chafee, Kiowa, Lake, Las Animas, and Prowers) enjoy high levels of per capita investment. So at best, other factors not addressed by service reach may contribute to high risk levels.

The two observations above illustrate the need for further analysis and research. Deeper dives at the community level that combine qualitative and quantitative research may help policy leaders and grant makers more fully understand the relationship between risk, reach and resources.

Continued on Next Page

Question Four: What data are needed to advance our knowledge of ECMH risk, reach, and resources?

The most significant opportunity to improve this report and underlying analysis is to improve the data associated with ECMH. Data challenges surfaced in all aspects of this work. Chief among them:

- **Risk and inadequate "proxies."** The ECMH field lacks a score or index to accurately gauge children at risk for ECMH issues. Our analysis weighted equally nine proxy indicators of risk (See Appendix Table 5). As the field advances, one place to focus on is on developing a more sophisticated and nuanced risk predictor or score.
- **Reach and de-duplication of records.** This report captures "touchpoints" with the 12 programs and services included in our analysis. Children who are involved in two or more services are counted multiple times. As our sophistication improves, converting touchpoints to total number of children will advance our capabilities in assessing service reach.
- **Reach, resource and program capture.** Due to the scope of this project, not all programs that impact ECMH were included. A priority of any subsequent analysis should be to incorporate clinical services and spending into the assessment. Other areas — such as public health, human services, and early care services — can follow.

Improvements in data collection and analysis will serve to deepen our understanding of ECMH. This report, we hope, serves as a template that will incorporate more data as it becomes available.

But per capita investments vary widely across the state — from Chaffee County with $430 investment per capita to Broomfield County, where ECMH investments are $55 per kid.

Sometimes a low per capita investment is attributed to lower risk rankings, such as in Douglas County where ECMH investments are $57 per child aged zero to eight.

In other counties, spending per child may be far higher to account for increased ECMH risks. For example, in Alamosa County, where ECMH spending is $224 per child, the regional risks are high — including a quarter of adults (25.8 percent) reporting four or more adverse childhood experiences (ACEs), more than two thirds of children (67.8 percent) living in poverty, and the highest rate of children receiving suspensions or expulsions in the state (87.1 per 1,000 children).

Most of those investments are publicly sourced, with more than two thirds of dollars coming from the state (see Table 1). But private philanthropic funders make up more than 10 cents on every dollar spent, with almost $7 million in support to children and families in 2017-18. And some of the state's programs are supported by a much higher private investment — such as ECMH consultation and specialists, where private dollars make up almost half (44 percent) of the budget.

Given their goals of filling gaps and promoting innovation, private philanthropic investments may be less certain than publicly sourced funds. The state's ECMH leaders should consider taking steps to sustain those investments through public appropriations or other means .

Analyzing ECMH investments by service type also reveals opportunities for the state's leaders to focus funding. Colorado ECMH programs and initiatives are broadly focused across intervention and treatment services, targeted supports and services, and systems approaches. Most of Colorado's investments go towards targeted supports and services like home visitation and family strengthening programs at $37.6 million (60 percent). Another $25.7 million (41 percent) goes to direct intervention and treatment like Early Intervention Colorado Part C (see Figure 1).

Some programs cut across this grouping, like ECMH consultants, which may provide targeted supports to caregivers and interventions for kids when necessary.

Investments in systems approaches for capacity building appear much smaller in this analysis with about $3.3 million (5 percent) but this figure does not include the programs and initiatives advancing ECMH policy and advocacy in the state (see Advancing the ECMH Policy Landscape section below).

The programs and services featured in this report represent a significant, albeit incomplete, inventory of ECMH resources. These programs were selected by a team of expert advisors, and they could also submit data in the project's timeframe. These selected programs operate in a landscape of other programs and services that undoubtedly impact ECMH like clinical services, public health activities, human services, and early care and learning services (see Figure 1). As our effort to capture the entire ECMH landscape develops, additional programs and services may be incorporated into future analyses. For example, we aim to include behavioral health information from claims and administrative data from Medicaid, Child Health Plan Plus (CHP+), and commercial payers in future analyses.

Advancing the ECMH Policy Landscape

This analysis focuses on 12 selected services that directly touch families and children. But those services are being delivered within a system that is reinforced with policy, advocacy, training, priority setting and leadership from a variety of other organizations and initiatives in the state.

For example, some of these organizations and initiatives include but are not limited to:

- The Colorado State Innovation Model
- Colorado Children's Campaign
- Colorado Office of Early Childhood
- Early Childhood Colorado Partnership
- Early Childhood Leadership Commission
- Regional Accountable Entities, or RAEs, in Health First Colorado.

Each of these organizations and initiatives promote ECMH either directly or indirectly, but their focus is broader, their priorities are systemic, and the services they provide do not clearly accrue to certain populations or geographies. Still, they leverage federal, state and private funds to provide leadership, advocacy, and policy advancement in the ECMH system. These example initiatives are described below:

The State Innovation Model (SIM) is a federally funded initiative in the governor's office that helps primary care practice sites integrate behavioral health services. Awarded as a $65 million grant to Colorado in 2014, SIM does not provide direct services but is a system building initiative. Though its focus is much broader than early childhood mental health, at least 132 SIM practices serve children and are working to promote critical services including screening for early childhood mental health needs, maternal and paternal mental health needs, warm handoffs to behavioral health care providers, and behavioral health integration.

The Colorado Children's Campaign is Colorado's child advocacy organization that promotes child well-being through development and implementation of data-driven public policy in health, education and partnerships. Its 2015 publication of Young Minds Matter: Supporting Children's Mental Health Through Policy Change sought to identify challenges and solutions in children's mental health policy in Colorado, including early childhood mental health consultation, screening and referral, suspensions and expulsions, and two-generation policies to support children and their caregivers.

The Colorado Office of Early Childhood (OEC) provides collaborative leadership and contracts with agencies statewide to offer quality early childhood programs and family supports for children, families, and early childhood professionals. The office is part of the Colorado Department of Human Services and administers over $250 million state and federal dollars to provide this leadership and contracted services — many of which are captured in this report's analysis. It also maintains a dedicated, director-level position for early childhood mental health to provide leadership on related policy and practice issues both nationally and statewide across departments, task forces and systems. The office's responsibilities are much broader than early childhood mental health and include programs to promote child well-being through advancing quality childcare, child maltreatment prevention, services to children with disabilities, home visitation, and other services.

The Early Childhood Colorado Partnership (ECCP) is a statewide network of individuals, organizations, and agencies that work to actively implement strategies to advance the Early Childhood Colorado Framework's system-level priorities. The Framework was developed


Brian Clark/CHI

in 2008 to provide a resource guide for comprehensive early childhood systems work in Colorado. Since then, it continues to be a useful tool for state and local early childhood stakeholders to help identify needs, guide planning and decision making, and build partnerships.

The Early Childhood Leadership Commission (ECLC) is Colorado's state advisory council for early childhood run through the office of Colorado's Lieutenant Governor. It consists of 20 commissioners including parents, early childhood professionals, Head Start, school districts, local municipalities, foundations, nonprofits, businesses and five state departments. Working within the context of the Early Childhood Colorado Framework, the ECLC offers statewide leadership and subject matter expertise and champions best and promising practices in early childhood for young children ages birth to eight and their families.

Regional Accountable Entities (RAEs) are organizations in Health First Colorado, the state's Medicaid program. The RAEs are responsible for coordinating care and ensuring the integration of primary care and behavioral health. RAEs receive a capitated payment to provide behavioral health care to all members, including children, thorough services like family counseling, individual counseling, residential child care, and more. RAEs also support community mental health centers to provide various services like parenting classes intended to improve social and emotional wellness for children. While the RAEs serve many people with a full range of services, contributions to ECMH must be appreciated. Given that almost half of children in Colorado are covered by Medicaid, a significant number will benefit from RAE-supported ECMH services.

Conclusion

In 2017-18, more than 50,000 of Colorado's children benefited from over $62 million invested in their mental well-being. But there are opportunities to strengthen this system.

The 2019 legislative session provides a ripe opportunity for discussion. ECMH leaders can use this analysis to inform future areas of service provision, geographic priorities, and levels of investment — benefiting generations of children to come.

Appendix 1: Methods

Reach and Resources Methods

CHI used six eligibility criteria to narrow the scope of this report to 12 programs, services and initiatives to analyze using mapping and quantitative approaches. CHI reviewed online budget documents and annual reports, conducted 13 interviews and collected data from ECMH key informant funders and administrators from the programs in this analysis. Six additional initiatives and organizations were described qualitatively rather than as part of the mapping and quantitative analysis because of their broad focus on issues beyond early childhood mental health.

The 12 selected programs and initiatives were analyzed by funding source, service type, target population and geography. We allocated all funding and numbers served by county. Whenever possible, we used the most granular information provided by key informants to help allocate funds and numbers served.

If county-level funding or numbers served were not available, the county-level population of children age zero to eight was used to allocate those funds and numbers served. For example, if a regional agency serves multiple counties, county-level funding or numbers served were calculated by multiplying the agency number by the ratio of the number of children age zero to eight living in that county to the number of children age zero to eight living in all the counties served by the agency. For simplicity, we will call this method the "population distribution method" throughout the remainder of this section.

Additional methodological details on the reach and resources of programs included in this study are included below.

ECMH Specialists and Consultants

- **Reach:** OEC provided numbers of children served in 2017-18 by agency. Some agencies served multiple counties, so the numbers served by agency were allocated across the counties they serve using the population distribution method described above. For example, Mental Health Partners served 46 children across Boulder and Broomfield. About 28,000 children age zero to eight live in Boulder and about 7,000 children live in Broomfield, so that proportion was used to divide up the 46 children served into about 37 in Boulder and 9 in Broomfield. The number served is an undercount. It only represents the figure of child-specific cases recorded in the database, excludes all program cases, and not all consultants use that reporting system.
- **Resources:** We asked private funders to report their spending, and we pulled public funding numbers from the 2017-18 Long Bill. Each total was allocated to the county level using the approach described under "Reach."

Core Services

- **Reach:** Core Services provided numbers of children age zero to eight served by county in 2017-18. Where there was a grouping of counties, the number served in that grouping was allocated using the population distribution method. Total numbers served and expenditures reflect the sum of county-level data, but clients could have had multiple involvements during the year with more than one county, so the totals may be slightly overestimated.
- **Resources:** Core Services provided county-level expenditures for 2017-18 on children age zero to eight. When funds were grouped across multiple counties, those dollars were allocated to counties using the population distribution method. This estimate does not account for the cost of salaried staff who provide direct services like home-based intervention and intensive family therapy. That's because those costs are tracked in aggregate as salaries and cannot be broken down to service costs.

Preschool Special Education Part B, Section 619

- **Reach:** The Colorado Department of Education provided numbers served by the Special Education Administrative Units as of December 1, 2017. Total number served was allocated by county using the population distribution method.
- **Resources:** Part B, Section 619, provided total federal funding by Administrative Unit for 2017-18. The total was allocated by county using the population distribution method. To access Preschool Special Education services available through Part B, Section 619, the child must be identified with an educational disability and have an Individualized Education

Program (IEP). However, this analysis does not include state and local funding for creation of those IEPs. Part B, Section 619 funding allows for all children served to access social-emotional services including behavioral supports delivered as specialized instruction by special education teachers, and mental health services delivered by mental health professionals as an educationally-related service. Since data are not available to estimate what portion of these dollars are allocated to these types of services versus other Preschool Special Education services, all Part B, Section 619 federal funding is included in this analysis.

Early Intervention Colorado Part C (Social-Emotional Services)

- **Reach:** Part C provided numbers of children served with social-emotional services by Community Centered Board (CCB) for 2017-18. Children served only by other developmental services were excluded. CCBs serve multiple counties. Where one CCB served only one county, the actual number served was used, but when multiple counties were served, we used the population distribution method. Some CCBs did not report numbers because they were too small. We allocated those to the county level using those counties' population of children age zero to eight.
- **Resources:** Part C provided 2016-17 per capita spending, which was multiplied by the number of children served with social-emotional services in each county. That per capita number includes funding from all sources for all kinds of services, not just social-emotional services.

(EQIT) Expanding Quality in Infant Toddler Care Initiative

- **Reach:** EQIT provided numbers of adults certified and numbers of children served by agency in 2017-18. Some agencies served multiple counties, and some counties were served by multiple agencies. Those numbers served were allocated using the population distribution method.
- **Resources:** EQIT provided funding by council for 2017-18. Some councils serve multiple counties. Council funding was allocated to county level using the population distribution method.

HealthySteps

- **Reach:** HealthySteps provided numbers of children served by HSR for 2017-18. Those were allocated to the county level using the population distribution method.
- **Resources:** Private funders provided philanthropic funding, and state funding was gathered from the 2017-18 program funding request. Both private and public funding was allocated by county using the distribution of numbers served.

Incredible Years

- **Reach:** Colorado's Incredible Years program administrator, Invest in Kids (IIK), provided the total number of children and parents served per county for 2017-18.
- **Resources:** IIK provided total state funding available for the parent program and classroom program for 2017-18. Parent program funding was allocated to the county level using the number of parents served in each county, and classroom program funding was allocated to the county level using the number of children served. This estimate does not include many smaller local contributions that allow each program site to offer services. Though this analysis only includes 2017-18 funding, the program will include support from public funds going forward into 2019.

Project LAUNCH

- **Reach:** Project LAUNCH's evaluation team provided the unduplicated number of screenings submitted from the three participating LAUNCH clinics from 2017-18. All those children were allocated to Adams County. It does not include children who were served with other Project LAUNCH programs.
- **Resources:** The Project LAUNCH team provided the total funding of $800,000 for 2017-18. All funds were allocated to Adams County. Approximately half of this funding goes towards systems-building and half goes to direct services.

LAUNCH Together

- **Reach:** The LAUNCH Together program administrator, Early Milestones, proposed not using a number served for this program given the focus is on systems building rather than direct services.
- **Resources:** Early Milestones shared funding totals for 2017-18 for the four program sites of Pueblo, Jefferson, Southwest Denver, and the Chafee and Fremont combined program. For the Chaffee/Fremont site, half the funding was allocated to each county.

Nurse Family Partnership (NFP)

- **Reach:** Invest in Kids provided total numbers of children and moms served in 2017, and those were allocated to the county level using the agency funding to county allocations (see Resources methods).
- **Resources:** IIK provided agency-level funding for each of the 22 agencies serving families in 2017-18. Some agencies served more than one county. Multi-county agency funding was allocated to the county level using the population distribution method. Public funding is now available for 2018-19, but those funds are not reflected here because the report focuses on 2017-18.

Parents as Teachers (PAT)

- **Reach:** PAT provided the number of children and guardians served by county for 2017-18. Children and guardians that were served but not associated with a region were allocated to the county level using the population distribution method.
- **Resources:** PAT provided federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) funding and Tony Grampsas Youth Services state funding for 2018-19 at the council level. Since funding did not change significantly between 2017-18 and 2018-19, CHI used the most available numbers, and PAT agreed on this approach. Private funding was collected from private funders. All funding was allocated by numbers served that PAT reported at the county level.

SafeCare

- **Reach:** SafeCare provided the number of families served by agency for 2017-18 and a map of counties served by each agency. Those agency-level numbers served were allocated to the county level using the population distribution method. The number of families served was assumed to be the number of children served as well to combine "like with like" across different programs. Since there may be more children in a single family, this number is an undercount of children served.
- **Resources:** SafeCare provided contracted funding for 2017-18 by agency and a map of counties served by each agency. The population distribution method was used to allocate the agency numbers to county. This is likely an overestimate of funding as the program served all children through age 18. Private funding for SafeCare was included for one small court-involved implementation. But the number served by that implementation was not available, so it is not reflected in this analysis.

Private Funding Data Assumptions

- Private funding data provided by the private funders were used when key informants could not provide a total private funding number. Otherwise, the key informant's funding information was used.
- For example, private funders reported about $500k support for the Incredible Years, but our key informant at Invest in Kids could provide total funding allocation of $1.2 million by agency and funding source, so we used those data instead of the funding data provided by the private funders to avoid double counting.
- Geographic information provided by the private funders was not used to allocate funding to the county level. If geographic information was available from the key informant, private funding data was allocated using that. For example, ECMH Consultants private funding data was totaled from the data provided by private funders and then distributed to the county level using the agency-level distribution of numbers served provided by the Office of Early Childhood.

- Otherwise, if incomplete geographic information was available but the private funder's data was the only private funding information available, then those private funds were included in aggregate and not distributed to the county-level analysis. For example, $10,000 of private funding was reported for NFP only for "Denver Metro." Because these funds are known to be allocated across all regions but they are not reported otherwise by the key informant, we included them in the aggregate funding analysis and did not allocate them to the county level. This was a small portion of the analysis. Less than one percent of reported funding ($263,300) was included in the aggregate analysis but not allocated to county-level.

Risk Methods

CHI used publicly available survey and administrative data to characterize Colorado's risks and need for ECMH services and investment. CHI used a set of five selection criteria to select nine risk indicators. These measures fall into two categories: family background and mental health events and outcomes.

The number of children ages zero to eight was analyzed alongside these nine indicators for context. These data were analyzed for the 21 health statistics regions (HSRs) and serve as an approximation of need for early childhood mental health services in Colorado.

We obtained the data from the sources listed and aggregated each indicator to the HSR. For each indicator, we split the 21 HSRs into thirds based on their indicator result. The lowest third was given a low risk, the middle third was assigned a medium risk, and the highest third was assigned a high risk.

We then calculated how each region scored in each of the three risk categories. A low risk was given a score of "1", a medium risk a score of "2" and a high risk a score of "3". The total score was then tallied for each health statistics region. Regions scoring 11 to 16 are considered to have an overall low risk, 17 to 20 are medium risk, and 21 to 27 are high risk. (The lowest possible score was 11, and the highest was 27.)

The chosen indicators were limited by data availability. One gap is data on parental substance use, which is a growing concern in the state. A similar measure currently unavailable is the rate of domestic violence in homes with children under age eight. Another limitation is the inability to analyze these measures by race and ethnicity on a meaningful level. Future analyses should seek to include these measures as they become available.

We also appreciate the importance of strengths-based reporting. These measures are not frequently available at a sub-state level. In their absence, we use the nine risk indicators to tell the most regionally precise story of early childhood mental health services and needs while keeping in mind the many components that make families strong.

The list of risk indicators included are described below.

Family Background

Maternal age

Measure: Percentage of live births to mothers ages 19 and younger

Source: Colorado Department of Public Health and the Environment, Vital Statistics

Level of Geography: Health Statistics Region

Year Reported: To report more reliable estimates, we used 2013-2017.

Ability to Trend: Reported annually.

Reasoning: Research finds that a child's risk of developmental vulnerabilities decreases as a mother's age increases (up to age 35).[15]

Maternal education

Measure: Percentage of live births to mothers with less than a high school diploma or GED

Source: Colorado Department of Public Health and the Environment, Vital Statistics

Level of Geography: Health Statistics Region

Year Reported: To report more reliable estimates, we used 2013-2017.

Ability to Trend: Reported annually.

Reasoning: Research consistently finds that maternal education is among the best indicators of child social and emotional well-being. The mechanism behind this relationship is still being studied, but recent research finds that a mother's education was a better indicator than income or maternal depression for predicting a child's social competence at age four.[16]

Parental adverse childhood experience

Measure: Percentage of adults with a high adverse childhood experience (ACE) score (four or more ACEs)

Source: Colorado Behavioral Risk Factor Surveillance System

Level of Geography: Mental Health Center regions (aggregated to Health Statistics Region)

Year Reported: This question has been asked only once, in 2014.

Ability to Trend: This question's availability is dependent upon funding for the survey module in a given year.

Reasoning: Research from Dr. Sarah Watamura has linked the BRFSS results for parents with their child's Colorado Child Health Survey results. The results of that study show that greater parental history of adversity is related to an increased likelihood of parents feeling their child needs mental health services and that the child has a diagnosis of ADD/ADHD and behavior or conduct problems.[17]

Children living in poverty

Measure: Percentage of children living at or below 200 percent of the federal poverty level

Source: American Community Survey

Level of Geography: County (aggregated to Health Statistics Region)

Year Reported: 2017

Ability to Trend: Reported annually.

Reasoning: Research on the link between poverty and child social and emotional health is strong. Protective factors can lessen these effects and are a critical piece of the conversation, but a measure of poverty serves as a baseline of risk.

Mental Health Events and Outcomes

Maternal depression

Measure: Percentage of new mothers who report feeling down, depressed or hopeless often or always since new baby was born

Source: Pregnancy Risk Assessment Monitoring System

Level of Geography: Health Statistics Region

Year Reported: 2014-2016

Ability to Trend: Reported annually, but must combine years for sufficient sample.

Reasoning: The research on the link between child and parental mental health is clear.[18] We chose to highlight maternal depression because of its established methodology and alignment with Colorado's Maternal Child Block Grant priorities.

Child mental health

Measure: Percentage of children with difficulties with one or more of the following: emotions, concentration, behavior or being able to get along with other people

Source: Colorado Child Health Survey

Level of Geography: Health Statistics Region

Year Reported: 2013-2017

Ability to Trend: Reported annually, but must combine years for sufficient sample.

Reasoning: This is Colorado's most consistent and direct survey metric for measuring the social and emotional well-being of children. There are other measures that capture some aspect of childhood mental health, but this measure captures multiple elements and has been consistently reported in Colorado.

Disciplinary action for elementary school children

Measure: Rate of children in grades K-3 who received in-school or out-of-school suspension or expulsion

Source: Colorado Department of Education (data request by CHI)

Level of Geography: Available at school level, aggregated to Health Statistics Region

Ability to Trend: Reported annually.

Reasoning: Suspension and expulsion are the consequence of behaviors deemed unacceptable by a school. Regions with high rates of suspension and expulsion may indicate of children in need of additional behavioral support or a workforce in need of additional training.

Child abuse and neglect

Measure: Rate of substantiated abuse or neglect claims per 1,000 children

Source: Colorado Department of Human Services

Level of Geography: Available by county, aggregated to Health Statistics Region

Ability to Trend: Reported monthly.

Reasoning: The consequences of abuse and neglect are long-lasting, especially when the abuse happens during the important development stages of early childhood. Effects of abuse and neglect include poor attachment and diminished ability to adapt to new situations.[19]

Access to treatment

Measure: Percentage of parents who said there was a time in the past 12 months where the child needed mental health care or counseling

Source: Colorado Child Health Survey

Level of Geography: Available by Health Statistics Region

Year Reported: 2013-2017

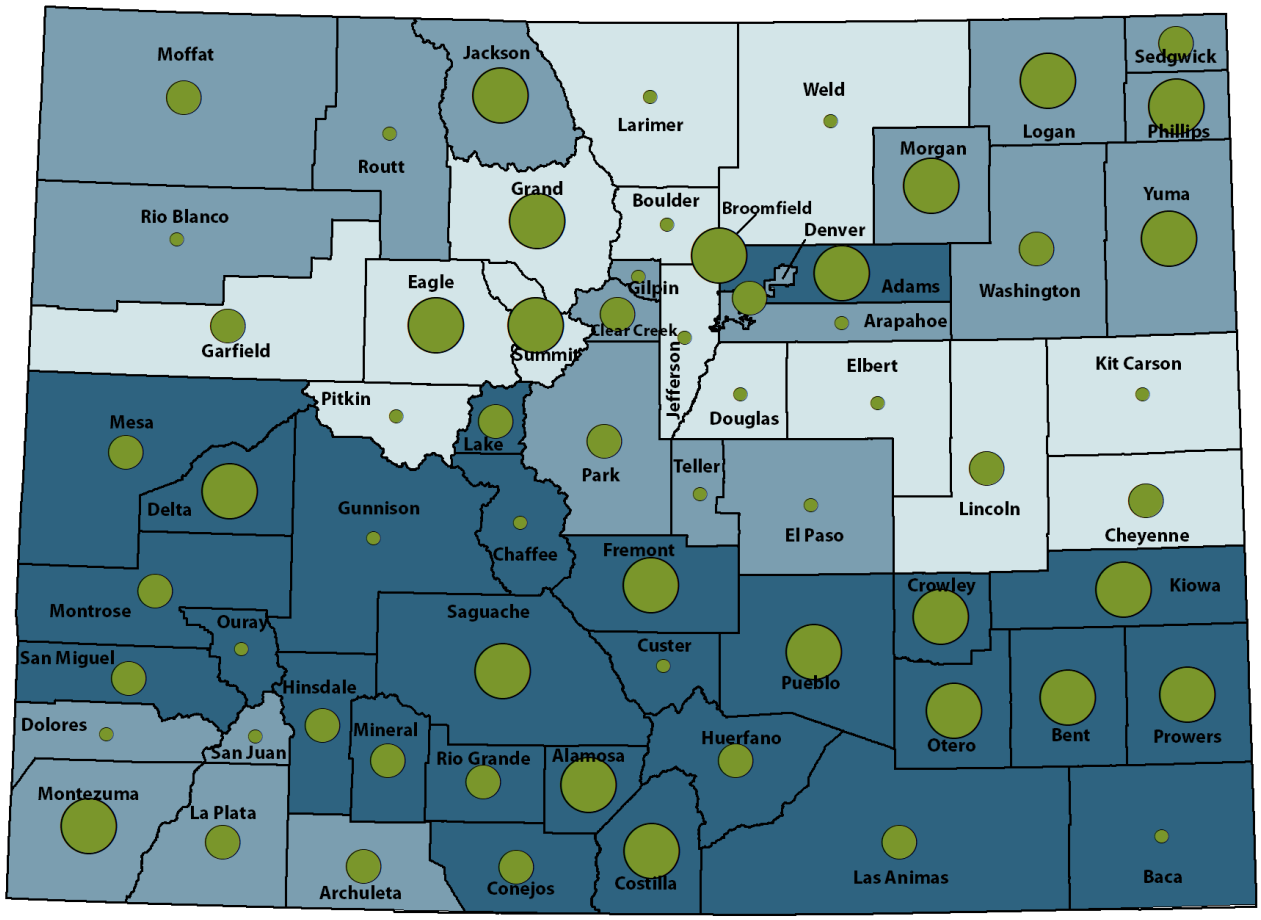
Ability to Trend: Reported annually, but must combine years for sufficient sample.

Reasoning: This measure captures parents' perception of their child's need for services. It includes both those who were able to access treatment and those who were not.

Appendix 2:

Map 4. Reach of Programs by County as a Percent of Population of Children Aged Zero to Eight

This map compares the number of children served by the 12 analyzed ECMH programs with the number of children aged zero to eight living in that county. Low "Reach" in this case means less than seven percent of children were served, medium means less than 12 percent were served, and high means 12 percent or more were served.



Risk

- Lowest relative risk: score of 11 to 16
- Medium relative risk: score of 17 to 20
- High relative risk: score of 21 to 27

Population of Children Aged Zero to Eight Served

- Lowest Relative Percent of Children Served (<7 percent)
- Medium Relative Percent of Children Served (7-11 percent)
- Highest Relative Percent of Children Served (12 percent or more)

Appendix 3: Colorado's Early Childhood Mental Health Services and Funding Data

Table 2. ECMH Reach and Resources Analysis by County

County	Number of Children Served	Number of Children Age 0-8	Percent of Children Age 0-8 Served	Tercile Ranking of Percent of Children Served	ECMH Investment	ECMH Investment, Per Capita	Tercile Ranking of Per Capita Investments	Risk Ranking
Adams	12,521	65,346	19%	High	$7,201,872	$110	Low	High
Alamosa	419	2,077	20%	High	$465,465	$224	High	High
Arapahoe	4,360	75,015	6%	Low	$6,308,922	$84	Low	Medium
Archuleta	139	1,143	12%	Medium	$213,579	$187	Medium	Medium
Baca	23	378	6%	Low	$74,574	$197	High	High
Bent	54	417	13%	High	$98,715	$237	High	High
Boulder	1,497	28,139	5%	Low	$2,034,882	$72	Low	Low
Broomfield	1,116	7,231	15%	High	$394,153	$55	Low	Low
Chaffee	96	1,514	6%	Low	$650,352	$430	High	High
Cheyenne	18	248	7%	Medium	$52,962	$214	High	Low
Clear Creek	70	759	9%	Medium	$152,379	$201	High	Medium
Conejos	95	1,027	9%	Medium	$169,610	$165	Medium	High
Costilla	82	323	25%	High	$82,805	$256	High	High
Crowley	72	339	21%	High	$106,998	$316	High	High
Custer	15	270	6%	Low	$39,462	$146	Medium	High
Delta	379	2,734	14%	High	$310,603	$114	Low	High
Denver	5,317	74,787	7%	Medium	$8,689,852	$116	Low	Medium
Dolores	8	191	4%	Low	$24,478	$128	Medium	Medium
Douglas	1,536	34,047	5%	Low	$1,953,439	$57	Low	Low
Eagle	860	5,792	15%	High	$671,339	$116	Low	Low
El Paso	4,964	83,364	6%	Low	$5,845,395	$70	Low	Medium
Elbert	146	2,304	6%	Low	$470,561	$204	High	Low
Fremont	456	3,608	13%	High	$1,060,134	$294	High	High
Garfield	555	7,393	8%	Medium	$880,834	$119	Medium	Low
Gilpin	25	490	5%	Low	$72,528	$148	Medium	Medium
Grand	411	1,291	32%	High	$273,677	$212	High	Low
Gunnison	108	1,528	7%	Low	$121,338	$79	Low	High
Hinsdale	5	68	8%	Medium	$7,325	$108	Low	High
Huerfano	52	502	10%	Medium	$76,459	$152	Medium	High
Jackson	26	107	24%	High	$11,819	$110	Low	Medium
Jefferson	2,137	55,520	4%	Low	$4,037,084	$73	Low	Low

County	Number of Children Served	Number of Children Age 0-8	Percent of Children Age 0-8 Served	Tercile Ranking of Percent of Children Served	ECMH Investment	ECMH Investment, Per Capita	Tercile Ranking of Per Capita Investments	Risk Ranking
Kiowa	18	143	13%	High	$42,809	$299	High	High
Kit Carson	48	882	5%	Low	$160,814	$182	Medium	Low
La Plata	535	5,154	10%	Medium	$867,203	$168	Medium	Medium
Lake	73	813	9%	Medium	$164,833	$203	High	High
Larimer	2,041	34,782	6%	Low	$2,781,577	$80	Low	Low
Las Animas	114	1,275	9%	Medium	$241,453	$189	High	High
Lincoln	55	568	10%	Medium	$183,120	$322	High	Low
Logan	308	2,015	15%	High	$420,725	$209	High	Medium
Mesa	1,394	16,380	9%	Medium	$2,821,634	$172	Medium	High
Mineral	6	64	9%	Medium	$10,434	$163	Medium	High
Moffat	123	1,663	7%	Medium	$312,502	$188	High	Medium
Montezuma	388	3,043	13%	High	$575,639	$189	High	Medium
Montrose	405	4,184	10%	Medium	$530,646	$127	Medium	High
Morgan	874	3,871	23%	High	$656,940	$170	Medium	Medium
Otero	345	2,101	16%	High	$489,390	$233	High	High
Ouray	17	367	5%	Low	$24,603	$67	Low	High
Park	99	1,343	7%	Medium	$221,812	$165	Medium	Medium
Phillips	63	509	12%	High	$69,444	$136	Medium	Medium
Pitkin	82	1,215	7%	Low	$137,619	$113	Low	Low
Prowers	217	1,561	14%	High	$423,872	$272	High	High
Pueblo	2,171	17,318	13%	High	$3,337,636	$193	High	High
Rio Blanco	38	754	5%	Low	$88,065	$117	Low	Medium
Rio Grande	129	1,305	10%	Medium	$222,457	$170	Medium	High
Routt	170	2,401	7%	Low	$410,543	$171	Medium	Medium
Saguache	132	727	18%	High	$141,945	$195	High	High
San Juan	3	54	5%	Low	$ 8,379	$155	Medium	Medium
San Miguel	59	803	7%	Medium	$53,832	$67	Low	High
Sedgwick	32	256	12%	Medium	$29,963	$117	Low	Medium
Summit	468	2,374	20%	High	$389,996	$164	Medium	Low
Teller	140	2,018	7%	Low	$170,122	$84	Low	Medium
Washington	58	487	12%	Medium	$69,810	$143	Medium	Medium
Weld	2,046	39,221	5%	Low	$3,425,049	$87	Low	Low
Yuma	174	1,332	13%	High	$217,688	$163	Medium	Medium
Colorado	**50,388**	**608,935**	**8%**		**$62,360,348**	**$102**		
Bottom 1/3			**7%**			**$ 119**		
Middle 1/3			**12%**			**$ 188**		

Table 3. ECMH Resources – Sources of Funding

Program	Public Funding		Private Funding Total	
	Federal	State		
Core Services	$-	$15,250,149	$-	$15,250,149
Early Intervention Colorado Part C (Social-Emotional Services)	$-	$2,644,758	$-	$2,644,758
ECMH Consultants and Specialists	$1,727,315	$1,260,317	$2,330,557	$5,318,189
(EQIT) Expanding Quality in Infant Toddler Care Initiative	$387,043	$-	$-	$387,043
HealthySteps	$-	$421,360	$58,742	$480,102
Incredible Years	$-	$-	$1,237,145	$1,237,145
Nurse Family Partnership	$3,254,639	$18,538,548	$10,000	$21,803,187
Parents as Teachers	$3,489,826	$207,000	$584,200	$4,281,026
Preschool Special Education Part B, Section 619	$3,519,254	$-	$-	$3,519,254
Project LAUNCH	$800,000	$-	$-	$800,000
LAUNCH Together	$-	$-	$2,500,000	$2,500,000
SafeCare	$-	$4,045,295	$94,200	$4,139,495
Total	**$13,178,077**	**$42,367,427**	**$6,814,844**	**$62,360,348**
	21%	**68%**	**11%**	**100%**

Table 4. ECHM Risk Index by Health Statistics Region (HSR)

HSR	Counties	Score	Risk	Number of Children Aged Zero to Eight
1	Logan, Morgan, Phillips, Sedgwick, Washington, Yuma	20	Medium	8,470
2	Larimer	12	Low	34,782
3	Douglas	11	Low	34,047
4	El Paso	21	Medium	83,364
5	Cheyenne, Elbert, Kit Carson, Lincoln	12	Low	4,002
6	Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers	27	High	2,676
7	Pueblo	24	High	17,318
8	Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache	23	High	5,523
9	Archuleta, Dolores, La Plata, Montezuma, San Juan	17	Medium	9,585
10	Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel	23	High	2,766
11	Jackson, Moffat, Rio Blanco, Routt	17	Medium	4,925
12	Eagle, Garfield, Grand, Pitkin, Summit	15	Low	18,065
13	Chaffee, Custer, Fremont, Lake	22	High	5,935
14	Adams	24	High	65,346
15	Arapahoe	17	Medium	75,015
16	Boulder, Broomfield	13	Low	35,370
17	Clear Creek, Gilpin, Park, Teller	19	Medium	4,610
18	Weld	16	Low	39,221
19	Mesa	21	High	16,380
20	Denver	18	Medium	74,787
21	Jefferson	12	Low	55,520

Table 5. ECHM Risk Indicators Included

HSR	Live births to women ages 15-19		Live births to women with less than a high school diploma or GED		Adults with four or more ACEs		Children living under 200% FPL		Maternal Depression		Difficulties with emotions, concentration, behavior or being able to get along with other people		K-3 who received in-school, out-of-school suspension, or expulsion per 1,000 children		Substantiated abuse or neglect claims per 1,000 children		Time in the past 12 months where the child need mental health care or counseling	
	Rate per 1,000 females in age group		Percentage of all live births		Percentage of all adults 18+		Percentage of all children age 0-18		As a percentage of women who recently gave birth		Percentage of parents with children ages 4-14		Rate per 1,000 children grades K-3		Rate per 1,000 children ages 0 to 8		Percentage of parents with children ages 4-14	
1	156.8	HIGH	19.5%	HIGH	11.0%	MID	46.7%	HIGH	11.5%	MID	14.1%	LOW	31.5	MID	23.5	HIGH	2.2%	LOW
2	54.6	LOW	8.1%	LOW	12.3%	MID	29.7%	LOW	10%	LOW	17.2%	MID	20.5	LOW	4.9	LOW	15.8%	MID
3	19.4	LOW	2.0%	LOW	7.7%	LOW	6.3%	LOW	4.2%	LOW	19.5%	HIGH	21.2	LOW	8.1	LOW	11.9%	LOW
4	107.6	MID	8.9%	LOW	16.7%	HIGH	40.6%	MID	10.6%	MID	18.0%	MID	68.2	HIGH	22.9	HIGH	17.7%	HIGH
5	67.3	LOW	7.8%	LOW	11.0%	MID	20.2%	LOW	10.7%	MID	9.3%	LOW	18.3	LOW	11.2	MID	9.2%	LOW
6	177	HIGH	18.2%	HIGH	18.1%	HIGH	60.9%	HIGH	13.4%	HIGH	33.5%	HIGH	45.6	HIGH	31.2	HIGH	16.3%	HIGH
7	148.6	HIGH	17.2%	HIGH	25.3%	HIGH	57.8%	HIGH	12%	MID	20.3%	HIGH	45.7	HIGH	8.5	LOW	19.4%	HIGH
8	117.7	MID	15.8%	HIGH	25.8%	HIGH	67.8%	HIGH	14.6%	HIGH	10.2%	LOW	87.1	HIGH	18.9	HIGH	11.9%	MID
9	104.2	MID	12.4%	MID	8.3%	LOW	38.2%	MID	7.3%	LOW	16.3%	MID	41.4	HIGH	10.5	MID	12.9%	MID
10	117.9	MID	15.5%	MID	15.8%	MID	49.3%	HIGH	14.1%	HIGH	20.2%	HIGH	33.4	MID	22.0	HIGH	17.3%	HIGH
11	92.3	MID	11.2%	MID	16.2%	HIGH	35.9%	MID	11.1%	MID	13.5%	LOW	40.2	MID	14.8	MID	11.3%	LOW
12	102.7	MID	17.8%	HIGH	16.2%	HIGH	36.0%	MID	6.9%	LOW	12.4%	LOW	22.1	LOW	5.5	LOW	9.9%	LOW
13	130.9	HIGH	12.8%	MID	13.3%	MID	26.1%	LOW	18.3%	HIGH	20.1%	HIGH	54.7	HIGH	14.5	MID	16.8%	HIGH
14	139.3	HIGH	19.3%	HIGH	12.0%	MID	43.4%	HIGH	12.2%	HIGH	19.1%	HIGH	46.9	HIGH	17.4	HIGH	10.6%	LOW
15	88.1	LOW	12.2%	MID	19.5%	HIGH	35.2%	MID	11.9%	MID	18.1%	MID	28.9	MID	8.0	LOW	15.2%	MID
16	38	LOW	8.4%	LOW	11.7%	MID	17.4%	LOW	6.4%	LOW	19.1%	MID	14.0	LOW	6.3	LOW	17.7%	HIGH
17	53.4	LOW	6.2%	LOW	16.0%	MID	37.1%	MID	14.2%	HIGH	35.7%	HIGH	27.1	MID	13.2	MID	24.4%	HIGH
18	116.7	MID	16.6%	HIGH	14.7%	MID	30.9%	LOW	10.6%	MID	14.9%	LOW	34.7	MID	12.5	MID	10.0%	LOW
19	135.7	HIGH	13.9%	MID	16.2%	HIGH	45.8%	HIGH	13.7%	HIGH	14.4%	LOW	24.4	LOW	27.1	HIGH	14.5%	MID
20	129.5	HIGH	14.8%	MID	15.2%	MID	40.4%	MID	10.3%	LOW	17.9%	MID	30.5	MID	15.5	MID	15.5%	MID
21	59.2	LOW	7.0%	LOW	14.1%	MID	24.5%	LOW	8.5%	LOW	17.5%	MID	22.7	LOW	8.1	LOW	12.9%	MID
Colorado	**93.9**		**12.3%**		**14.8%**		**34.4%**		**10.4%**		**18.0%**		**35.6**		**13.5**		**14.2%**	
Bottom 1/3	90.9		10.4%		13.0%		33.7%		10.5%		15.8%		26.2		9.9		11.9%	
Middle 1/3	121.8		15.6%		16.2%		41.5%		12.1%		19.1%		40.6		16.1		15.9%	

Endnotes

[1] Colorado State Demography Office, Department of Local Affairs. (2017). "Population Data." https://demography.dola.colorado.gov/population/.

[2] Colorado Department of Public Health and Environment, Center for Health and Environmental Data. (2017). "Colorado Child Health Survey." Retrieved from https://drive.google.com/file/d/1GWQbvAlFk9E0hQcdFCzj_uy51YmCJmr3/view.

[3] Colorado Health Institute. (2016). "The Link Between Parent and Child Mental Health in Colorado." https://www.coloradohealthinstitute.org/sites/default/files/file_attachments/Final%20Brief_0.pdf.

[4] Colorado Department of Education. "IDEA, Early Intervention and Preschool Special Education Key Differences." Retrieved from https://www.cde.state.co.us/early/candbcomparison. October 2018.

[5] Colorado Department of Education. "Expanding Quality in Infant Toddler Care Initiative." Retrieved from https://www.cde.state.co.us/early/eqinfant_toddler. October 2018.

[6] ZERO TO THREE. "HealthySteps: The Model." Retrieved from https://www.healthysteps.org/the-model. October 2018.

[7] Nurse Family Partnership. "About Us." Retrieved from https://www.nursefamilypartnership.org/about/. October 2018.

[8] Colorado Department of Human Services, Office of Early Childhood. "SafeCare Colorado." Retrieved from http://coloradoofficeofearlychildhood.force.com/oec/OEC_Families?p=Family&s=SafeCare-Colorado&lang=en. October 2018.

[9] Colorado University School of Medicine, JFK Partners. "Colorado Project LAUNCH: Linking Actions for Unmet Needs in Children's Health." Retrieved from http://www.ucdenver.edu/academics/colleges/medicalschool/programs/JFKPartners/research/Pages/Colorado%20Project%20LAUNCH.aspx. October 2018.

[10] Early Milestones Colorado. "LAUNCH Together." http://earlymilestones.org/launch-together/. October 2018.

[11] Tulane Institute of Infant and Early Childhood Mental Health and the Louisiana Department of Health, Office of Public Health, Bureau of Family Health. (2016). "Early Childhood Risk and Reach in Louisiana." http://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/maternal/RiskandReach_Report.pdf.

[12] Colorado Children's Campaign. (2013) "Colorado Children's Budget." https://www.coloradokids.org/data/publications/colorado-childrens-budget-2013/.

[13] Data Resource Center for Child & Adolescent Health. (2016). "National Survey of Children's Health." http://www.childhealthdata.org/browse/survey/results?q=4685&r=7.

[14] Colorado Department of Health Care Policy and Financing. (2017). "Annual Report 2016-17." https://www.colorado.gov/pacific/hcpf/hcpf-2016-2017-annual-report.

[15] Falster, K., et al. (2018). "Maternal age and offspring developmental vulnerability at age five: A population-based cohort study of Australian children." PLoS Med 15(4): e1002558. https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002558.

[16] Winer, A.C. and Thompson, R. (2011). "How Poverty and Depression Impact a Child's Social and Emotional Competence." Center for Poverty Research 1(10). https://poverty.ucdavis.edu/sites/main/files/file-attachments/policy_brief_thompson_risk_print.pdf.

[17] Watamura, S. and Brown, S. (May 2017). "Parental History of Adversity and Child Well-Being: Insights from Colorado." https://dcfs.my.salesforce.com/sfc/p/#410000012srR/a/4100000000yp3/6qy0RIGU00pw1a10kBBP0B.1UBGb2Z7XycN0V4XZUqk.

[18] Colorado Health Institute. (December 2015). "The Link Between Parent and Child Mental Health in Colorado." https://www.coloradohealthinstitute.org/research/link-between-parent-and-child-mental-health-colorado.

[19] Bruce, J., et al. (2013). "Early adverse care, stress neurobiology, and prevention science: Lessons learned." Prevention Science 14(3): 247–256.

Notes

COLORADO
HEALTH
INSTITUTE

The Colorado Health Institute is a trusted source of independent and objective health information, data and analysis for the state's health care leaders. The Colorado Health Institute is funded by the Caring for Colorado Foundation, Rose Community Foundation, The Colorado Trust and the Colorado Health Foundation.

303 E. 17th Ave., Suite 930, Denver, CO 80203 • 303.831.4200
coloradohealthinstitute.org

OUR FUNDERS

The Colorado Health Foundation™

THE COLORADO TRUST

CARING for COLORADO FOUNDATION
A Health Grantmaker

ROSE COMMUNITY FOUNDATION