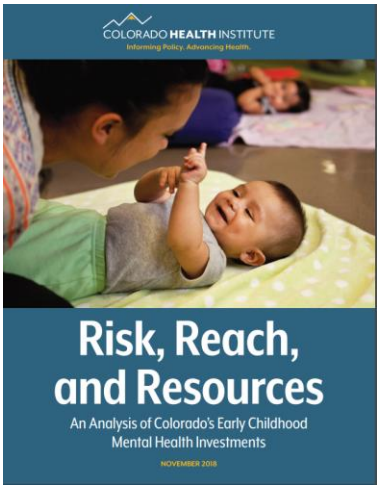

Risk, Reach and Resources
An Analysis of Colorado's Early Childhood Mental Health Investments
COLORADO HEALTH INSTITUTE
Analysis Results
December 2018



https://www.coloradohealthinstitute.org/research/risk-reach-and-resources

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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?

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- This project had three research questions.
- First – we knew we wanted to establish the level of need in the state for ECMH services. We call this risk.
- Next, we wanted to understand reach of current services. Where are these services in the state, and how do those services compare to the risk profiles of our communities?
- Finally, we wanted to understand how this work is being funded to provide analysis and guidance on what funding might look like in the future.

Takeaways

1. **Risk.** A southern swath of the state — as well as Adams County — has the **highest need** for ECMH investment and services.
2. **Reach.** Colorado's ECMH system is **serving less than 10 percent** of children aged zero to eight.
3. **Resources.** **Philanthropic funding made up 11 percent** of the state's ECMH investments, and far more for certain initiatives. Those grants have historically initiated critical programming in high-risk areas – but they might not be sustained indefinitely.

What This Report Is

- ✓A focused analysis of 12 ECMH programs and initiatives representing a significant portion of the state's ECMH system.
- ✓A representation of the best available data as of September 2018.
- ✓A characterization of current ECMH services and investments compared with a risk index created from unweighted, related data indicators.

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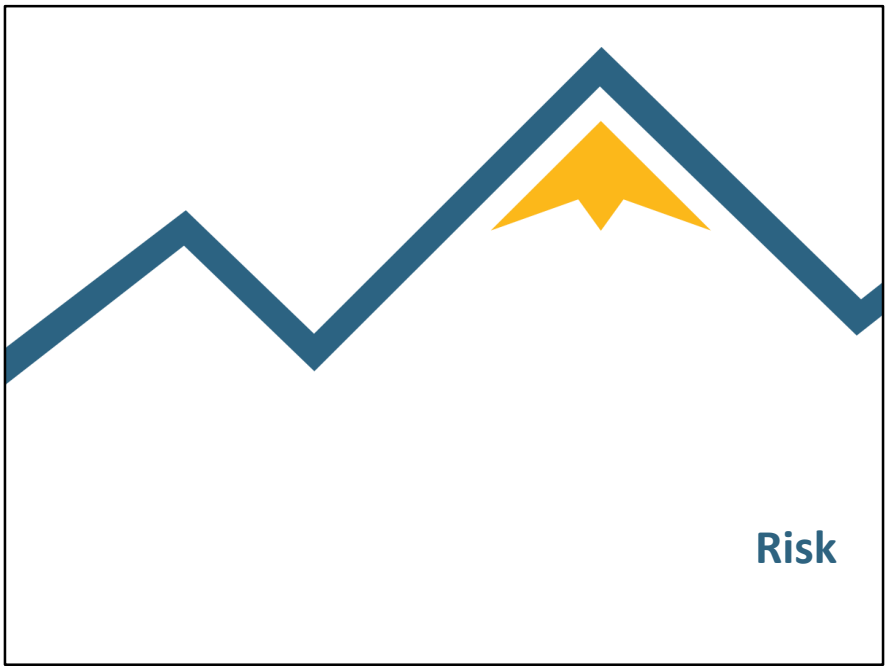
- The scope of this analysis is narrow when it comes to defining early childhood mental health.
- Many programs and initiatives are not included here even though they have a critical impact on early childhood development.
    - For example, Head Start, preschool programming, and childcare services are excluded.
    - Clinical services paid for by insurance or out of pocket – 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.
- These data are reflective of what was available as of September 2018.
- The need for services was approximated using an unweighted index. Future analyses may find that a weighted index is more appropriate.


Risk

Risk Indicator Selection 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?

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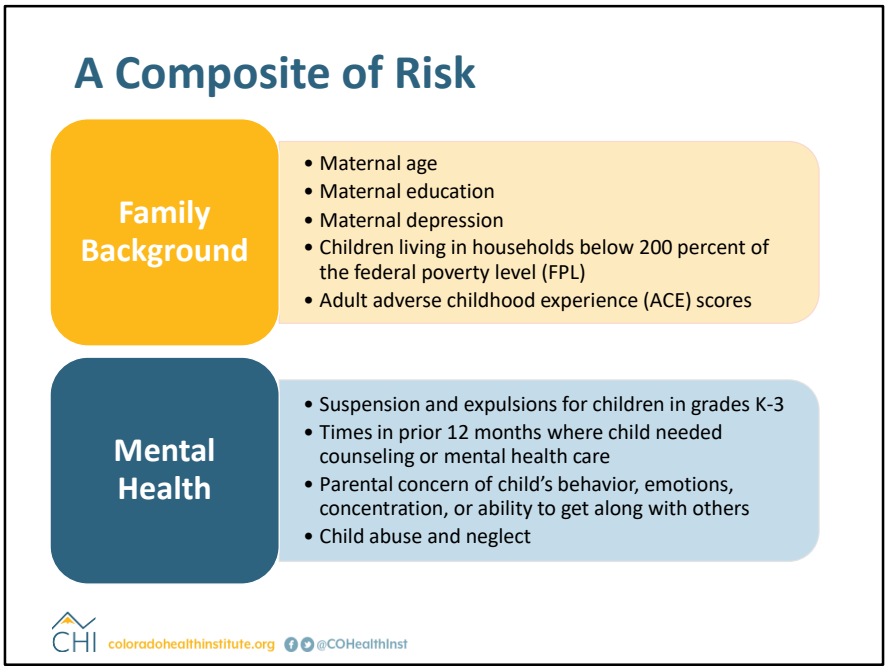
- CHI used publicly available survey and administrative data to characterize Colorado's risks and need for ECMH services and investment. Started with a list of about twenty five indicators related to children's mental health that CHI compiled for a project with the ECMH funders group two years ago. CHI then refined that list using a list of five criteria.

- Measures that are directly related to the need for early childhood mental health. Literature illustrates the measure's link to mental health outcomes for children such as a parent's perception of the child's behavior, or the link to family background such as poverty and abuse and neglect.
- Indicators that are reliably available at a regional level. This cut out all of the National Survey of Children's Health measures which are only available at the state level. Risk data are all at the Health Statistics Region level rather than county level. That's because the estimates are more stable and can report on measures like the adverse childhood experiences data point from the BRFSS, which was only asked in one year of the survey and is therefore small in terms of sample size.
- Data that was primarily trendable – either currently or in the future.
- Reflective of the measures examined by other initiatives. E.g., Early Childhood Colorado partnership's data agenda, the maternal and child block grant needs

assessment, and the MIECHV priority populations.



Best approximation of need for early childhood mental health in Colorado, but we know they aren't perfect.

Gaps:

- 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.
- 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.
- 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. Many of the services and initiatives described in this report illustrate those strengths and promote that resilience.

Risk Methods: Pueblo County Example

Measure	Data	Category	Score
Maternal age	148.6 (per 1,000)	High	3
Maternal education	17.2%	High	3
High ACE score	25.3%	High	3
200% FPL	57.8	High	3
Maternal depression	12.0%	Medium	2
Child mental health	20.3%	High	3
Disciplinary action	45.7 (per 1,000)	High	3
Abuse and neglect	8.5 (per 1,000)	Low	1
Needed mental health care	19.4%	High	3
Total score		**High**	**24**

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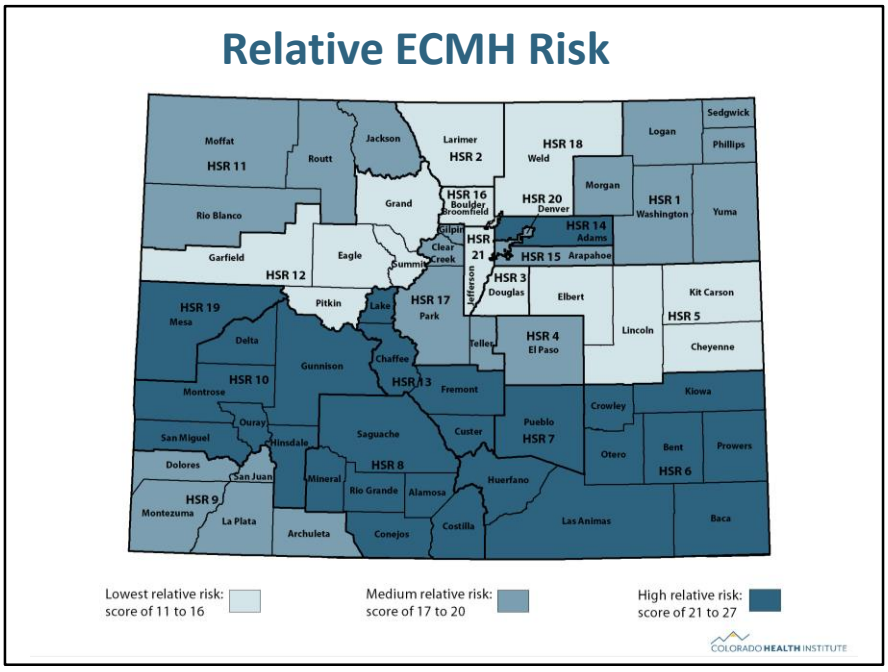
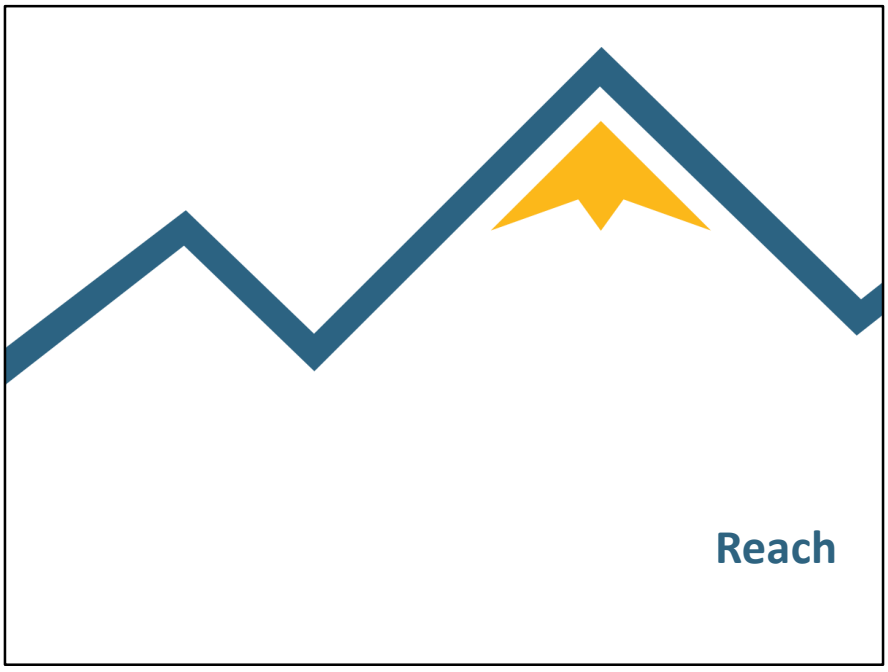
- Here is an example of how we went about calculating scores for each county.
- **The index.** For each indicator, we split the 21 HSRs into thirds based on their indicator result. The lowest third was given a low risk, the middle third was assigned a medium risk, and the highest third was assigned a 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.)
- Remember everything is calculated by its performance relative to other counties.
- A note on weighting:
    - While literature does indicate which of these indicators are more or less indicative of certain outcomes later on, there is no definitive research among these nine indicators how we would weight them.
    - They are also from different data sources with different sample sizes and different levels of statistical power.
    - Given these constraints, we decided to keep them weighted equally.

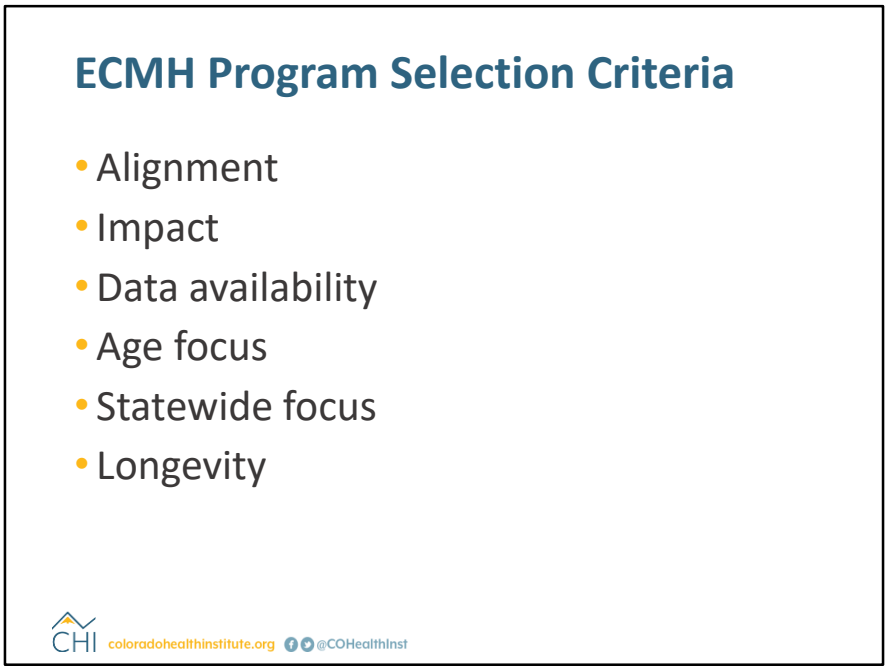


Observations:

- Southern part of state plus Adams County are highest risk.
- Denver is considered mid-risk. This was surprising. These high risk areas are sometimes masked in this regional level analysis. For example, the need represented in the Tribes in the Southwest. There was not sufficient Tribe-specific data to analyze in this version of the analysis.
- The map tracks with poverty, which suggests that the risk indicators we used are related. For future analyses, we may want to illustrate correlation between them, or weight them.



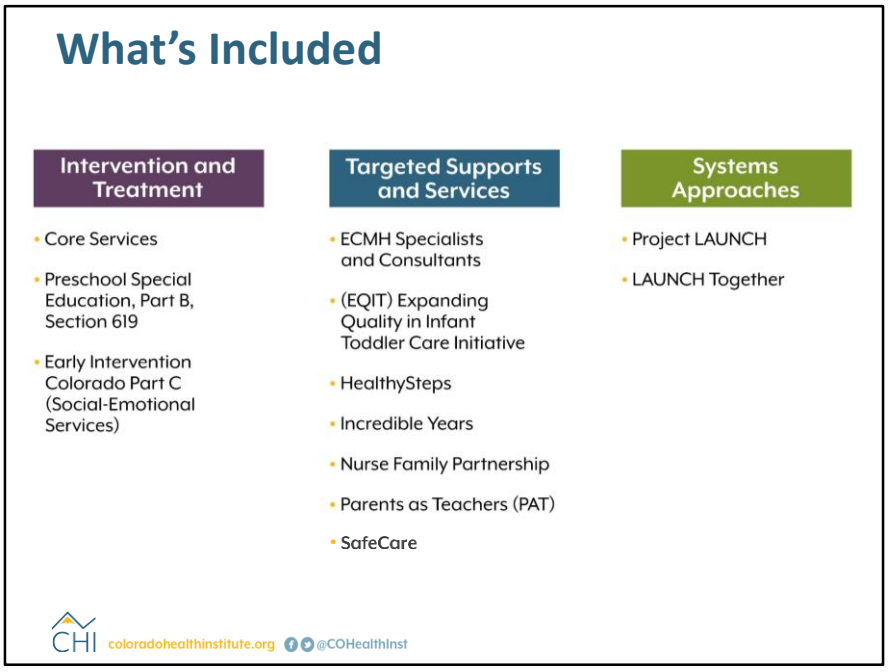
- Conducted 13 interviews
- Reviewed annual reports
- Conducted two analyses:
    - Program density. Some counties have more programs than others.
    - Proportion of kids aged zero to eight. Colorado's ECMH system is serving less than 10 percent of children aged zero to eight.
- Number served
    - 50,000 children aged zero to eight, and 12,000 families.
- Note those numbers are touchpoints reported by each program or initiative. So one child that was served by both (for example) Core Services and HealthySteps will be counted twice.
    - This is a limitation. But we think the results are meaningful regardless because they represent density of services available.



- This analysis is not intended to be an environmental scan of the ECMH landscape in Colorado.
- Selection based on input from Colorado's early childhood mental health experts and philanthropic leaders using criteria 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*. This report also builds on an analysis of financing for early childhood services in Colorado conducted by the Children's Campaign in 2013.
- **Alignment.** Selected programs fit into the priority areas identified by Colorado's ECMH leaders, clinicians, advocates and philanthropic leaders – like intervention and treatment services, early intervention/targeted supports, and system strengthening approaches.
- **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 – e.g. HeadStart.
- **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/caregivers are not reimbursed or financed, so they are excluded. Integrated care dollars going towards pediatric clinical integration excluded because those funds are not extractable.

- **Age focus.** They primarily focus on children aged 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. E.g., regional ECMH strategic planning efforts were excluded.
- **Longevity.** They are longstanding, critical components of Colorado's ECMH ecosystem. Not just 2017-18.

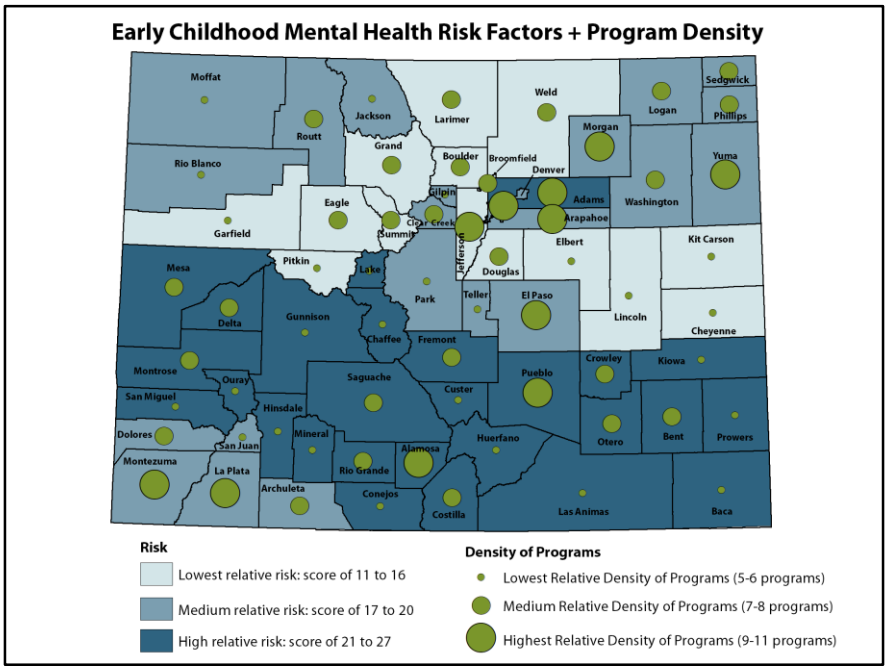


- Here are the twelve programs that were included in the analysis. See report for full descriptions of each program.

Reach Methods: County Examples

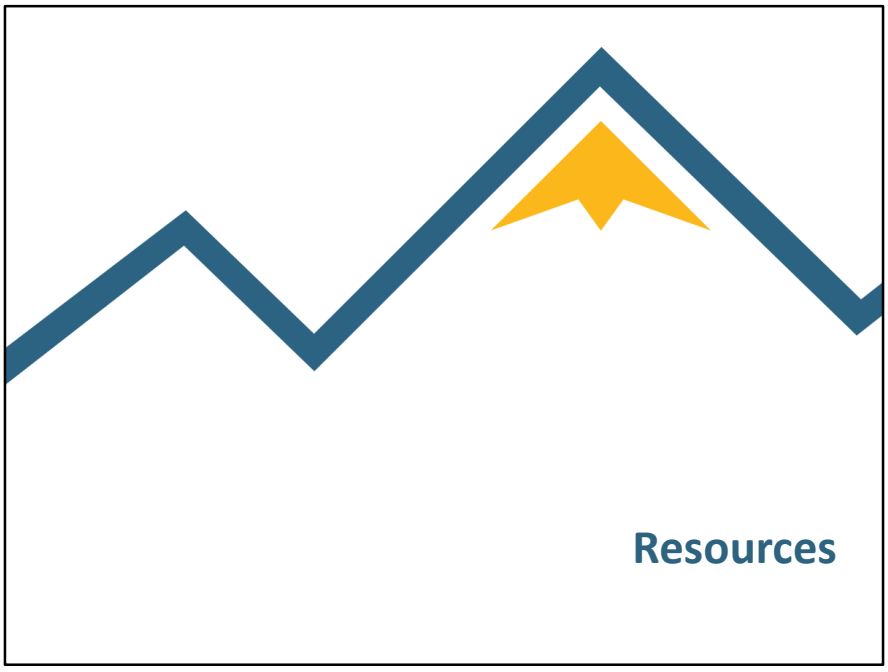
Program	Chaffee County	Pueblo County
Core Services	X	X
Early Intervention Colorado Part C (Social-Emotional Services)	X	X
ECMH Specialists and Consultants	X	X
(EQIT) Expanding Quality in Infant Toddler Care Initiative		X
HealthySteps		X
Incredible Years		X
Nurse Family Partnership	X	X
Parents as Teachers		X
Project LAUNCH		
LAUNCH Together	X	X
Preschool Special Education, Part B, Section 619	X	X
SafeCare		X
	Low (6 programs)	**High (11 programs)**

- We counted up the total number of programs active in a county, then grouped the counties by tercile.
- We're making the assumption that more programs accessible is better. A relatively "low" program density might just indicate a significant presence of a legacy program, not a need for more programs.
- Interpreting service "reach" is not simple. So we used a couple different ways of looking at service "reach" including analyzing the portion of children aged 0-8 served by one of the 12 programs.



- Map of Risk index scores by HSR compared with density of programs.
- This was the same approach that Dr. Geoffrey Nagle used to illustrate “reach” of services.

- A couple observations:
  - Parts of the state where the highest risk counties have highest density of programs – or the lowest risk have lowest relative to the rest of the state number of progs.
  - Adams County. High risk with many programs available – 11 of them. Everything except for LAUNCH together.
  - Gunnison valley (Gunnison, Ouray, Hinsdale..) – high risk but lowest compared to the rest of the state in program density. Mismatch?
  - Jefferson – lowest relative risk, but many programs available.



- Method for resources
  - 13 interviews
  - Review of budget documents
  - Per capita analysis

Public Investment Plays a Major Role In Supporting 12 Selected ECMH Programs

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

Total: **$62,360,348**

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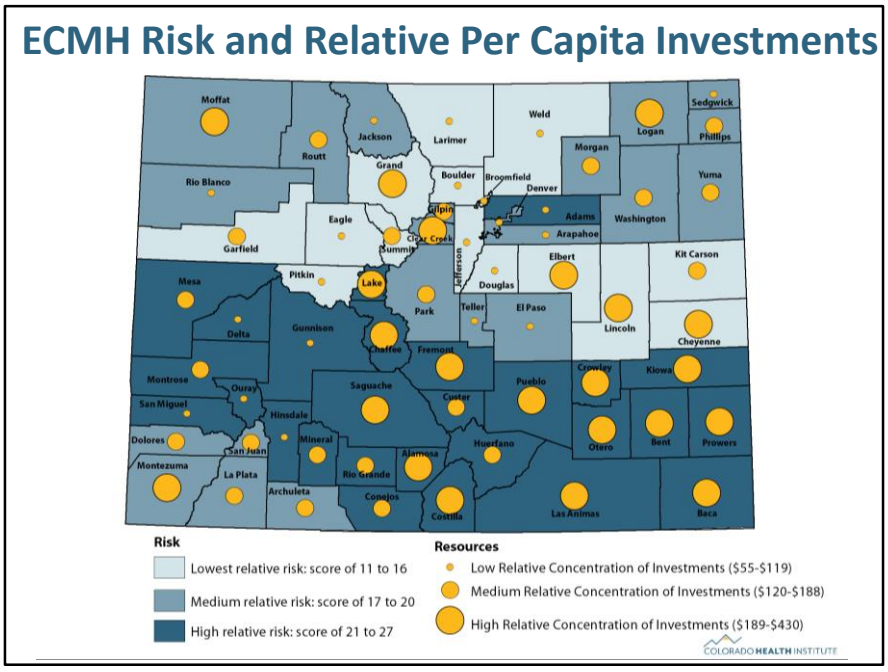
- We also analyzed the total number by funding source.
- First, we found that for the twelve programs we studied, there was an investment of about 62 million dollars in fy2017-2018.
- When you break that down by the source, you find that public investment is a huge chunk of this money with the state contributing about two thirds.
- Our philanthropic community in Colorado has rallied around this issue and has been very active in the space.
- For the twelve programs studied, they contributed about 7 million dollars.
    - Want to note that for some programs like ECMH consultants and specialists, where private dollars make up almost half of the budget.

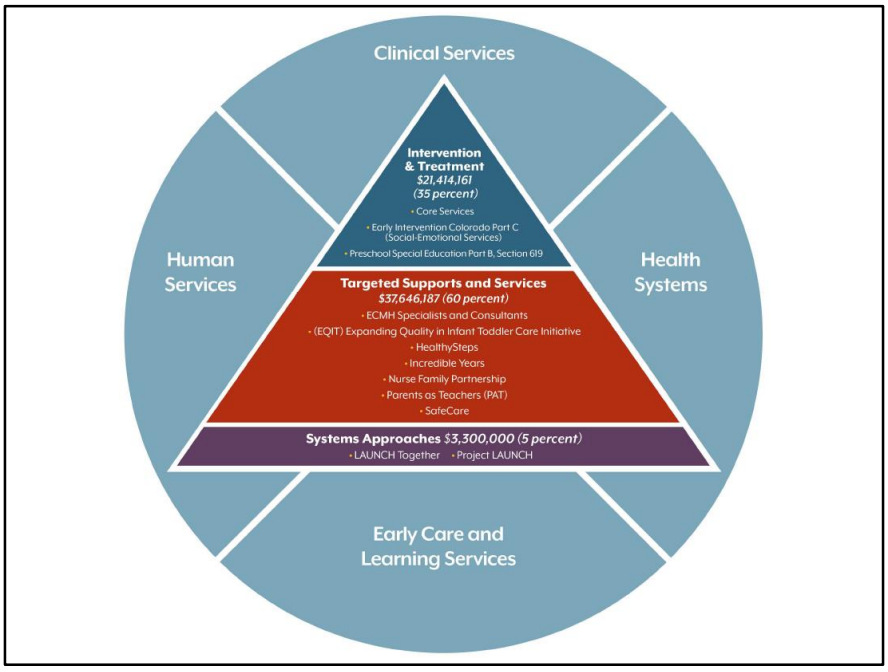
Resources Methods: County Examples

County	ECMH Total Funding	Total Children Aged 0-8	Per Capita ECMH Funding	Category
Adams	$7,201,872	65,346	$110	Low
Mesa	$2,821,634	16,380	$172	Medium
Lincoln	$183,120	568	$322	High

- Here are some examples of how we thought about funding by county.
- Essentially, we took total funding in the county for the 12 programs we analyzed and divided it by the number of children age zero to eight.
- That's a crude "investment density" measure. For example we might have high per capita because of high need. Or we might have it because there's a small population so the "overhead" to run the program is high. Or finally we might be "overinvested" with a high per capita spend.



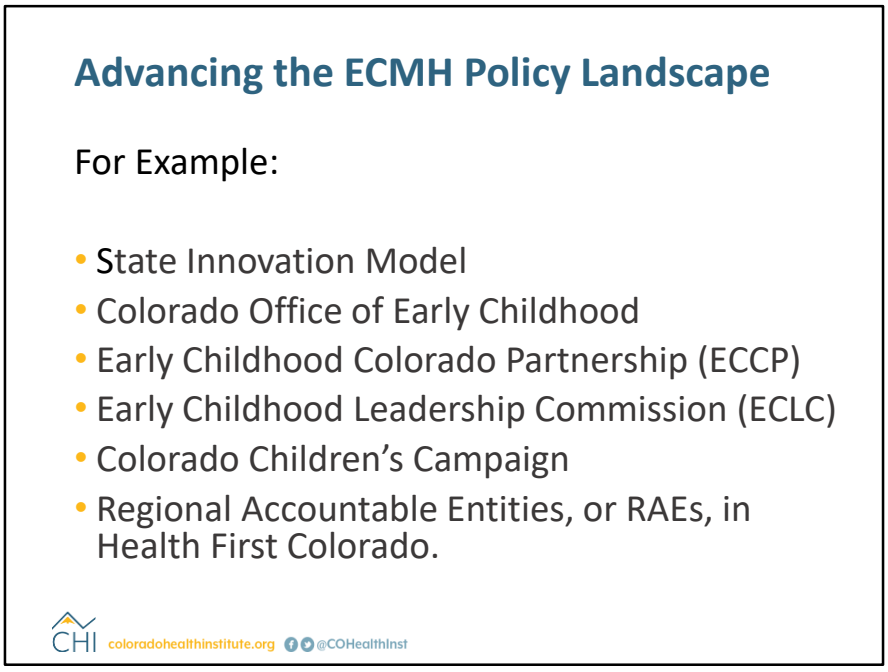
- Comparing the highest risk counties with their per capita investments for children age zero to eight reveals some regions in the state in need of additional investment.
- For example, Adams county ECMH risk is high compared to other counties because of several factors including a high poverty rate, a significant number of children receiving suspensions and expulsions, and a high birth rate among mothers 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 per child.



- This figure categorizes the 12 ECMH programs included in this analysis, representing about $62m in funding.
- It excludes many important services and initiatives that impact ECMH — such as clinical, human, and health systems and public health services, as well as early care and learning services.
- Some programs cut across categories, like the LAUNCH initiatives that promote five cross-cutting strategies from screening in various child-serving settings to integration of behavioral health into primary care, among others. Or 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 only represents the 12 programs analyzed, and we don't always have the data, and does not include the programs and initiatives advancing ECMH policy and advocacy in the state.
- And we want to reiterate in this graphic – the 12 included programs are significant in their scope and representation, but they are in no way an inventory. These were selected by a team of expert advisors, and they were programs that could submit data in our tight timeline.
    - They exist in a landscape of other programs and services that undoubtedly

impact ECMH, such as clinical services, public health activities, human services, and early care and learning services. Those are represented in the background.

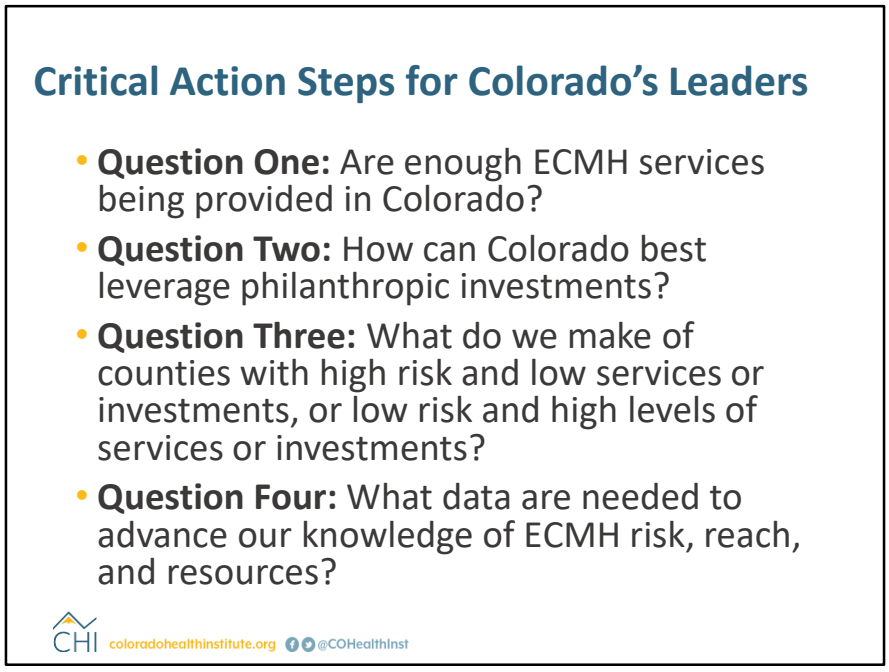
- Our goal in future analyses would be to include treatment dollars from Medicaid, CHP+, private insurance… which of course would change this distribution dramatically weighted towards the top – by many fold probably.
- We know this picture is limited – so to deal with this in the report we acknowledged some examples initiatives an organizations shown on the next slide.



- The 12 selected 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. These are examples – they are not analyzed as part of the reach and resources analysis.
- For example, include but are not limited to:
    - State Innovation Model – federally funded behavioral health integration initiative. At least 132 SIM practices serve children. But much broader focus than ECMH.
    - Office of Early Childhood – Administers $250m state and federal dollars to provide contracted services but also policy leadership.
    - Early Childhood Colorado Partnership (ECCP) – membership organization of ECMH community leaders.
    - Early Childhood Leadership Commission (ECLC) – appointed body of ECMH leaders to address the state's biggest challenges.
    - Colorado Children's Campaign.
    - Regional Accountable Entities, or RAEs, in Health First Colorado.
- 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.


How Should Colorado's
Leaders Go Forward?



- We've shared with you this analysis' approach to characterizing ECMH needs and the extent to which the system is reaching those needs.
- We found that the 12 programs analyzed are serving less than 10 percent of kids age 0-8. Investments in those programs add up to about $100 per kid.
- There are limitations to those findings – like services might double count kids, and low investment might just mean efficient programs – not financial need… and low program density might mean an exceptionally strong program is in place, not a need for diverse programs. And it's not every possible program and touch point for children and families – like poverty programs and HeadStart.
- But these 12 programs are significant. They are a close approximation of the ECMH system. So we can draw meaning from the findings and propose additional ways of interpreting the findings. We did that in the report through four questions:
    - 1.) Are enough services? We think answer is no. A couple ways to get at this question:
        - Comparing the reach number of less than 10 % of kids served to other proxies like clinical care (According to the National Survey of Children's Health, 87.6 percent of Colorado children had a medical visit in 2016.)
        - Comparing the per capita investment of $100 per kid to clinical

investments. Colorado's Child Health Plan Plus spent about $2,207 per child in FY2016-17.
    - Considering our commitment to parity, we might expect these numbers to be comparable… but the contrast is pretty stark.
    - A serious question that emerges for us is – what mix of universal, targeted and intervention services should all CO children receive and when? What's the gold standard?
- 2) How to leverage philanthropic funding? About 11 percent comes from private funders. How should policymakers in ECMH leverage those dollars for max impact?
    - Historically these dollars have been used to incubate promising programs and scale evidence-based ones. **Incredible Years**. 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** – different but still illuminating how to leverage private investment. This is a collaboration of eight CO foundations based on an effective national program Project LAUNCH funded by SAMHSA.
- 3.) How to interpret high risk but low services, or low risk and high services/investments?
    - **Low risk / high programmatic density** (overinvested? Or is there a causal relationship?): Jefferson County, for example.
    - **High risk / low programmatic density (gaps – 14 counties).** But a couple of them have high per capita funding (e.g., Baca, Kiowa, Lake) – so there are other factors at play besides low programmatic service levels.
- 4) What data will help us in the future?
    - Better proxies. We used nine proxies of "need" for ECMH, weighted them equally. But as the field advances, this is a need to better determine how to allocate.
    - Reach and deduplication. We counted "touch points" across services because we know services double count. Can we do better?
    - Reach/resource/program capture. We narrowed our analysis based on criteria, timeframe, available data. We want to expand this to clinical data first. Then to public health, human services, early care and learning services.

Looking Ahead

- We recommend periodic updates. Annual may not be appropriate given the availability of data, but every other year should be considered.
- New risk data sources should be added as they become available.
- Treatment data should be included in the next iteration.
    - APCD
    - Medicaid

Takeaways

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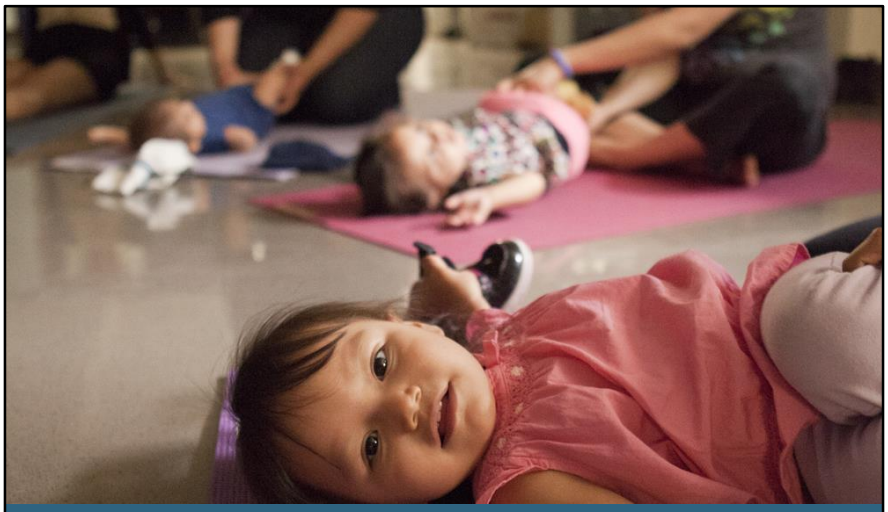

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