

Parental History of Adversity and Child Well-Being: Insights from Colorado



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In this report, we utilize data from the Adverse Childhood Experiences module of the Behavioral Risk Factor Surveillance System and from a linked state-initiated Child Health Survey to evaluate the impacts of parental history of adversity not only on their own adult health, but on the current health and well-being of their children. These data provide a window on the intergenerational transmission of adversity, and a clear call to action. Cross-sector stakeholders including those from the research, policy, state-government, education, health, philanthropy, business, and legal communities in Colorado are working together to identify and protect against the serious life-long consequences of early life adversity. In this report, we highlight selected projects and efforts in Colorado to identify and prevent the short and long-term consequences of early life stress through family-centered approaches.

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The Adverse Childhood Experiences (ACE) Study

Beginning in 1998, results from the Adverse Childhood Experiences (ACE) Study, a collaboration between the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente with over 17,000 participants, have had a tremendous impact (Felitti et al., 1998). This seminal study asked Kaiser patients in San Diego beginning in 1995 to respond to a 26-item survey about adverse experiences in their childhood (before the age of 18) and used their responses to calculate an ACE score ranging from 0 (no adversity in childhood) to 10. This ACE score was then linked to patients’ health records, including health behaviors, chronic conditions, and mortality.

Some of the most impactful findings include the fact that two-thirds of respondents from the original sample reported

at least one ACE, making adversity experienced in childhood a broad public health concern (Felitti et al., 1998). Childhood adversity was also related to health outcomes in a dose-response fashion, with greater adversity predicting both increased severity of symptoms and a broader range of chronic health conditions (Anda et al., 2006; Chapman et al., 2004; Dong et al., 2004). Perhaps most alarmingly, experiencing six or more ACEs was associated with a 20-year life span reduction among the Kaiser Permanente population [Brown et al., 2009]. These findings have also spurred an expansive literature base, with 2,404 scientific citations as of March, 2017 (see Figure 1), yet there remain limitations to the original ACE study. For example, as this was a retrospective report of adversity experienced in childhood, it may introduce the issue of recall bias and a lack of verification of experienced adversity. In addition, it is also possible that other early adversities and key protective factors may help to explain health outcomes.

Citations in Each Year

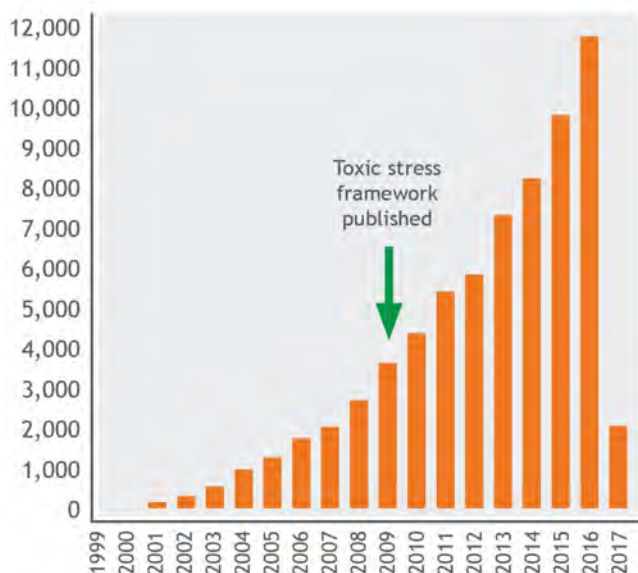


Figure 1: Citations of the 1998 ACE Study Article

The Toxic Stress Framework

In 2009, Shonkoff, Boyce and McEwen published their first paper on Toxic Stress in the *Journal of the American Medical Association*. This paper presented an organizing framework that integrated findings from animal models, human retrospective designs like the ACE study, and from studies of children. In this framework, the effects of stress are best understood by considering not only the severity and chronicity of stressors in childhood, but by considering the presence or absence of protective adult relationships (see Figure 2).

Stressors are considered toxic when chronic and/or severe stressors occur in the absence of the buffering support of an adult. When adult buffering is available, even chronic or severe stressors may be “tolerable” – that is, they may not require the child to reorganize their brain and body systems to cope. It is this reorganization of brain architecture and body systems to cope directly with severe

and/or chronic stress that can result in both short-term adaptation and long-term health consequences. For example, when a child faces chronic and severe stress in the absence of adult buffering, they cue their brain and body to be on the lookout for threats in the environment and to store energy to cope with future threats. We store energy in fat and stress results in fat deposits in particular around the midline (Aschbacher et al., 2014). This provides an energy store in the short run *and* is a major risk factor for heart disease in the long run (Onat et al., 2004). When, however, children can rely on adults in the face of stress, they can avoid this type of costly adaptation and preserve their long term health.

Toxic Stress Framework

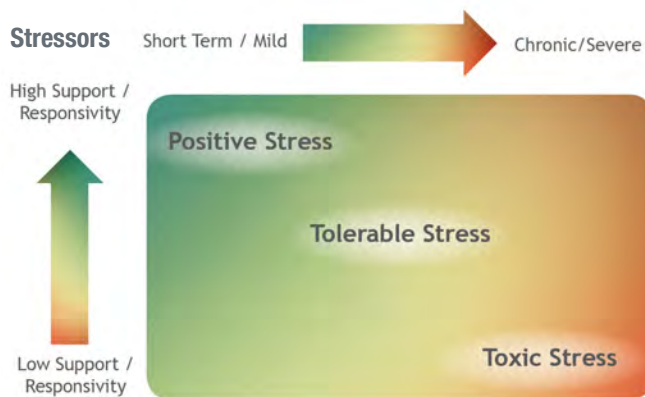


Figure 2: Toxic Stress Framework



The Power of Pairing the Toxic Stress Framework with the ACE Study Results

Paired together, the Toxic Stress Framework and the ACE study results have galvanized the research, policy, and practice communities to come together to understand this public health problem and to work toward prevention and intervention solutions. This is in part because the Toxic Stress Framework offers an explanation for when and how stress gets “under the skin” to result in the types of long-term health consequences captured by the ACE Study [Schlueter & Watamura, 2017].

Adapting the ACE Survey for State-Level Data

The ACE study and subsequent efforts with similar surveys have asked adults about their own childhood experiences and collected information from health records to document the lasting impacts of childhood adversities on health outcomes.

To make it possible to understand the impact of childhood adverse experiences on a wider scale, the CDC developed a shorter ACE module which can be used as an optional add-on to the Behavioral Risk Factor Surveillance System (BRFSS) survey used yearly by all states, Washington, D.C., and three territories (<http://www.cdc.gov/brfss/>). The

BRFSS is a population-based annual survey used by the CDC to assess the nation’s health status and includes information on health behaviors and chronic health conditions. By adding the ACE module, states are able to collect data on ACE exposure and on the connection between childhood adversity and individuals’ reports of their current health behaviors and conditions. Because of the way the BRFSS is designed and administered, it allows states to estimate population level prevalence rates and to calculate odds of disease outcomes by risk factors such as ACEs. Several states including Alaska and Wisconsin have produced reports of their ACE findings, (Wisconsin: <https://preventionboard.wi.gov/Documents/REVISEDWisconsinACEs.August2012.pdf>; Alaska: <http://dhss.alaska.gov/abada/ace-ak/Documents/ACEsReportAlaska.pdf>) and a report inclusive of data from five states is also available [Bynum et al., 2010] (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5949a1.htm>).

Overwhelmingly, when using the modified BRFSS ACE module as recommended by the CDC, states are telling the same story as the original ACE study. Specifically, ACEs are common and they have a lasting and significant impact on adult physical and mental health.

In states where economic data are available, this significant public health burden also has sizable economic consequences as chronic physical and mental health problems are costly to treat and severely decrease productivity. Furthermore, child maltreatment is costly for special education, criminal justice, and child welfare programs (Anda et al., 2004; Fang, Brown, Florence, & Mercy, 2012).

The BRFSS ACE Module & ACE Prevalence in Colorado

The ACE module for the BRFSS results in a maximum score of 8 adversities from 11 individual questions, as compared to a maximum score of 10 on the original 26-items (see Table 1). Key differences between the surveys include the fact that the BRFSS ACE module does not include neglect (9 items that resulted in 2 ACE points on the original survey) and the 4 items that assessed physical abuse of the mother or mother figure in the original 1995 survey have been reduced to a single item assessing domestic violence in the home. For exact wording of the questions asked on the BRFSS, see https://www.cdc.gov/violenceprevention/acestudy/pdf/BRFSS_Adverse_Module.pdf.

As established in prior research on ACEs, 4 or more ACEs are considered high exposure, with profound impact on health. Even experiencing 1-3 ACEs can increase risk for poor health, though this depends on the outcome.

BRFSS ACE Items by Type (Experienced before age 18)

Item Type	Items	Score
Abuse		
Emotional abuse (verbal)	1	1
Physical abuse	1	1
Sexual abuse	3	1
Household Dysfunction		
Parents ever separated or divorced	1	1
Household domestic violence	1	1
Household member substance abuse	2	1
Household member mental illness	1	1
Household member incarcerated	1	1
TOTAL	11	8

Table 1: BRFSS ACE Items by Type (Experienced before age 18).



A total of 3,677 Colorado adult residents, 18–98 years old, completed the ACE module as part of the 2014 BRFSS survey. As seen in Figure 3 and reported by the Colorado Department of Public Health and Environment (CDPHE) Health Watch 99 (<http://www.chd.dphe.state.co.us/Resources/pubs/AdverseChildhoodExperiences.pdf>), the ACE score results from Colorado are consistent with previous findings; approximately 62% of adult respondents reported experiencing at least one or more ACEs. Similar to other samples, nearly 15% of Colorado adults reported high ACE exposure (4 or more ACEs) as compared to 12.5% of the original ACE sample. The prevalence of women reporting 4 or more ACEs is greater (17.4%) than the prevalence among men (12.1%). Assessing educational attainment, the prevalence of reporting 4 or more ACEs among those who did not graduate from high school is higher (72.6%) than that of high school and college graduates (60.5%).

followed by physical and sexual abuse. Among ACEs associated with household dysfunction, the majority reported parental divorce followed by substance abuse, mental illness, domestic violence, and parental incarceration. For more information on prevalence and demographics for Colorado ACE data, please also see: <http://www.chd.dphe.state.co.us/Resources/pubs/AdverseChildhoodExperiences.pdf>.

Although these rates are comparable to those reported in other states, this level of exposure to adversity in childhood is unacceptably high, with negative impacts for individuals, families, communities and our region.

Percent of Adult Coloradans Reporting Each Type of ACE

Percent of Adult Coloradans with Each ACE Score

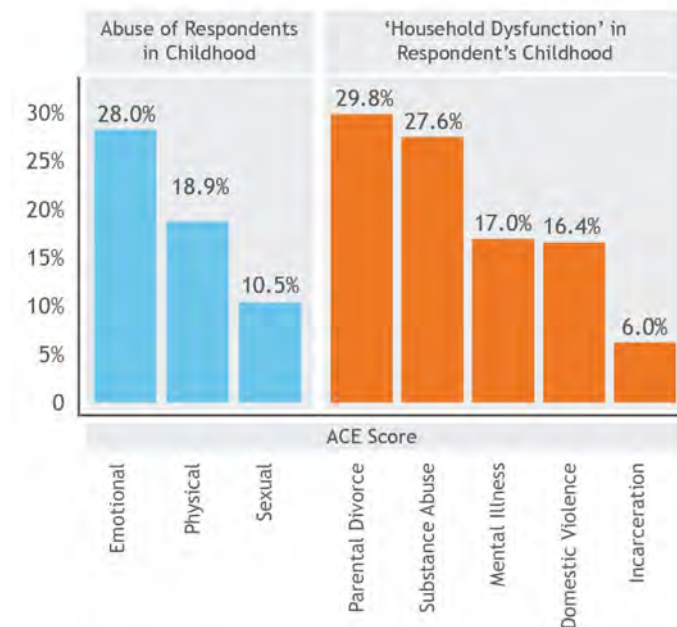
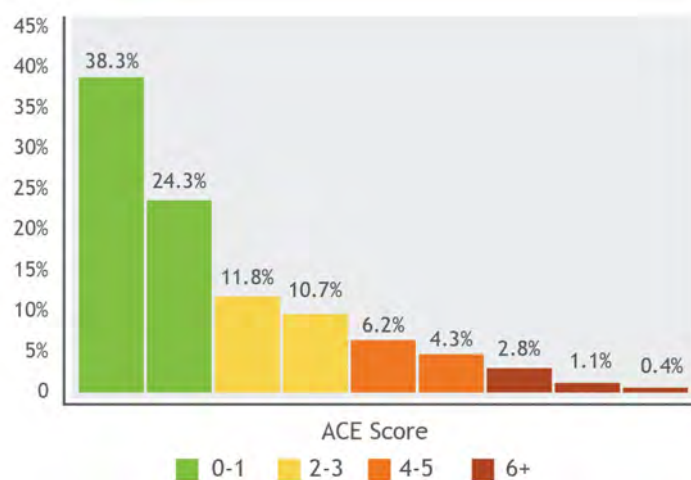
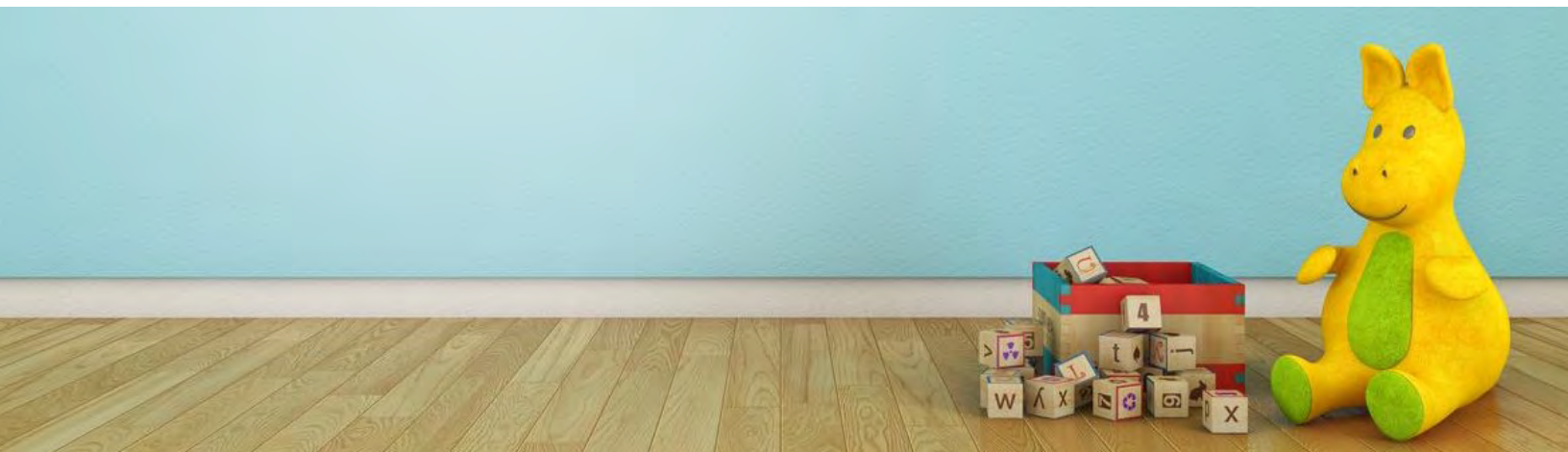


Figure 3: Percent of Adult Coloradans with Each ACE Score

Figure 4: Percent of Adult Coloradans Reporting Each Type of ACE

- ACE scores can be broken down into two categories:
1. Abuse
 2. Household Dysfunction

As seen in Figure 4, among those experiencing abuse in childhood, the majority of adults reported emotional abuse



ACE Exposure & Current Health Conditions in Colorado Adults

As in other states and the original study, ACE exposure is also connected to chronic health conditions creating substantial hurdles to overcome. In particular, controlling for respondent's age, sex, education level, and race, individuals reporting 1-3 ACEs were more likely to suffer from arthritis, disability, chronic obstructive pulmonary disease, and depression, and those reporting 4 or more ACEs were between 2 and 5.5 times more likely to suffer from a range of chronic conditions from cancer to depression. Figure 5 depicts the odds ratios reported by CDPHE as hurdles to illustrate that while significant, having experienced adverse childhood experiences is not deterministic.

Odds of Chronic Health Conditions by ACE Score

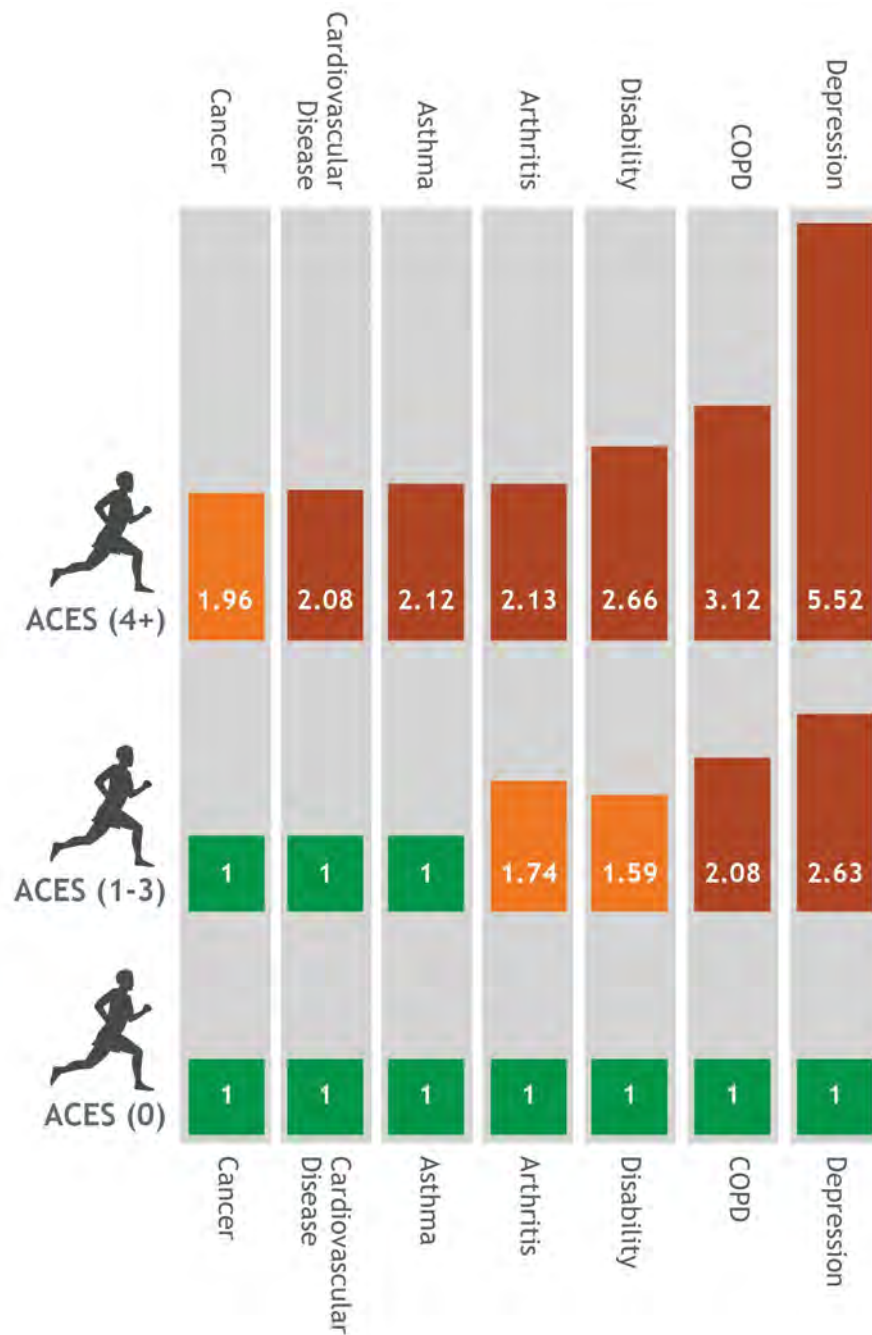


Figure 5: Odds of Chronic Health Conditions by ACE Score, controlling respondent age, sex, race, and educational level and using population weights

ACE Exposure & Current Health Behaviors in Colorado Adults

In the original publications from the ACE study it was proposed that childhood adversity resulted in long-term poor health outcomes primarily by increasing health risk behaviors (smoking, alcoholism, illicit drug use, insufficient exercise, risky sexual behavior, etc.; e.g., Anda et al., 1999; Dube et al., 2003). Indeed, associations between ACE scores and these health risk behaviors were found. This raises two important points. First is the question of whether childhood adversity impacts chronic health conditions exclusively or primarily because childhood adversity increases health risk behaviors. If this is the primary mechanism, programming that targets reductions in health risk behaviors, especially for individuals with high ACE scores, would be recommended. However, it could be the case that experiencing childhood adversity increases health risk behaviors and leads to chronic disease, without the only or primary mechanisms being engaging in increased health risk behaviors.

For example, there is evidence that childhood adversity changes the way the brain and body process and handle later stressful experiences, and these neural and physiologic changes could lead to chronic health conditions even in individuals with healthy lifestyles (e.g., Pechtel & Pizzagalli, 2011). This pathway could happen alongside or without increased health risk behaviors. In this case, programming that only targets reducing health risk behaviors would not be sufficient to prevent chronic health conditions.

Given the importance of this question for intervention, we first examined whether a higher ACE score was related to health risk behaviors/preconditions in the Colorado BRFSS data using complex samples in SPSS Version 23. Specifically, we examined whether respondents with higher ACE scores also reported more alcohol consumption, smoking, or obesity (which can be more likely when individuals have poor nutrition and exercise behaviors, among other factors).

In the 2014 Colorado BRFSS sample, controlling for respondent's age, sex, race and educational level, individuals with more childhood adversity were no more or less likely to be obese (i.e., a body mass index of 30 or greater) or to drink heavily (i.e., 15 or more drinks per week for males, 8 or more drinks per week for females). Those with 1-3 ACEs are 1.5

times more likely to report binge drinking (i.e., 5 or more drinks for males and 4 or more drinks for females on a single occasion) than are those with no ACEs; however those with 4 or more ACEs are indistinguishable from those with no ACEs with regard to binge drinking.

However, controlling for respondent's age, sex, race, and educational level, those with 1-3 ACEs are 1.87 times more likely to smoke and those with 4 or more ACEs are 3.5 times more likely to smoke than are Coloradans with no ACEs (see Figure 6).

Odds of Smoking by ACE Score

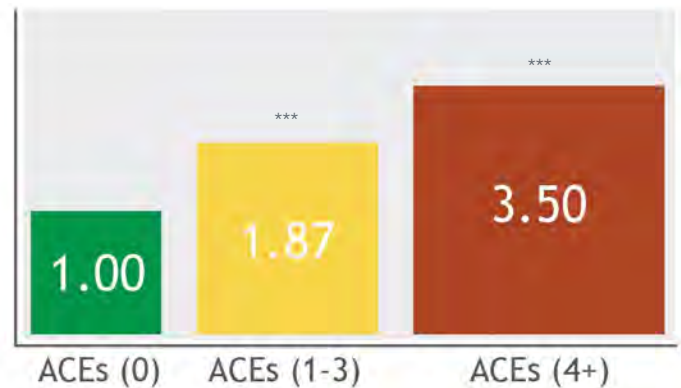


Figure 6: Odds of Smoking by ACE Score controlling for age, sex, race, and education level; Note. *** $p < .001$

Smoking is a predictor for each of the chronic health outcomes below. Importantly, however, smoking did not account for the effects of childhood adversity on health outcomes. That is, while both smoking and ACEs predicted current health, the effects of ACEs on current health did not result from the health effects of smoking. See Table 2 for details on health outcomes when controlling for smoking.

Taken together, the available data on these health risk behaviors from the BRFSS for Colorado adults does not suggest that health behaviors account for the strong and consistent relationships between ACE score and health outcomes and suggest other mechanisms should be explored.

Odds Ratios of Health Indicators by ACE Score

Chronic Conditions	Low ACE		High ACE	
	OR	95% CI	OR	95% CI
Arthritis	1.68	1.36 - 2.09	2.37	1.72 - 3.26
Cancer	ns	-	2.83	1.85 - 4.34
Cardiovascular Disease	ns	-	1.87	1.20 - 2.93
Chronic Obstructive Pulmonary Disease	1.92	1.30 - 2.85	3.03	1.84 - 4.97
Depression	2.58	1.88 - 3.54	5.18	3.52 - 7.62
Disability	1.53	1.21 - 1.95	3.16	2.25 - 4.46

Table 2: Odds Ratios of Health Indicators by ACE Score, controlling for smoking as well as age, sex, race, and education level; Note. OR=Odds ratio, CI=Confidence Interval

Parental Adversity & Child Well-being

In Colorado, we are focused on understanding and preventing intergenerational transmission of adversity across our research, policy, and program efforts. An important step in that process is determining the extent to which parents' experiences of adversity are linked to current outcomes in their children. To do this, we have taken data from the BRFSS that asks one parent (mother or father) about the adversity they experienced in childhood using the BRFSS ACE module, and linked it to reported characteristics of their current household, and to their child's current well-being as assessed in the Colorado Child Health Survey Questionnaire (CCHSQ). Linked BRFSS and CCHSQ data were available for 338 families (BRFSS respondents who completed the ACE module, who were parents of a child between the ages of 1-14, and who completed a follow-up interview about a selected target child; see Figure 7). These data were analyzed in SPSS Version 23 using Complex Samples and all analyses controlled for parent age and sex and child age and race.

In this subsample of parents, nearly 19% reported 4 or more ACEs, 47% reported 1-3 ACEs, and 34% reported no ACEs. We examined whether parental ACE score was related to current health and safety behaviors and environmental hazards, access to and use of medical care, reported discipline techniques, the child's need for and receipt of mental health services, and whether the parent had been told by a medical professional that their child had depression, anxiety, behavior or conduct problems, or attention deficit (hyperactivity) disorder. Details on each outcome are as follows.

Conceptual Model of Data Origin

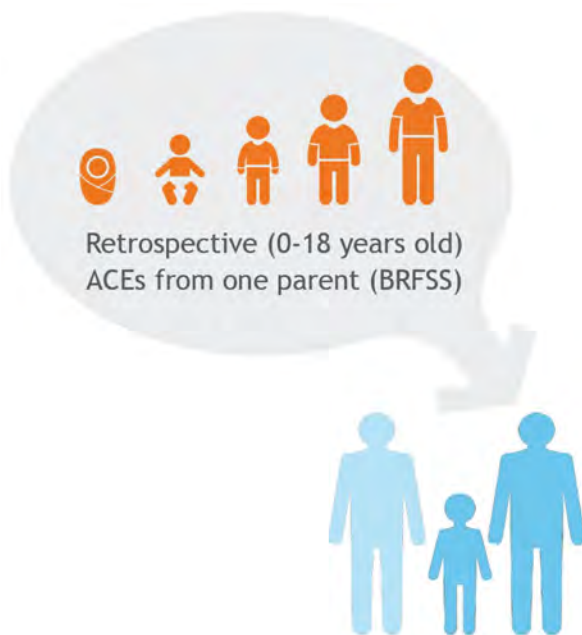


Figure 7: Conceptual Model of Data Origin

Parental ACEs & Health & Safety

Parents were asked about potential environmental hazards including cigarette smoking in the home (which could result in second or third-hand smoke exposure), exposure to marijuana products or marijuana smoking, and driving safety including the use of seatbelts as well as drinking and driving. Parental ACE score was unrelated to reported cigarette smoking in the home, use of seatbelts, and/or drinking and driving. However, when parents reported high childhood adversity, they also reported more marijuana presence and use. The odds of exposure to marijuana products and marijuana smoking were substantial, with parents who reported 4 or more ACEs over 10 times more likely to also report marijuana exposure (see Figure 8). Both recreational and medical marijuana were legal at the time parents were asked to report on its possession and use.

Odds of Exposure to Marijuana Products and Use in the Home by Parental ACE Score

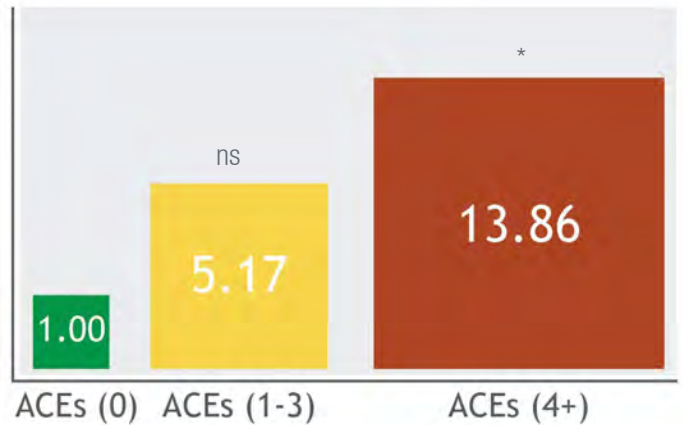


Figure 8: Odds of Exposure to Marijuana Products and Use in the Home by Parental ACE Score, controlling for parent age and sex and child age and race; Note. ns=non-significant, *p<.05

Parents were asked three questions that, combined, provided a portrait of medical care and access for their children. Specifically, they were asked whether their child had health insurance coverage, whether their child received mental health counseling, and whether their child received medical care in the past 12 months. Nearly 30% of parents with 4 or more ACEs reported having no health insurance or not using medical or mental health services in the past 12 months vs. 8% for those parents with no reported childhood adversity (see Figure 9).

Percentage of Parents Reporting Children Without Medical Coverage or Care

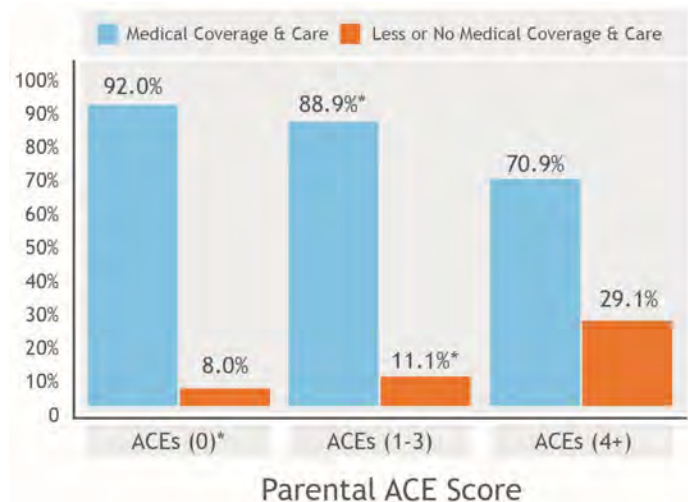


Figure 9: Percentage of Parents Reporting Children Without Medical Coverage or Care; Note. *statistically significant

Parental ACEs & Parental Discipline Practices

Parents were asked about their discipline practices and how often they use each method. These methods included yelling, spanking, time out, taking away toys, and/or explaining to their child the appropriateness of behavior. Prior research indicates that exposure to early adversity may have lasting effects on how one raises their own offspring (e.g., Oliver, 1993).

Most parents in this sample (85.9%) indicated that they used time outs, taking away toys, and/or explaining sometimes or often, and 71.4% reported yelling or spanking sometimes or often. Parents' own history of adversity was not associated with their current use of yelling or spanking to discipline children (see Figure 10).

Odds of Yelling or Spanking by ACE Score

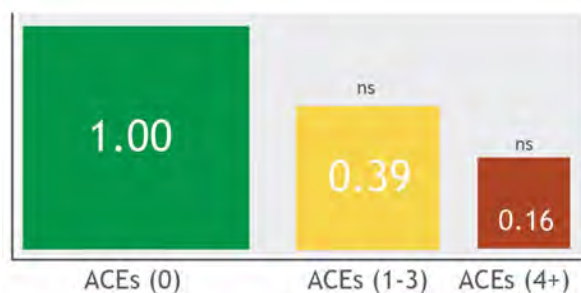


Figure 10: Odds of Yelling or Spanking by ACE Score, controlling for parent age and sex and child age and race; Note. ns=non-significant

Parental ACEs & Parents' Report that Child Needs Mental Health Counseling

Approximately 9% of parents with no childhood adversity felt their child needed mental health treatment or counseling. That rose to nearly 33% of parents reporting 4 or more childhood adversities (see Figure 11). Of these, 17.4% did not receive mental health services despite parent-identified need.

Percentage of Parents Reporting Child Needs Mental Health Services

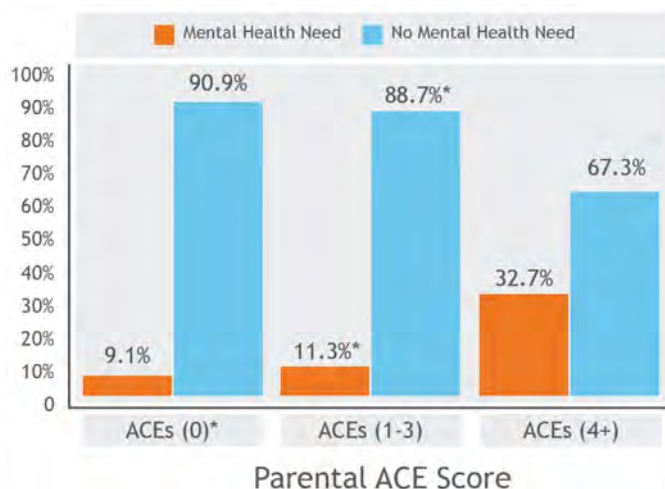


Figure 11: Percentage of Parents Reporting Child Needs Mental Health Services; Note. *statistically significant



Parental ACE & Child Mental Health Diagnoses

Parents were asked to indicate whether or not a doctor or health care provider had ever told them that their child had one of the following four types of mental health conditions: attention deficit disorder or attention deficit hyperactivity disorder (ADD or ADHD), depression, anxiety problems, or behavioral or conduct problems such as oppositional defiant disorder or conduct disorder. Prevalence rates of each diagnosis by parental ACE score suggested that ADD/ADHD, anxiety problems, and behavior or conduct problems were more common in families where parents reported higher exposure to childhood adversity, while depression diagnoses were more common among parents reporting no childhood adversity. However, significant differences using sample weights and confidence intervals were only evident between 0 and 4 or more ACEs for ADD/ADHD and behavior/conduct problems (see Figure 12).

Percent of Parents Reporting Child Mental Health Diagnoses by ACE Score

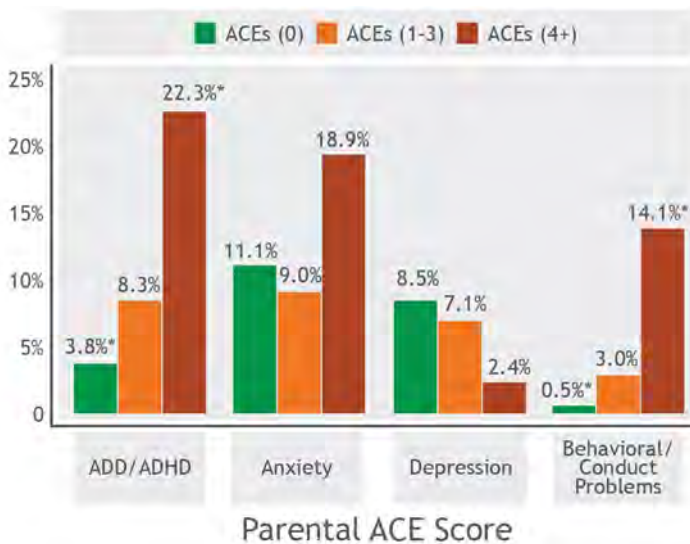


Figure 12: Percent of Parents Reporting Child Mental Health Diagnoses by ACE Score; Note. *statistically significant

For these two categories of mental health diagnoses, parental adversity had a dramatic impact. Children of parents with 1-3 ACEs were over twice as likely to be labeled with ADD/ADHD, and 4.76 times more likely to be labeled with a behavior or conduct disorder. Children of parents with 4 or more ACEs were 5.65 times more likely to be labeled with ADD/ADHD and 27.39 times more likely to be labeled with a behavior or conduct disorder (see Figure 13).

Odds of ADD/ADHD and Externalizing Behavior Problems by Parental ACE

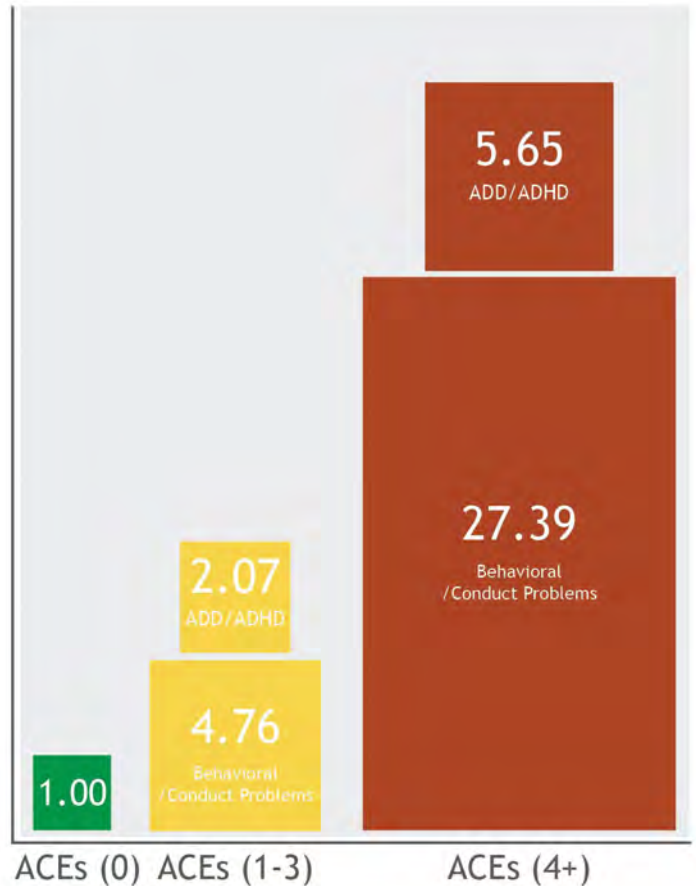


Figure 13: Odds of ADD/ADHD and Externalizing Behavior Problems by Parental ACE Score, controlling for parent age and sex and child age and race; Note. **p<.01, ns=non-significant

Summary: Parental ACEs & Child Outcomes

In sum, greater parental history of adversity was related to less reported parental use of and access to medical care, more presence of marijuana in the home, to parents feeling their children needed mental health services, and to child labeled with ADD/ADHD and behavior or conduct problems.





Prevalence, Costs, & Consequences of ADD/ADHD & Behavior/Conduct Problems

ADD/ADHD and behavior/conduct problems are serious and costly mental health concerns, with moderate stability into adulthood and associations with other behavioral health concerns (see Table 3). Efforts to support families with significant parental ACE scores to reduce contextual stressors and improve the buffering potential of relationships may be important for reducing intergenerational costs of adversity experienced in childhood.

ADD/ADHD & Behavior/Conduct Problems

	Prevalence	Stability in Adulthood	Cost
ADD/ADHD	<p>6.4 million children in U.S. aged 4-7 have ADHD diagnosis as of 2012</p> <p>This is a 43% increase since 2003 1/3 of children received diagnosis before the age of 6</p>	<p>Diagnosis persists into adulthood among 1/3 of children with ADHD</p> <p>Consequences include lower educational and career attainment, co-occurring psychiatric disorders and higher rates of suicide</p>	<p>The societal cost of childhood ADD/ADHD is estimated between \$38-\$72 billion annually</p>
Behavior or Conduct Problems (Oppositional Defiant Disorder, ODD; or Conduct Disorder, CD)	<p>The prevalence of disruptive behavior disorders has increased to 6.1% in 2015 from 4.9% in 2014</p>	<p>ODD persisted in a 10-year longitudinal study starting at age ~10 and following up at age ~20</p> <p>Co-morbid CD and ODD are associated with major depressive disorder</p> <p>The presence of ODD significantly increased risk of CD, antisocial personality disorder, substance abuse and bipolar disorder</p>	<p>Children with behavioral disorders incur health care costs similar to children with physical health conditions</p> <p>Further research is needed to determine the exact cost to society including social and health services</p> <p>Additionally, criminal behavior is often associated with ODD, CD, and antisocial personality disorder</p>

This does not account for the likely significant and undocumented costs associated with those children and families who are unable to obtain treatment, which may in turn result in untreated behavioral problems that subsequently impact children’s well-being and opportunity to succeed in school.

Table 3: Prevalence, Costs, and Consequences of ADD/ADHD and Behavior/Conduct Problems

Summary of Key Findings

- Overall, in the larger BRFSS dataset from Colorado, greater childhood adversity predicted worse adult physical and mental health as has been widely documented in other states. Coloradans with greater childhood adversity were also more likely to smoke cigarettes, but were no more or less likely to drink heavily or be obese.
- Even when accounting for smoking, strong relationships between experienced adversity in childhood and adult health were clearly evident.
- Looking within the smaller subsample of families who also reported child data, parental history of adversity also predicted their child's need for mental health services and labeling with ADD/ADHD and behavior/conduct problems. Despite reporting these mental health needs, 30% of parents with greater childhood adversity reported less use of or access to health care.
- Parental history of adversity did not predict current smoking in the home, drinking and driving, or lack of

seatbelt use, but it did predict use and presence of marijuana products in the past 30 days. When these data were collected, recreational and medical marijuana use were both legal in Colorado.

Summary of Key Limitations and Recommendations for Future Research

- The sample size for the linked data is small which limited some analyses and should temper conclusions. In particular, interpretation of null results and estimated effect sizes should be interpreted cautiously; results are expected to be more stable with larger samples.
- Given the concerning nature and potential significance of some of these findings, we strongly recommend additional years of linked data collection via the BRFSS ACE module & CCHSQ.
- Data are self and parent-report. We recommend pairing participant report with linked medical record data.





Highlighted Colorado Research Efforts

A number of teams in Colorado are evaluating the impact of parental history of adversity on current family and child well-being. For example, as part of the national Buffering Toxic Stress Consortium (The Buffering Toxic Stress Consortium Principal Investigators, Meyer & Fortunato, 2013), a team at the University of Denver and one at the University of Colorado Anschutz Medical Campus have documented impacts of parental history of adversity on both parents' current mental health symptoms and on child mental health symptoms in early childhood. In that work we have also documented that, even when parents have very high ACE scores, specific parenting behaviors and skills are protective against poor outcomes in children.

Early Childhood Leadership Commission (ECLC)

The ECLC was created in 2010 to advance a comprehensive service delivery system for pregnant women and children birth to age eight and their families, using data to improve decision-making, alignment, and coordination among federally- and state-funded services and programs. Comprised of parents, early childhood professionals, Head Start, school districts, local municipalities, foundations, businesses and five state departments, the ECLC plays a critical role in advising and aligning early childhood systems that ultimately lead to better outcomes for children and families.

Broader Colorado Prevention & Intervention Efforts

Colorado has many programs and initiatives that strengthen the health and well-being of children and families. A few initiatives are highlighted and described below. These are meant to be illustrative but are not inclusive of the many important initiatives planned or underway.

Shared Message Bank

In partnership with Frameworks Institute and GroundFloor Media, the Early Childhood Colorado Partnership created a Shared Message Bank that provides messaging for early childhood stakeholders to use in order to speak from a collective voice, engage more audiences, and mobilize action. The tools and resources generated support consistent messaging when discussing early childhood adversity and toxic stress and are designed to shift social norms toward positive change for family and child well-being in Colorado. For more information about the Shared Message Bank along with additional relevant toolkits and resources available to support community mobilization, please visit <http://eccp.civicanopy.org/>.

First 1,000 Days Initiative, Children's Hospital Colorado

The First 1,000 Days Initiative prioritizes a child's first thousand days of life through five strategic areas:

- 1) **Public awareness:** A broad media campaign to elevate *public awareness* and reach caregivers, community members and providers.
- 2) **Policy and advocacy:** Advancing family-friendly workplaces, particularly those that impact the caregivers of young children.
- 3) **Provider training:** Increasing healthcare provider awareness and understanding of the importance of the First 1,000 Days by offering comprehensive and impactful training to health professionals and community partners working with young children and their families.
- 4) **Screening, identification, and care coordination:** Implementing universal psychosocial screening using standardized tools to identify young children at risk or already facing adversity. Identified families receive triage, referral, care coordination, and targeted intervention.
- 5) **Targeted interventions:** Expanding partnerships with prenatal and early childhood providers to reduce premature births, increase referrals to settings that prioritize socioemotional health and integrated behavioral health services, and ensure more babies and parents receive care within medical homes.

<https://www.childrenscolorado.org/community/community-health/prematurity/>

Early Childhood Colorado Framework

Colorado has developed a shared vision for comprehensive early childhood systems work called the *Early Childhood Colorado Framework*. The *Framework*, which was revised and endorsed in 2015, promotes collaborative efforts among state and local early childhood stakeholders to ensure that all children reach their full potential. The core guiding principles are: whole child and family-centered; prenatal through age eight; strengths-based; culturally relevant and responsive; outcomes focused; informed by evidence-based and promising practices; and cross-sector collaboration. The *Framework* aims to enhance access, quality, and equity to improve outcomes for Colorado’s children and families across several systems (see Figure 14). For more information, please visit www.earlychildhoodframework.org.

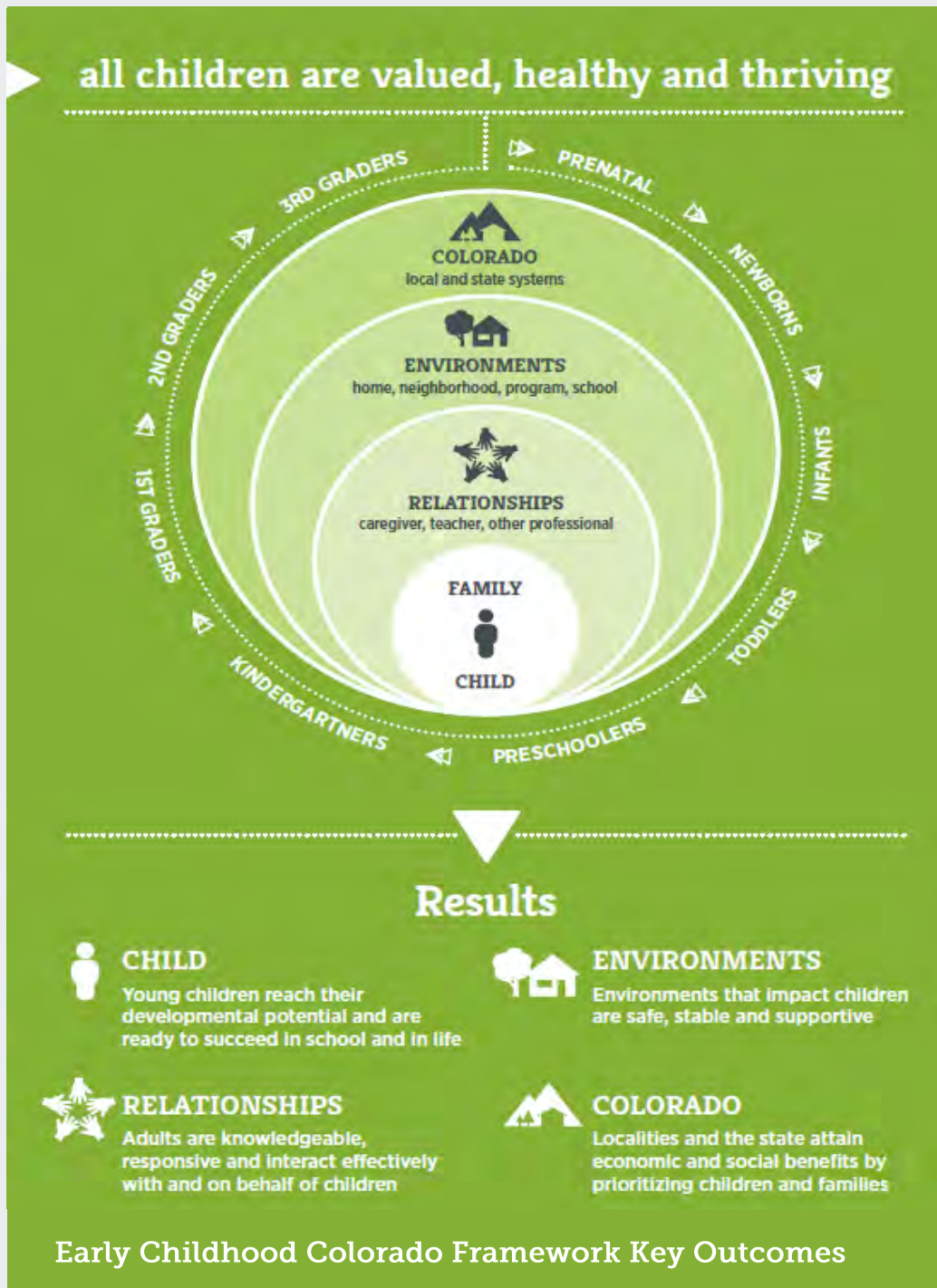


Figure 14: Early Childhood Colorado Framework

Child Maltreatment Prevention Framework for Action

This framework is designed as a tool to guide strategic thinking, at the state and local level, about resource investments to prevent child maltreatment and promote child well-being. As this tool is used collectively across the state, the resulting alignment of strategies will maximize the impact on shared outcomes.

Anchored by six foundational principles, the framework outlines potential strategies that when implemented will achieve four overarching outcomes to ensure that all children are valued, healthy and thriving (<http://co4kids.org/prevention>).



Foundational Principles

Monitoring Program Implementation Study what contributes to or inhibits successful implementation	Fostering Data Integration Share information within and across agencies	Honoring Family and Participant Voice Engage those you seek to help and encourage advocacy skills
Strengthening the Work Force Increase provider knowledge and skills	Incentivizing Continuous Quality Improvement Raise the performance bar and use timely data to adjust practice	Driving Policy Integration Partner with others to increase success



Channels for Change

Strategies for Individualized Services Home Visiting Parent Education Mobility Mentoring and Financial Literacy Respite and Crisis Care Family Development and Goal Setting Screening for Substance Abuse, Intimate Partner Violence, and Depression	Strategies for Organizational and Practice Change Evidence-Based Practice Implementation Science Workforce Development Performance Monitoring	Strategies for Agency Collaboration and Community Capacity Building Integrated Care Community Effects on Child Maltreatment and Strategies at the Community Level Utilizing Technology Early Learning Communities Community Norms Change	Strategies for Policy Reforms Policy Agenda Setting Innovating Federal and State Health Care Funding Transforming Existing Legislation to Better Meet the Needs of Families
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Overreaching Outcomes

Child Well-Being and Achievement Maximize developmental potential of all children	Caregiver Well-Being and Achievement Provide parents and other primary caregivers the support they need to succeed
Safe and Supportive Neighborhoods Create a context of collective responsibility to children	Consistent High-Quality Caregiving Ensure all caregivers foster positive child development

Figure 15: Child Maltreatment Prevention Framework for Action

Colorado Early Childhood Mental Health Strategic Plan

Colorado adopted an Early Childhood Mental Health (ECMH) Strategic Plan in 2015. This plan was designed to reflect the Early Childhood Framework, with specific attention to the social emotional health and well-being of young children birth to age eight and their caregivers. The ECMH Strategic Plan has a vision that all children and families are valued, in good social and emotional health, and their relationships are thriving. In order to accomplish this, Colorado will focus for the next 3-5 years on three priorities found in the plan.

http://coloradoofficeofearlychildhood.force.com/oec/OEC_Resources?p=Resources&s=StatePlans&lang=en

Colorado Health Institute

The Colorado Health Institute, founded in 2002, is Colorado's leading nonprofit and nonpartisan health policy research institute. They support health policy discussions with data, evidence and analysis. But that's just the beginning of their work. They also serve as trusted strategic advisors, facilitators and evaluators. They are a valued partner with the individuals, groups and communities across the state working to make Colorado No. 1 in health .

<http://www.coloradohealthinstitute.org>

CHI released a report on links between maternal and child mental health using data from the two surveys included in this ACE report. More information can be found here: http://coloradohealthinstitute.org/uploads/postfiles/Final_Brief.pdf

Project LAUNCH & LAUNCH Together

The Project LAUNCH (Linking Actions for Unmet Needs in Children's Health) initiative is guided by a federal-level partnership among the Substance Abuse and Mental Health Services Administration (SAMHSA), the Administration for Children and Families (ACF), the Health Resources and Services Administration (HRSA), and the Centers for Disease Control and Prevention (CDC). It aims to promote the physical, social, emotional, cognitive, and behavioral health of young children ages birth to eight, thereby ensuring that children are ready to learn and succeed in school.

In order to promote healthy child development, Colorado organizations have developed programs and policies to improve access and services for young children and their families. Specific core prevention and promotion strategies include screening and assessment, enhanced home visiting through increased focus on social and emotional well-being, mental health consultation in early care and education, family strengthening and parent skill training, and integration of behavioral health into primary care settings (see Figure 16). For more information, please visit www.healthysafechildren.org/grantee/project-launch.

Project LAUNCH Framework



LAUNCH Together builds on and expands Project LAUNCH by supporting additional Colorado communities in enhancing children's health and well-being through evidence-based prevention and coordinated systems of care. LAUNCH Together aims to invest in communities to implement effective strategies to support early childhood and caregiver mental health, train professionals to better support children's mental health and bring together public and private partners to evaluate the project and support scaling of effective approaches. Together, Project LAUNCH and LAUNCH Together are providing supportive and effective services for thousands of families across Colorado. For more information, please visit www.earlymilestones.org/launch-together/

Figure 16: Project LAUNCH Framework

The Funders Learning Network on Early Childhood Mental Health

A number of foundations have been key partners in these efforts. For example, the Funders Learning Network on Early Childhood Mental Health (FLN) has been instrumental in developing a shared knowledge of young children's mental health among foundations and supporting independent and collaborative grantmaking among its 11 members. The Network is a diverse group of Colorado grantmaking organizations that fund in many areas and have a shared interest in young children's mental health. Members have come together since 2013 to share ideas, learn, and work together to improve the social, emotional, and mental health of children birth to age three. The FLN have been active partners in understanding and addressing ACEs in Colorado, and they have been key supporters of LAUNCH Together, the ECMH Strategic Plan, and behavioral health services in pediatric offices. The Network partners are the Aloha Foundation, Ben and Lucy Ana Walton Fund at the Walton Family Foundation, Caring for Colorado Foundation, the Colorado Health Foundation, Colorado Springs Health Foundation, Community First Foundation, Constellation Philanthropy, Kaiser Permanente, The Piton Foundation at Gary Community Investments, Rose Community Foundation, and Temple Hoyne Buell Foundation.

Call to Action

We believe these data provide a clear call to action. ACEs impact not only the health and well-being of the adults who report having experienced them, but they also impact the health and well-being of the next generation. Therefore, ACEs are too common and too costly. These costs accrue not only to individuals and families, but to society as a whole. ACEs are preventable with strong family supports, and family-centered supportive prevention, early identification and intervention would benefit our entire community.

We can do more

- to track the impacts of ACEs with systematic multi-year population-based data collection efforts using tools like the BRFSS and the CCHSQ or with more intensive research efforts like those at the University of Denver.
- to reach additional families, using integrative behavioral health models like those being tested and disseminated at the University of Colorado School of Medicine.
- by moving efforts like Project LAUNCH and LAUNCH Together into all Colorado regions. Public health problems of this magnitude take creative, dedicated, and collaborative cross-sector solutions.

With all of our efforts and voices, we can change what has been a steady level of ACEs across generations to support, protect, and enhance our future.



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