

JOINT BUDGET COMMITTEE



STAFF BRIEFING FY 2020-21

EVIDENCE-BASED POLICY

JBC WORKING DOCUMENT - SUBJECT TO CHANGE
STAFF RECOMMENDATION DOES NOT REPRESENT COMMITTEE DECISION

PREPARED BY:
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NOVEMBER 14, 2019

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CONTENTS

Evidence-based Overview2

APPENDICES

Appendix A – Joint Budget Committee Evidence-based Policy4

Appendix B – Governor’s Letter (Shortened) Evidence-based Attachment.....13

Appendix C – Spending Report on Governor’s Office Evidence-based Program Evaluations.....36

Appendix D – Evidence-based Collaborative Hub Proposal43

EVIDENCE-BASED OVERVIEW

SUMMARY

The Evidence-based Overview discusses several issues around evidence-based programs in the state. The first issue is the comparison between the Joint Budget Committee’s (JBC or Committee) evidence-based scale and the Governor’s Office of State Planning and Budgeting (OSPB) evidence-based scale. The second issue is a discussion of the programs considered evidence-based in the FY 2020-21 budget request. The third issue is the FY 2019-20 funding on evaluations for evidence-based programs the state is currently operating and the final issue is a discussion of an evidence-based hub.

RECOMMENDATION

Staff recommends additional funding for evaluations of evidence-based programs in the FY 2020-21 budget and a discussion of the evidence-based hub concept.

EVIDENCE CONTINUUM

Proponents of Evidence-based Policy (EBP) often discuss tiers of evidence and categorize programs based on the rigor of available evidence. These tiers range from a theory of change for new programs not yet studied to a top tier of randomized controlled trials and quasi-experimental design (to include a systematic study and a control group for comparison). The tiers allow policymakers to categorize programs, practices, or interventions based on the rigor of evidence supporting the practice. The five tiers of evidence, as reflected in the *Evidence-based Continuum* table below, are the Committee approved tiers used by JBC Staff.

EVIDENCE-BASED CONTINUUM		
Evidence Continuum	Examples of Evidence	Confidence in the Program
Proven	1. Two High Quality RCT's	High
Evidence-Informed	2. 1 High Quality RCT 3. 2 High Quality QEDs	Moderate
Theory-Informed	4. No Control or Comparison Groups	Moderate to Low
Opinion Based	5. Satisfaction Surveys 6. Personal Experience 7. Testimonials	Low
Evaluation Investment	8. No Existing Evidence 9. Quality Evaluation Planned	Unknown

OSPB also uses a five-tier scale in its evidence-based rankings of programs. That ranking is contained in Appendix B and Appendix C, as well as in the *JBC-OSPB Evidence Scale Crosswalk* table below.

JBC-OSPB EVIDENCE SCALE CROSSWALK		
JBC SCALE		OSPB SCALE
5. Proven	➡	5. Attain Casual Evidence
4. Evidenced-Informed	➡	4. Attain Initial Evidence
3. Theory-Informed	➡	3. Assess Outcomes
2. Opinion Based	➡	2. Identify Outputs
1. Evaluation Investment	➡	1. Program Design

EVIDENCE-BASED PROGRAMS FOR FY 2020-21 BUDGET REQUEST

OSPB highlighted several Evidence-based programs in the FY 2020-21 budget. The programs highlighted were rated levels three through five on the OSPB evidence-based scale. While those programs are based on empirical data, ranking these programs can be subjective to some extent. Because of that, Committee staff may or may not agree on the ranking provided by OSPB, but differences are likely to be slight in most cases. The *FY 2020-21 Budget Request Levels 3-5 Evidence-based Programs* table below is a list of the Governor’s evidence-based programs in the budget request, the location to find the program, and the Committee staff associated with that program.

FY 2020-21 BUDGET REQUEST LEVELS 3-5 EVIDENCE-BASED PROGRAMS			
Department	Program & OSPB Evidence Scale	JBC Staff Contact	Description Location
Agriculture			
	R01 Renewable Energy and Energy Efficiency (ACRE3) Funding – Level 3	Scott Thompson	Appendix B & Governor Shortened Letter Page 45
Education			
	R06 Colorado Preschool Program (CPP) Expansion – Level 5	Craig Harper	Appendix B & Governor Shortened Letter Page 34
	R10 Educator Evaluations – Level 3	Craig Harper	Appendix B & Governor Shortened Letter Page 35
	R12 Expanding Eligibility for School Improvement Funds - Level 3	Craig Harper	Appendix B & Governor Shortened Letter Page 36
Governor’s Office – Office of Economic Development and International Trade (OEDIT)			
	R01 Extended Procurement Technical Assistance Center – Level 3	Scott Thompson	Appendix B & Governor Shortened Letter Page 45
	R02 Small Business Development Center Increase – Level 3	Scott Thompson	Appendix B & Governor Shortened Letter Page 45
Health Care Policy and Financing			
	R06 Improve Customer Service – Level 3	Eric Kurtz	Appendix B & Governor Shortened Letter Page 44
	R07 Pharmacy Pricing and Technology – Level 3	Eric Kurtz	Appendix B & Governor Shortened Letter Page 44
Higher Education			
	R11 Colorado Opportunity Scholarship Initiative – Level 4	Amanda Bickel	Appendix B & Governor Shortened Letter Page 47
Human Services			
	R02 Early Intervention Caseload Growth – Level 3	Tom Dermody	Appendix B & Governor Shortened Letter Page 37
	R08 TEACH Scholarships for Early Childhood Education Professionals – Level 3.5	Tom Dermody	Appendix B & Governor Shortened Letter Page 38
	R09 Expansion of Evidence-Based Home Visiting – Level 5	Tom Dermody	Appendix B & Governor Shortened Letter Page 39
	R10 Child Support Pass-Through – Level 4	Tom Dermody	Appendix B & Governor Shortened Letter Page 40
	R11 Respite Care Task Force Funding Adjustments Level - 4	Tom Dermody	Appendix B & Governor Shortened Letter Page 41

FY 2020-21 BUDGET REQUEST LEVELS 3-5 EVIDENCE-BASED PROGRAMS

Department	Program & OSPB Evidence Scale	JBC Staff Contact	Description Location
	R08 Subsidized Employment Continuation – Level 3	Tom Dermody	Appendix B & Governor Shortened Letter Page 42
	R05d Youth Service Day Reporting – Level 3	Robin Smart	Appendix B & Governor Shortened Letter Page 43
Labor and Employment			
	R01 Expand Access to Work-Based Learning - Level - 3	Amanda Bickel	Appendix B & Governor Shortened Letter Page 47
Personnel and Administration			
	R01 Paid Family Leave – Level 4	Alfredo Kemm	Appendix B & Governor Shortened Letter Page 43
	R02 Telematics – Level 2.5	Scott Thompson	Appendix B & Governor Shortened Letter Page 44
Public Health and Environment			
	R01 Enforcement, Compliance, and Permitting Initiative – Level 3	Tom Dermody	Appendix B & Governor Shortened Letter Page 46
	R02 Immunization Outreach – Level 3	Andrew Forbes	Appendix B & Governor Shortened Letter Page 46
Public Safety			
	R01 Performance Based Contracting – Level 2.5	Vance Roper	Appendix B & Governor Shortened Letter Page 43

EVIDENCE-BASED GRANTS FOR EVALUATIONS

The General Assembly has annually appropriated \$500,000 cash funds from the Marijuana Tax Cash Fund (MTCF) to the Governor’s Office for evaluations on evidence-based programs. These funds support evaluation on current evidence-based programs in the state (a list of these programs are contained in Appendix C). Staff recommends increasing these funds with General Fund in order to allow for more evaluations of programs within the State.

Increased evaluations of EBPs will help ensure that when the General Assembly appropriates funding for new programs, that funding is used to the best extent possible. This happens by ensuring that the program implementation follows the research the original program was based on. Following implementation increases the chances that results seen in the original program are replicated in the new program. The evaluations can help find shortfalls, if any exist, and help to develop a plan to tweak the program to more closely follow the original program implementation.

APPENDIX A – JOINT BUDGET COMMITTEE
EVIDENCE-BASED POLICY

MEMORANDUM



JOINT BUDGET COMMITTEE

TO Joint Budget Committee Members
FROM Christina Beisel, Craig Harper, and Vance Roper
DATE November 27, 2018
SUBJECT Internal JBC Evidence-Based Policy

EXECUTIVE SUMMARY

The Joint Budget Committee (Committee) has heard increasing discussion of Evidence-Based Policy (EBP) in recent years in two contexts: (1) state agencies have justified a variety of budget requests as “evidence based,” prompting discussions of what that means; and (2) external groups and the Governor’s Office have both emphasized a goal of increasing the use of EBP in Colorado. However, it has not always been clear what, exactly, “evidence based policy” meant in the context of specific programs or proposals.

Based on the Committee’s interest, during the 2017 interim an internal JBC staff group formed an Evidence-Based Policy Team to conduct a research project to better understand EBP. Specific areas of investigation included: (1) background on EBP, including the meaning of EBP in the field, what constitutes “good” evidence, and how EBP is implemented; (2) the current use of EBP in Colorado, including both statutory requirements and executive branch actions; (3) other states’ use of EBP, including legislative components encouraging or requiring use of EBP; (4) the limitations of EBP; and (5) potential paths forward should the General Assembly decide to expand the use of EBP in Colorado.

This process continued into the 2018 interim where JBC staff worked with multiple stakeholders, including the Colorado Evidence Based Policy Collaborative, to develop an internal policy proposal for the Committee’s consideration. The Evidence-Based Policy Team has completed the project and submits the following recommendation to the Committee for discussion.

STAFF RECOMMENDATION

In order to facilitate the Committee’s discussion of evidence based budget requests, staff recommends the Committee approve the following internal policies (discussed in greater detail later in the document):

- 1 Standard definitions that will be used to describe terms and processes for EBP programs. These definitions include the “Evidence-Based Continuum,” which defines EBP tiers, as well as common terms used in evidence-based evaluations.
- 2 A process for highlighting and describing EBP programs in staff documents presented to the Committee.

EVIDENCE CONTINUUM

Proponents of EBP often discuss tiers of evidence and categorize programs based on the rigor of available evidence. These tiers range from a theory of change for new programs that have not yet been studied to a top tier of randomized controlled trials and quasi-experimental design including a systematic study and a control group for comparison. The tiers allow policymakers to categorize

programs, practices, or interventions based on the rigor of evidence supporting the practice. The Evidence-Based Policy Team recommends the Committee approve four tiers of evidence, as reflected in the Evidence-Based Continuum table below.

EVIDENCE CONTINUUM	EXAMPLES OF EVIDENCE	CONFIDENCE IN THE PROGRAM
Proven	<ul style="list-style-type: none"> Two High Quality RCTs 	High
Evidence-Informed	<ul style="list-style-type: none"> 1 High Quality RCT 2 High Quality QEDs 	Moderate
Theory-Informed	<ul style="list-style-type: none"> No Control or Comparison Groups 	Moderate to Low
Opinion Based	<ul style="list-style-type: none"> Satisfaction Surveys Personal Experience Testimonials 	Low
Evaluation Investment	<ul style="list-style-type: none"> No Existing Evidence Quality Evaluation Planned 	Unknown

DEFINITIONS USED IN EVIDENCE BASED EVALUATIONS

The Evidence-Based Policy Team recommends the following definitions for evaluation of evidence-based programs:

Evidence: Research and evaluations that indicate whether a program is capable of influencing and/or changing an outcome of interest.

Evidence Continuum: Evidence is built over time using a series of different research designs. The Evidence Continuum is the process of moving between the categories in the table above.

Comparison Group: A group (typically people) in an evaluation that either did not receive a program or were not randomly assigned to receive a program. The two groups are compared to measure a program’s ability to influence and/or change an outcome of interest. Comparison groups are typically used in Quasi-Experimental Designs.

Control Group: A group (typically people) in an evaluation that have been randomly assigned to not receive a program. Data on the control group are compared to those receiving the program to measure a program’s ability to influence and/or change an outcome of interest. Control groups are typically used in RCTs.

Outcome of Interest: The outcome that a program aims to influence and/or change. Program outcomes typically reflect behaviors, such as reducing recidivism or increasing academic achievement.

Quasi-Experimental Designs (QEDs): A research method that uses a comparison group. QEDs can produce high-quality evidence; however, they are not as reliable as RCTs in accounting for differences between subjects who receive a program and those who do not. Importantly, QED methods vary widely in their rigor, particularly in their ability to ensure program and comparison groups are equivalent on both observable and unobservable characteristics at the start of the program. However, some QEDs are highly capable of controlling for threats to internal validity and establishing causation.

Randomized Controlled Trial (RCT): A research method that uses a randomized control group, meaning that subjects are randomly assigned to either (i) a group that receives a program or (ii) a control group

that does not. Random assignment provides greater confidence that there are no systematic differences between the two groups. As a result, any difference in outcomes between the groups after the program can confidently be attributed to the program.

INTERNAL PROCESS

Evaluating an evidence-based program is time consuming and requires specific skills sets. The JBC staff does not have the capacity or the authority to perform full program evaluations including experimental designs, etc. However, the State has invested resources in evidence-based policy in recent years. For example, the Executive Branch has a dedicated EBP team that works with Departments to develop EBP programs and requests, which are highlighted in the annual budget submittal. Based on programs identified in the annual budget request, JBC staff can do a partial analysis on the program and how it fits into evidence based theory. For context, we expect to see fewer than 10 EBP requests across all departments in FY 2019-20.

In order to facilitate the Committee's discussions of evidence based budget requests, the Evidence-Based Policy Team recommends that the Committee approve the following internal policy on evidence-based evaluation. If a decision item, or any other programmatic request, is identified as an evidence-based program/request, JBC staff will:

- 1 Review the item to determine where the program falls on the evidence-based continuum.
- 2 Add a section in the staff briefing (if the item is a briefing issue) and figure setting documents titled "Evidence-Based Evaluation."
- 3 In the Evidenced-Based Evaluation section, JBC Staff will:
 - a. Describe the tier of the continuum where the program falls, the confidence level in the program, and include a brief explanation on why the program falls into this area.
 - b. Discuss the implementation plan for the program, or the lack of an implementation plan.
 - c. Discuss the expected outcomes from the program's intervention.
- 4 Create an RFI that requires the Department or Agency running the program to report back on:
 - a. The implementation process used for the program and a discussion on the fidelity of implementation for the program;
 - b. Results in relation to the outcomes expected from the program;
 - c. Lessons learned through implementation and administration of the program;
 - d. Changes made based on the lessons learned; and
 - e. Adjustments to outcomes based on lessons learned.
- 5 Report and discuss the information provided in the RFI to the Committee during the following fiscal year budget briefing process.

APPENDIX A COLLABORATIVE DOCUMENT

TO Vance Roper, Senior Legislative Analyst, Colorado General Assembly
CC Craig Harper, Chief Legislative Analyst, Colorado General Assembly

FROM The Colorado Evidence-Based Policy Collaborative
DATE 10/19/2018
SUBJECT Evidence Standards

Dear Vance,

The Colorado Evidence-Based Policy Collaborative thanks you for the opportunity to provide feedback on the evidence standards you are recommending to the Joint Budget Committee. Per your request, we reviewed standards for the following terms:

1. Randomized Control Trial (RCT)
2. Quasi-Experimental Design (QED)
3. Control Group
4. Promising Practices

A glossary of terms is listed at the end of this document for reference.

The Collaborative's recommendations are that the Committee:

- References the Evidence Continuum listed in Table 1 (and illustrated in Figure 1);
- Focuses on the amount of *confidence* that different types of evidence provide (see Table 1) in terms of whether a particular outcome was caused by a given program;
- Understands that the more rigorous an evaluation, the more confidence we have in findings that demonstrate

Evidence Continuum	Examples of Types of Evidence	Confidence of Effectiveness, Ineffectiveness, or Harmfulness
Proven	<ul style="list-style-type: none"> • 2 high-quality RCTs 	High
Promising	<ul style="list-style-type: none"> • 1 high-quality RCT, or • 2 high-quality QEDs 	Moderate
Theory-Informed	<ul style="list-style-type: none"> • Evaluations with no control or comparison group 	Moderate-Low
Opinion-Based	<ul style="list-style-type: none"> • Satisfaction surveys • Personal experience(s) • Testimonials 	Low-None



- whether our investments in programs achieve important outcomes for Coloradans *and* do no harm;
- Recognizes that even programs with “Proven” evidence might not produce positive results if sufficient implementation resources are not invested; and
 - Engages The Colorado Evidence-Based Policy Collaborative as a resource to vet and offer feedback on research, evaluation, and implementation.

Table 1: The Evidence Continuum

The Evidence Continuum (Table 1) applies mostly to evaluations of individual service delivery (e.g. criminal and juvenile justice programs, behavioral health programs, child welfare programs, etc.). It does not best represent the highest level of evidence available –or even feasible– for many population-based strategies, including several implemented in state agencies such as public health (e.g., air quality), transportation (e.g., road safety), and agriculture (e.g., conservation).¹ The top evidence category listed in Table 1 is typically applied to programs that serve or engage individuals directly. Additionally, some programs (e.g., entitlements) are statutorily prohibited from randomizing their populations. This means that not all state programs can reach the level of “Proven.” In these circumstances, certain QED study designs are recommended to evaluate these strategies. Since there are a variety of QED designs, each with different strengths, weaknesses and applications, their rigor should be considered in context. In addition to rigor, particular attention should also be paid to the quantity of QED studies evaluating these strategies and the consistency of their findings (e.g., one can be more confident in the evidence supporting a strategy that has been consistently shown to have important impacts across multiple high-quality QED studies, than one evaluated in a single QED study or one for which the evidence is not consistent across multiple studies). To this point, ***the “best available evidence” is a principle that should be interpreted in context and determined by evaluation experts.***

It is also important to note that while most state programs will not fall into the “Proven” category, they still have value. We encourage the Committee to invest in moving programs along the evidence continuum (illustrated in Figure 1), or investing in the most appropriate scientific study design, so that the state’s programs can build evidence to support their efforts or engage in process improvement efforts to achieve better outcomes.

The Evidence Continuum in Detail

Evidence building is an iterative process and starts once a program becomes “Theory-Informed” (see Figure 1). The best way to aid programs in building evidence, or in moving along the evidence continuum, is to fund evaluations of programs and support proper implementation to ensure fidelity to the chosen program/model. **Implementation support is critical**—especially for “Proven” programs, **because proper training, materials, and funding (etc.) ensures programs are implemented as intended and therefore more likely to produce positive findings.**² Figure 1 provides guidance on the steps, or research activities, involved in building an evidence base, especially for programs that serve individuals and/or have a standardized curriculum. The figure also highlights how implementation support takes place throughout the entire evidence-building process. As mentioned above, **the further a program is along the continuum (as it moves towards “Proven”/Step 5), the more credible the findings are of program effectiveness, ineffectiveness, or harmfulness, and the more confidence that can be placed in the findings.**

In Summary

This memo focuses on: 1) identifying how confident we can be that a program is effective; 2) increasing our confidence in the findings of a program’s effectiveness through building an evidence base of more

¹For example, the Colorado Department of Public Health and Environment utilizes several high-quality and respected resources including the Cochrane Review, the CDC Community Guide, the World Health Organization, the National Academies of Sciences, Engineering, and Medicine (previously the Institute of Medicine), and other reputable, peer-reviewed research to identify recommended strategies with substantial evidence of impact.

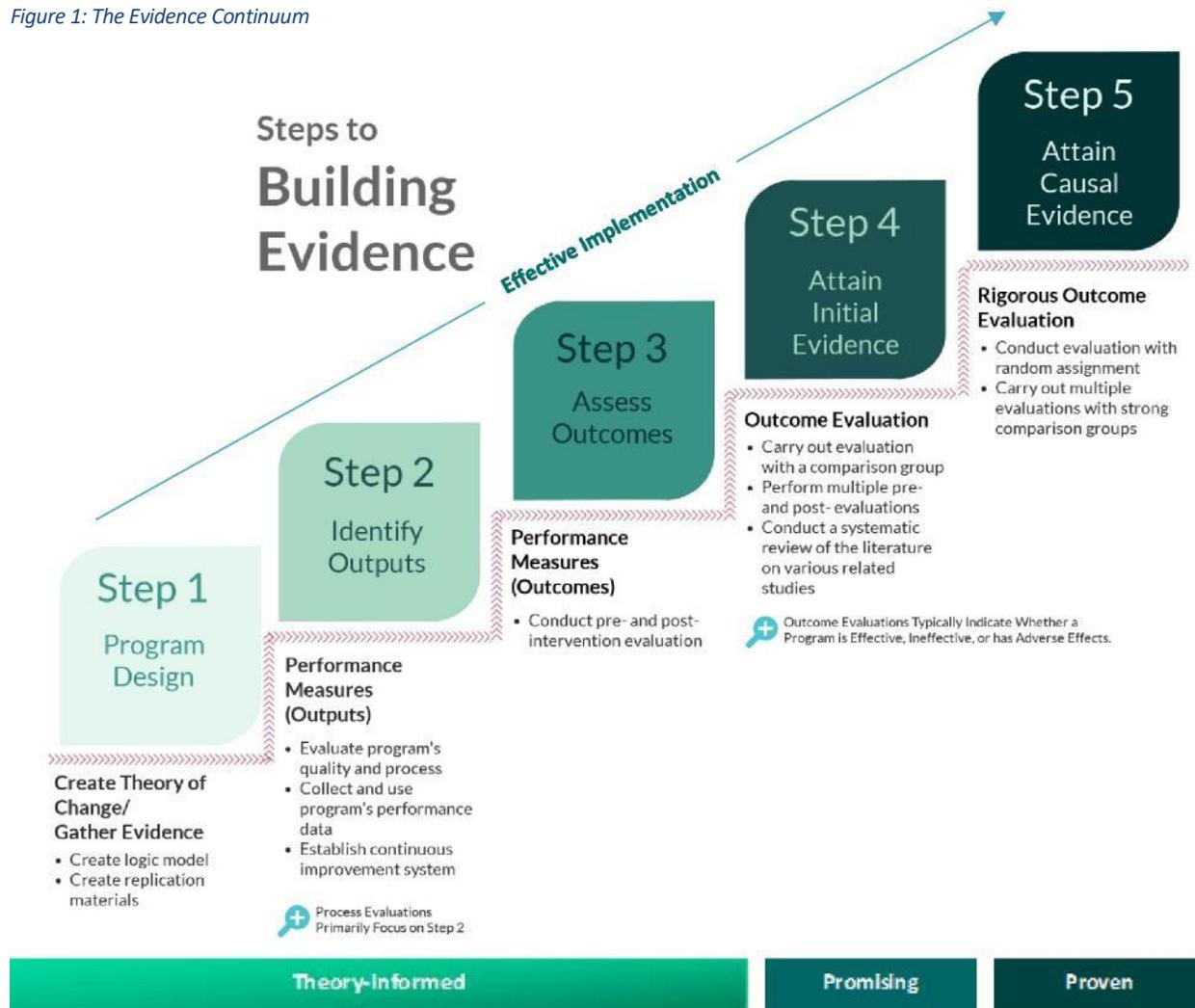
²A good example of this is an implementation of the Functional Family Therapy program on the west coast. Through evaluation it was discovered that gaps in the program’s

rigorously designed evaluations; and 3) underscoring the important concept that evaluations produce findings that range from effective to harmful, and that confidence in those findings is associated with the level of rigor in the research study reporting outcome results.

The Colorado Evidence-Based Policy Collaborative would like to thank the Committee for considering our recommendations and invites the Committee to reach out with questions.

Glossary of Terms

Figure 1: The Evidence Continuum



Evidence: Research that indicates whether a program is capable of influencing and/or changing an outcome of interest.

Evidence Continuum: Evidence is built over time using a series of different research designs. The graphic “Steps to Building Evidence” (Figure 1) displays this continuum.

Comparison Group: A group (typically people) in an evaluation that either did not, or were not *randomly* assigned to, receive a program. Data on the *comparison group* are compared to how other tested subjects (those receiving the program) do to benchmark and measure a program’s ability to influence and/or change an outcome of interest. Comparison groups are typically used in QEDs.

Control Group: A group (typically people) in an evaluation that have been *randomly* assigned to not receive a program. Data on the *control group* are compared to how other tested subjects (those receiving the program) do to benchmark and measure a program’s ability to influence and/or change an outcome of interest. Control groups are typically used in RCTs.

Outcome of Interest: The outcome that a program aims to influence and/or change. Program outcomes typically reflect behaviors, such as reducing recidivism or increasing academic achievement.

Quasi-Experimental Designs (QEDs): A research method that uses a comparison group. QEDs can produce high-quality evidence; however, they are generally not as reliable as RCTs in accounting for differences between subjects (typically people) who receive a program and those who do not. Importantly, QED methods vary widely in their rigor, particularly in their ability to ensure program and comparison groups are equivalent on both observable and unobservable characteristics at the start of the program. However, some QEDs are highly capable of controlling for threats to internal validity and establishing causation (like a well-done RCT), such as a well-designed and executed instrumental variable analysis, regression discontinuity design or comparative interrupted time series design. Experienced researchers determine which designs are most suitable and/or appropriate for the program in consideration of its setting.

Randomized Controlled Trial (RCT): A research method that uses a randomized control

group, meaning that subjects (typically people) are randomly assigned to either (i) a group that receives a program or (ii) a control group that does not. Random assignment ensures to a high degree of confidence that there are no systematic differences between the program and control groups in their observable or unobservable characteristics at the start of the program. As a result, any difference in outcomes between the groups after the program can confidently be attributed to the program. It should be noted that with this evaluation design, either group can concurrently access any other available programs as needed.

Colorado Evidence-Based Policy Collaborative Members

- Adrienne Russman, Director of Collective Impact, Uncharted
- Ali Maffey, Policy and Communication Unit Supervisor, Colorado Department of Public Health and Environment
- Ann Renaud Avila, ARA Strategies
- Bill Woodward, Director, Training and Technical Assistance, Center for the Study and Prevention of Violence, Institute of Behavioral Science, University of Colorado
- Brian Bumbarger, PhD, Adjunct Research Associate, Colorado State University Prevention Research Center; Adjunct Research Fellow, Griffith University Institute of Criminology; Consultant, Annie E. Casey Foundation
- Cindy Eby, Founder/CEO, ResultsLab
- David Anderson, Director of Evidence-Based Policy, Laura and John Arnold Foundation
- Diane Pasini-Hill, EPIC Manager, Division of Criminal Justice, Department of Public Safety
- Jessica Corvinus, Research and Evidence-Based Policy Manager, Colorado Governor’s Office
- Kristen Pendergrass, Principal Associate, Pew–MacArthur Results First Initiative
- Kristin Klopfenstein, PhD, Director, Colorado Evaluation and Action Lab
- Lisa Hill, Executive Director, Invest In Kids
- Pamela Buckley, PhD, Director of Blueprints for Healthy Youth Development
- Sarah Prendergast, Doctoral Student, Colorado State University
- Tiffany Madrid, Research and Evidence-Based Policy Lead Analyst, Colorado Governor’s Office
- Tiffany Sewell, Collaborative Management Program Administrator, Colorado Department of Human Services

APPENDIX B – GOVERNOR’S LETTER (SHORTENED)
EVIDENCE-BASED ATTACHMENT

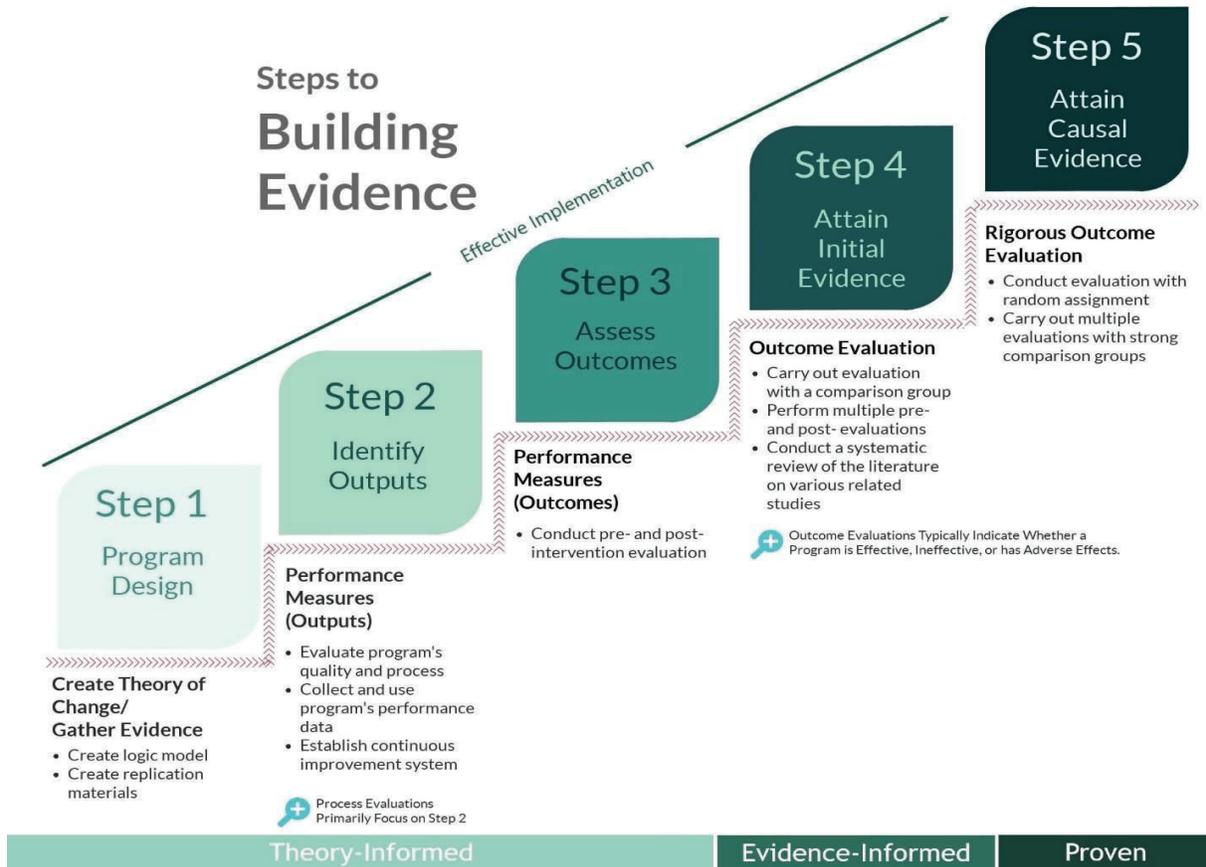
Evidenced-Based Policy

Colorado was recently honored as the top state in the nation for connecting its budget to data and evidence - and that is more clear in this budget than any in our state's history. We are making a concerted effort to focus our resources on programs that are proven successes through data and research. The Governor's Office of State Planning and Budgeting (OSPB) is working with state agencies to improve the use of evidence-based policymaking to inform resource allocation, program design, and program implementation. We will continue to expand the role of evidence-based policymaking and seek to help programs progress along the State's Evidence Continuum, which has been jointly adopted by the Joint Budget Committee and OSPB (See Figure 1 below), in order to improve program outcomes for Coloradans.

OSPB is dedicated to expanding the influence of evidence-based policy in the State of Colorado, including incorporating evidence-based policy into the preparation of the Governor's FY 2020-21 budget. OSPB evaluated each budget request it received for FY 2020-21 to determine its alignment with and position on the Evidence Continuum. OSPB then incorporated those evaluations into our recommendations for each relevant decision item in the form of an "evidence meter," shown here. This decision tool elevated evidence-based discussions to the Governor, and helped to formulate a budget rooted in sound data and evidence, and where evidence is missing, advances the research needed to collect it.



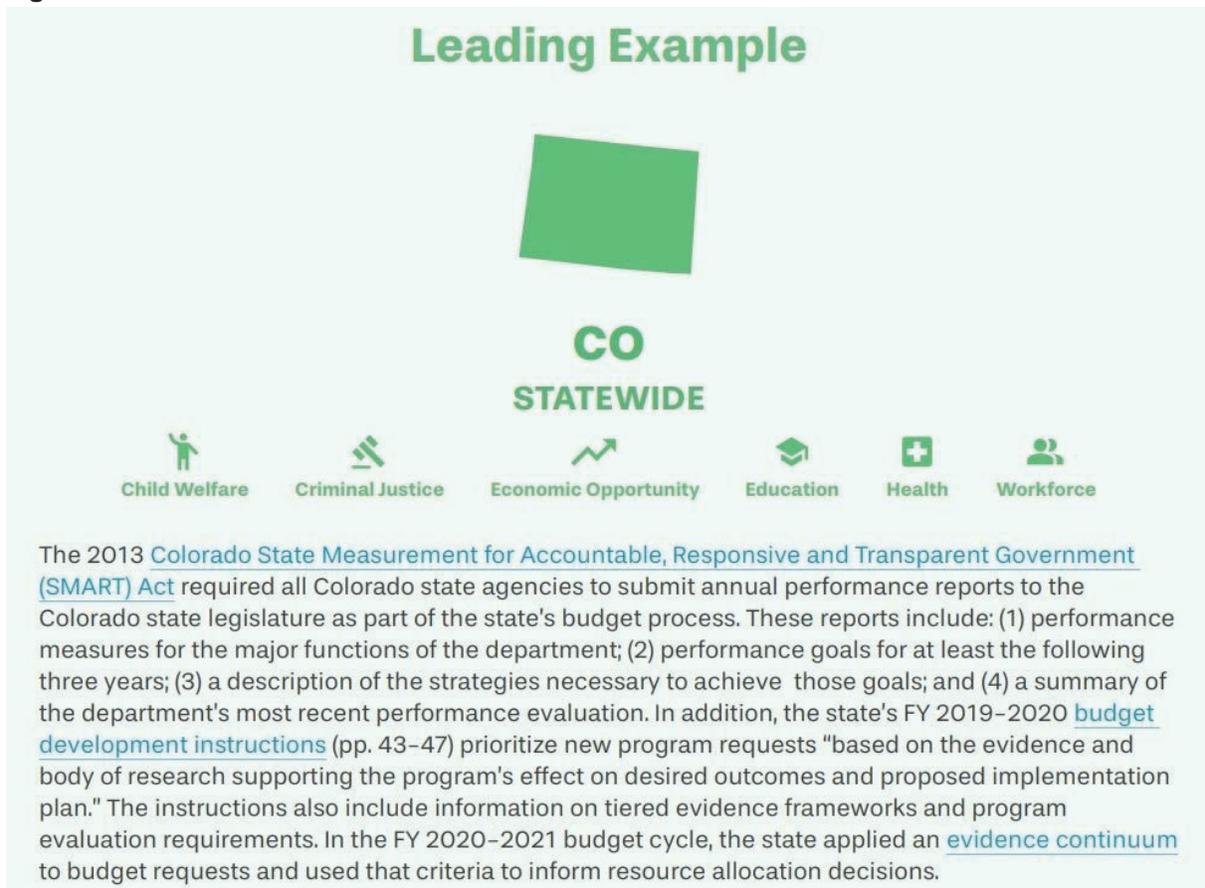
Figure 1: The Evidence Continuum



Further, OSPB has expanded responsibility for considering the evidence base of programs from a small team within the office to the expectation that all OSPB analysts work with the Departments on evidence-based policy and how to apply evidence to program design and implementation. In addition, core competencies for OSPB staff include quantitative analysis and evaluation. The goal is to embed the mindset of evidence-based policy and expand its reach to all policy areas.

Finally, Colorado was recently recognized as the #1 state in the country for its use of evidence and performance measures in budgeting by Results for America. In an event co-hosted by the National Governors Association, Results for America specifically identified Colorado's State Measurement for Accountable, Responsive and Transparent Government (SMART) Act, as well as the inclusion of the Evidence Continuum in annual budget instructions, as a leading example of how states can use outcomes data and tie evidence and data to the budget process.¹

Figure 2: Results for America State Standard of Excellence



The Governor's Budget requests funding for 46 existing or newly proposed programs that OSPB identified as appropriate for considering on the Evidence Continuum; 50% of which (23 programs) meet the high standard of achieving a Step 3 or above on the Evidence Continuum. (See Section 1 for a description of each of these programs.) To continue this progress, this

¹ Results for America, "2019 State Standard of Excellence – Outcome Data," accessed on October 7, 2019. Available at: <https://2019state.results4america.org/state-standard-of-excellence/outcome-data.html#leading-example>

budget also includes funding to evaluate 10 ongoing and newly requested programs to determine if they are a wise investment. (See Section 2 for additional information.)

In addition to supporting Departments in the application of the principles of evidence-based policymaking and performance management as part of the budget process, OSPB receives an appropriation to provide grants to Departments for evaluation and implementation support. This funding helps Departments evaluate their programs and ensure proper program implementation. OSPB's website provides an update on these ongoing evaluation projects.

Finally, OSPB has identified several opportunities to continue to expand the influence of evidence in budget decisions and ongoing management of government programs. These include:

- Using the annual budget development process to drive funding decisions towards programs with strong evidence of results and to allocate resources to evaluate existing and newly proposed programs to ensure that they work;
- Expanding the use of evidence beyond areas of traditional emphasis such as healthcare, criminal justice, and education to all areas of State programming, including environment and transportation;
- Encouraging Departments to incorporate evidence into their internal management decisions about programs and allocation of resources and building capacity and coordination within the Governor's Office to support Departments in applying evidence and evaluation to program design and implementation;
- Ensuring Departments have the guidance and resources needed to identify programs that are good candidates for performance measures or evaluation; and
- Continuing and expanding the State's collaboration with external partners to explore ways to incorporate evidence and evaluation into existing and proposed programs.

For more information about OSPB's evidence-based policy work please contact: Aaron Ray, OSPB Deputy Director for Education, Workforce, and Environment, at aaron.ray@state.co.us or 303-866-2067.

Section 1: Select FY 2020-21 Requests with Evidence-Based Policymaking Emphasis

In the FY 2020-21 budget, OSPB identified the following requests as opportunities to use evidence to improve program outcomes. Overall, OSPB received more requests with an evidence-based emphasis than in previous years, including a number of proposals with an evaluation component. As compared to the prior budget cycle, these requests suggest the State of Colorado is making progress in the implementation of evidence-based policy.

Department of Education

R-06 Colorado Preschool Program (CPP) Expansion

The Department of Education requests \$27.6M to expand access to the Colorado Preschool Program (CPP). The General Assembly established CPP in 1988 to provide high-quality early childhood education and family support to at-risk 3- and 4-year old children. The General Assembly has provided regular increases over the past 30 years, totaling about \$122.5M through FY 2019-20. However, the funds have been insufficient to meet the demand for CPP. In 2018-19, CPP served only 38% of eligible children, leaving 47,050 potentially eligible children unserved. This request would increase preschool access to nearly 6,000 at-risk 3- and 4-year-olds across the state, increasing the percent of eligible children served to 50%.



High-quality early childhood education has demonstrated positive outcomes across numerous indicators for both children and families in the short- and long-term. The early childhood period (birth to age 5) is a time of rapid brain development, with one million new connections forming every second.² Early experiences play a large role in determining how brain connections are formed and in the “wiring” that becomes the foundation upon which all later learning is built. The learning gap between advantaged and at-risk children can form as early as 9 months of age, and at-risk children can start kindergarten as many as 18 months behind their peers.³ Many of these children never catch up, and are at an increased risk of dropping out of high school.

A recent national analysis of high-quality experimental and quasi-experimental studies of the impact of early childhood education conducted between 1960 and 2016 found that, on average, participation in early childhood education leads to statistically significant reductions in special education placement (-8.1 percentage points), grade retention (-8.3 percentage points), and increases in high school graduation rates (+11.4 percentage points).⁴ Separate economic analyses based on longitudinal studies of preschool programs similar to CPP have demonstrated that the benefits of early childhood education outweigh the costs of providing early educational opportunities, with seven to twelve dollars saved for every dollar invested.⁵

² Harvard University Center on the Developing Child. Brain Architecture. Available at: <https://developingchild.harvard.edu/science/key-concepts/brain-architecture/>

³ Barnett, W, Tarr, J, Lamy, C, & Frede, E. 2001. Fragile lives, shattered dreams: A report on implementation of preschool education in New Jersey’s Abbott Districts. New Brunswick, NJ: National Institute for Early Education Research.

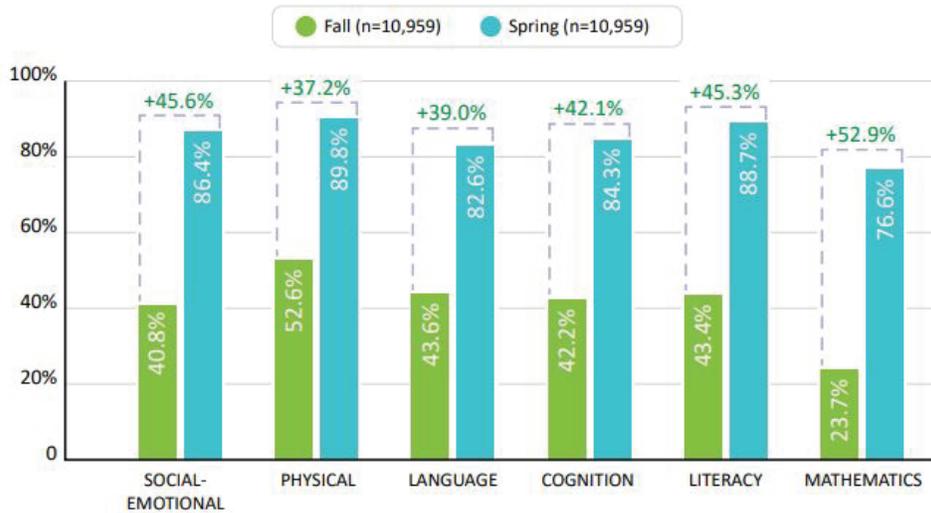
⁴ McCoy, D. C., Yoshikawa, H., Ziol-Guest, K. M., Duncan, G. J., Schindler, H. S., Magnuson, K., Shonkoff, J. P. 2017. Impacts of Early Childhood Education on Medium- and Long-Term Educational Outcomes. *Educational Researcher*, 46(8), 474–487. <https://doi.org/10.3102/0013189X17737739>

⁵ High Scope Perry Preschool Project. Available at: <https://highscope.org/perry-preschool-project/>

CPP has continuously produced positive outcomes for participating children. Last year, the Department of Education reported that participants were less likely to be identified with a significant reading deficiency, less likely to be retained in the same grade level, and had better on-time high-school graduation rates than their peers who did not participate in CPP. The state’s observational child assessment tool, Results Matter, found substantial gains among participants from the beginning to the end of participating children’s school year in the six measured outcome areas: social emotional, physical, language, cognition, literacy, and math.⁶ The graph, below, depicts the growth children enrolled in CPP made across each domain from the fall to the spring. In each area, children made significant overall gains in learning and development over the course of the school year.

Percentage of CPP Four-Year-Olds Meeting or Exceeding Expectations in 2017-18

Source: CPP Legislative Report 2019



Outcomes that the Department of Education has used to measure and evaluate CPP to date include:

- Improved kindergarten readiness;
- Reduced likelihood of a reading deficiency;
- Higher test scores;
- Reduced grade repetition;
- Reduced need for remedial education;
- Reduced special education placement; and
- Better high school graduation rates.

R-10 Educator Evaluations

The Governor’s Office is requesting \$0.5M to improve evaluations and supports for Colorado educators. The requested funding would enable improvements to Colorado’s educator evaluation system, including:

- Free training through the Department of Education for evaluators in best practices in observation;
- Establishing an online repository of differentiated rubrics for school districts to use for educator evaluations;
- Funding to support school districts’ use of innovative approaches to teacher evaluation, including video evaluations and allowing peers or departmental leads to evaluate educators.



⁶ CDE Legislative Report. 2019. Available at: <https://www.cde.state.co.us/cplegreport>

A strong teacher evaluation system not only helps teachers improve their practice, which in turn improves student learning, but can also help promote retention. Studies have shown that teachers who are given opportunities to grow in the profession are more likely to stay in education.⁷ In contrast, an evaluation that does not accurately predict teacher effectiveness may run counter to both of those goals. A nationwide survey by Rand found that “teachers are more likely to value and respond constructively to feedback from an evaluation system that they feel is fair and insightful and holds expectations that can be supported by school resources.”⁸

Innovative types of educator evaluations such as peer assistance and review have been shown to increase teacher retention, instruction, and are likely to have a positive impact on student achievement.⁹ Peer or departmental evaluation can help to free up time for school leaders to concentrate on other priorities or spend more time with struggling educators. In addition, evaluation systems in which educators can submit videos of their instruction led teachers to “perceive the evaluation process as more fair, less adversarial, and more useful in identifying aspects of their practice leading change.”¹⁰ Providing funding for a pilot program for innovative approaches to evaluation can also help to increase the body of research around what works when it comes to educator evaluation.

R-12 Expanding Eligibility for School Improvement Funds

The Governor’s Office is requesting \$1M to increase evidence-based supports for struggling schools that have been identified as in need of support under the State’s accountability system. Under current law, schools that are identified as struggling by either state or federal rules are eligible for financial support and assistance under the Empowering Action for School Improvement (EASI) program. Schools or school districts that apply for support must commit to implement or continue evidence-based approaches to school improvement that leverage WestEd’s “Four Domains for Rapid School Improvement”¹¹, including:



- Exploration supports for districts to better understand the needs of the school and community, and planning to address those needs;
- District-designed plans that meet evidence requirements and school needs and involve pursuing grant funds to support improvement activities; and
- Participation in an evidence-based CDE-sponsored program or support aimed at improving school systems. These opportunities include implementing Connect for Success, the Turnaround Network, multi-tiered systems of support (CO-MTSS), and the school turnaround leaders’ development program.

In 2019, less than half of schools that were identified for support received any funding. In addition, schools that were rated “improvement” but very close to being identified as

⁷ Education Commission of the States. 2016. Available at:

<https://www.ecs.org/wp-content/uploads/Mitigating-Teacher-Shortages-Teacher-leaders.pdf>

⁸ Prado Tuma, Andrea, Laura S. Hamilton, and Tiffany Tsai, How Do Teachers Perceive Feedback and Evaluation Systems? Findings from the American Teacher Panel. Santa Monica, CA: RAND Corporation, 2018. Available at: https://www.rand.org/pubs/research_briefs/RB10023.html

⁹ Papay, J. P., & Johnson, S. M. 2012. Is PAR a Good Investment? Understanding the Costs and Benefits of Teacher Peer Assistance and Review Programs. *Educational Policy*, 26(5), 696–729.

<https://doi.org/10.1177/0895904811417584>

¹⁰ Harvard University Center for Education Policy Research. Available at:

<https://cepr.harvard.edu/best-foot-forward-project>

¹¹ WestEd. Four Domains for Rapid School Improvement. Available at:

<https://www.wested.org/four-domains-for-rapid-school-improvement/>

underperforming were not eligible for State resources. The Governor’s Budget request increases funding for evidence-based supports and expands eligibility to allow improvement schools to apply for funding. This will allow 19 new schools to receive evidence-based supports or interventions that can help students excel.

In addition to requiring that all interventions funded through the program meet a high bar for evidence, CDE has conducted an evaluation of the program that demonstrates that schools that participate in CDE-offered supports (specifically the Turnaround Network and Connect for Success) come off the State’s “accountability clock” and are no longer identified as underperforming, and stay off the clock at a higher rate than schools that do not participate. In addition, CDE is in the beginning stages of establishing a more rigorous evaluation of supports for low-performing schools.

Department of Human Services

R-02 Early Intervention Caseload Growth

The Department of Human Services requests \$3.2M to address growing caseload in the Early Intervention (EI) program. The EI program identifies developmental delays in infants and toddlers to proactively address these delays and mitigate the impact they have on a child’s growth so that the child will have as many skills as possible when they enter preschool. The developmental areas that EI services target are adaptive skills, cognitive skills, communication skills, motor skills, and social and emotional skills.



The Department of Human Services projects a need to serve 361 additional children in FY 2020-21, which represents a 3.7% caseload increase. This caseload growth is largely driven by increased physician referrals, improved collaboration with Child Welfare, increased exposure of infants to developmentally harmful substances, and enhanced outreach to Level 1 Neonatal Intensive Care Units. Without additional General Funds to increase the program’s capacity, the EI program risks losing its federal funding through Part C of the Individuals with Disabilities Education Act (IDEA). The Department’s request for an increase of \$3.2M will provide additional EI direct services and service coordination associated with projected caseload growth.

Pre- and post-evaluations of Colorado children enrolled in the EI program have demonstrated positive outcomes and potential preventive cost-savings, including:

- Nearly half (49%) of children enrolled in EI do not go on to receive Part B Preschool Special Education services;
- 99% of children show at least some progress in development; and
- 60% of children show significant progress toward reaching development closer to their same-age peers.

The Department currently evaluates the EI program across several outcome measures and includes the progress across these indicators in its Annual Performance Report submitted to the federal EI partners each February. Examples of measures tracked include the percent of infants and toddlers with Individual Family Service Plans (IFSPs) who:

- Receive the early intervention services on their IFSPs in a timely manner;
- Primarily receive EI services in the home or community-based settings; and
- Demonstrate improved, a) positive social-emotional skills, b) acquisition and use of knowledge and skills, and c) use of appropriate behaviors to meet their needs.

The EI program is required to serve all eligible children. As a result, studies utilizing random assignment of services are not possible.

R-08 TEACH Scholarships for Early Childhood Education Professionals

The Department of Human Services is requesting \$0.6M to establish State support for TEACH (Teacher Education and Compensation Helps Early Childhood) early childhood scholarships.



Qualified early childhood education (ECE) professionals are key to children’s positive early learning and development. Research is clear that skilled ECE professionals “are the single most important factor” in providing children with the early experiences necessary to foster children’s positive learning and development in ECE settings, including social and emotional development.¹² Likewise, the need for ECE professionals is significant throughout the state with a 44 percent increase in openings.¹³

The TEACH program, which has agreements with eight four-year institutions, including Colorado State University, University of Northern Colorado, and University of Colorado at Denver, and 15 two-year institutions, provides 90% of the cost of tuition and books for participants, paid release time, and a raise and bonus upon successful completion. TEACH requires participants to remain employed at their child care program for one year following completion if they earn a degree and for six months following completion if they earn licensing credentials.

TEACH Early Childhood Colorado produced the following results during FY 2017-18:

- 100% retention rate for associate degree scholarship recipients
- 100% retention rate for bachelor’s degree scholarship recipients
- 100% of surveyed TEACH recipients indicated they would recommend TEACH to their peers and 100% of surveyed employers would recommend TEACH
- The average increase in earnings for a TEACH recipient on an associate or bachelor’s degree scholarship was 4%.¹⁴

The Department is also requesting an FTE to support the evaluation of the TEACH program and the ongoing workforce challenges. Incorporating and implementing this evaluation component could move the TEACH program from Step 3 to Step 4 on the Evidence Continuum. Specific outcomes that the Department may measure, as compared to professionals not in the TEACH scholarship program, are:

- Retention rate by degree program
- Satisfaction rate for scholarship recipients
- Average increase in earnings

¹² United States Department of Health and Human Services and United States Department of Education. 2016. “High quality early learning settings depend on a high-quality workforce: Low compensation determines quality.” Available at: https://www.acf.hhs.gov/sites/default/files/ece/ece_low_compensation_undermines_quality_report_june_10_2016_508.pdf

¹³ Colorado Workforce Development Council, Talent Pipeline Report. 2018. Available at: https://www.colorado.gov/pacific/sites/default/files/2018_Talent_Pipeline_Report_Web.pdf

¹⁴ TEACH Colorado FY 2018 Results. Available at: <https://ecclcolorado.org/wp-content/uploads/2019/01/State-Profile-FY18-TEACH-CO.pdf>

R-09 Expansion of Evidence-Based Home Visiting

The Department of Human Services is requesting \$0.5M to expand two evidence-based home visiting programs, Healthy Steps and Home Instruction of Parents of Preschool Youngsters (HIPPY). Home visiting is a strategy to provide education and modeling for parents and home-based child care providers so that children can begin school ready to learn.



The Department will use the requested funding to add four Healthy Steps sites (320 additional children) and expand HIPPY in two locations (40 additional children). Both programs have demonstrated positive outcomes and strong return on investment. Specifically, the total benefit to cost ratio of Healthy Steps is \$2.60 per \$1 invested, while HIPPY is \$6.10 per \$1 invested. Both Healthy Steps and HIPPY have been evaluated nationally and in Colorado and have been associated with positive outcomes for both children and their families.

For Healthy Steps, these outcomes include:

- Families received more anticipatory guidance that matched their needs.
- Parents demonstrated a better understanding of infant development.
- Mothers were 22% more likely to show picture books to their infants every day.
- Parents were 2x more likely to report that someone at the practice went out of the way for them, and they were 1.5x more likely to rely on someone in the practice for advice (rather than a friend or relative).
- Children were 1.4 times more likely to have nonmedical referrals, including for behavior, speech, hearing, child abuse or neglect, and early intervention.
- Mothers with depressive symptoms reported fewer symptoms after 3 months in the program.
- Parents were 22% less likely to rely on harsh punishment (e.g., yelling, spanking by hand).
- Parents were less likely to use severe discipline (e.g., face slap, spanking with objects).
- Children whose mothers reported childhood trauma scored better on a social-emotional screening after receiving Healthy Steps than comparable children who did not receive the program.
- Children were 23% less likely to visit the emergency room for injuries.¹⁵

For HIPPY, these outcomes include:

- Home literacy environments improve and parent involvement in children's academic learning increases for families enrolled in HIPPY.
- Parents participating in the HIPPY program report spending more time reading to their children; teaching them letters, words and numbers; visiting the library; and monitoring their child's TV use.
- Children participating in HIPPY have demonstrated statistically significant higher achievement scores in reading, math, and social studies in third, fifth, and sixth grades based on multiple measures used in Arkansas, Texas, Florida and Colorado.¹⁶

¹⁵ National Healthy Steps data comes from evaluation from Zero to Three, a national organization dedicated to advancing the healthy development of young children. More information available at: <https://www.healthysteps.org/article/national-and-site-level-evaluations-9>

¹⁶ National HIPPY data comes from a series of studies including randomized controlled trials, quasi-experimental designs, and evaluation studies. More information available at: <https://www.hippyusa.org/research/>

Likewise, two years of Colorado-specific Bracken School Readiness pre- and post-testing shows that over the course of the nine month program, a significant number of children in HIPPPY move from testing as delayed to testing on-track as compared to their same age peers. Additionally, a significant number of children in this program move from on-track into the advanced category. This request will increase access to school readiness programs for children who do not have access to high-quality early care and learning in their community.

R-10 Child Support Pass-Through

The Department of Human Services is requesting \$0.8M to support the child support pass-through program. Families eligible for Temporary Assistance for Needy Families (TANF) are required to cooperate with Child Support Services and forgo their rights to child support while receiving TANF benefits. States are required to direct approximately 50% of child support collected on behalf of children receiving TANF cash assistance to the federal government. States are allowed to retain the remaining 50% of child support payments collected on behalf of TANF families to offset the cost of welfare payments or to pass some or all current support collected to the custodial parent. Colorado's full pass-through policy allows the custodial parent receiving TANF cash assistance, usually the mother, to receive all child support paid. The request aims to ensure sufficient resources are available to continue the child support pass-through program, which was implemented in April 2017.



Multiple studies have found this program to be effective. According to the Pew Foundation's Results First Clearinghouse Database, a comprehensive resource on the available evidence for nearly 3,000 programs, it has "a positive impact based on the most rigorous evidence" and met Pew's criteria for "highest rated" evidence.¹⁷ There is strong evidence that full pass-through increases custodial parents' likelihood of receiving payments as well as the amount they receive. Paternity is also established more quickly when the custodial parent receives all child support paid on their child's behalf and when that amount is not considered in benefit calculations, than when child support payments are retained to offset welfare payments.¹⁸ Full pass-through may also reduce the risk of child maltreatment.¹⁹ Generous pass-through policies generally decrease government outlays on some safety net services such as child care and food stamps but can increase other government costs.²⁰

¹⁷ For further information about the Pew Results First initiative, see <https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/results-first-clearinghouse-database>.

¹⁸ Laura Wheaton and Elaine Sorensen. 2008. *The Potential Impact of Increasing Child Support Payments to TANF Families*. Urban Institute. Cancian, M., D. R. Meyer, et al. 2008. "Welfare and Child Support: Complements, Not Substitutes." *Journal of Policy Analysis & Management* 27(2): 354-75; Cancian, M., Meyer, D. R., & Roff, J. 2007. *Testing new ways to increase the economic wellbeing of single-parent families: The effects of child support policies for welfare participants*. Madison, WI: Institute for Research on Poverty; Pirog, M. A. and Ziolk-Guest, K. M. 2006. *Child support enforcement: Programs and policies, impacts and questions*. *Journal of Policy Analysis and Management*, 25: 943-990.; Cassetty JH, Hutson R. Effectiveness of federal incentives in shaping child support enforcement outcomes. *Children and Youth Services Review*. 2005;27(3):271-89.

¹⁹ Cancian, M., Heinrich, C. J. and Chung, Y. 2013. Discouraging Disadvantaged Fathers' Employment: An Unintended Consequence of Policies Designed to Support Families. *J. Pol. Anal. Manage.*, 32: 758-784. doi:10.1002/pam.21707

²⁰ Pirog, M. A. and Ziolk-Guest, K. M. 2006. Child support enforcement: Programs and policies, impacts and questions. *Journal of Policy Analysis and Management*, 25: 943-990.

DHS is conducting an evaluation of the pass-through program using a quasi-experimental design. The work is expected to continue at least through FY 2020-21. To date, the Department has collected preliminary evidence suggesting that more TANF cases are establishing child support orders, more non-custodial parents are paying child support, and child support is being paid at a higher rate. The Department also tracks the outcomes measures below to assess program performance:

- Number of TANF cases established by child support orders
- Number of non-custodial parents paying child support
- Rate of child support payment
- Proportion of children in poverty

R-11 Respite Care Task Force Funding Adjustments

The Department of Human Services is requesting \$0.4M to support the next phase of the respite study. The initial study conducted in FY 2017-18 identified positive impacts of respite services related to economic, fiscal, and client satisfaction. The Department plans to pilot the evidence-based caregiver assessment tool, Tailored Care (also known as TCARE), to identify the best ways to support family and informal caregivers. Washington State implemented this model and identified an estimated savings of \$19.4M in both State and Medicaid costs.²¹ The Department will pilot this tool in Colorado in FY 2019-20 and analyze the results of the pilot in FY 2020-21.



A sample of Area Agencies on Aging, Single Entry Points, and Community Centered Boards around Colorado will pilot the TCARE model during FY 2019-20. The control groups will utilize an initial ten question screening tool to identify if a caregiver is experiencing stress and/or identity discrepancy (loss of identity in relationship to the care recipient) associated with providing care. The treatment group will utilize the same ten question screening tool and then provide the TCARE assessment for those caregivers experiencing stress and/or identity discrepancy associated with providing care. In FY 2020-21, the Colorado Evaluation and Action Lab at the University of Denver will evaluate and analyze the information provided by the pilot sites.

The Department has identified the following outcome measures to assess program performance:

- Number of caregivers in the control and treatment groups that identified as experiencing stress and/or identity discrepancy as a result of providing care
- Number of caregivers in the treatment group that received the full TCARE assessment to identify methods of addressing the stress and/or identify discrepancy experienced by the caregiver
- Difference between the providers' scores on the initial screening tool and the follow-up screening tool in both the control and treatment groups to identify the impact of the TCARE assessment

²¹ Bridget Lavelle, PhD; David Mancuso, PhD; Alice Huber, PhD, Barbara E.M. Felver, MES, MPA. 2014. *Expanding the Eligibility for Family Caregiver Support Program in SFY: Updated Findings*. Olympia, WA: Department of Social and Health Services, Research and Data Analysis Division.

R-08 Subsidized Employment Continuation

The Department of Human Services is requesting \$4M to continue to connect public assistance recipients with employment opportunities. The funding will continue the Employment Opportunities with Wages program, created by SB 17-292. That bill invested in the subsidized employment program, Colorado Works Subsidized Training and Employment (CW STEP), directly benefiting families via immediate income and on-the-job experience to facilitate future employment.



This program achieved the highest rating for evidence in Pew's Results First Clearinghouse. There is strong evidence that transitional and subsidized jobs programs increase employment and earnings for low income adults, youth, unemployed individuals, TANF recipients, and recently released former prisoners for the duration of their subsidized position.²²

The Department is planning a rigorous evaluation of the program and is working with OSPB on the design. During the first 18 months of CW STEP implementation (January 2018 through June 2019), the Department collected preliminary program participant data to determine the methodology for evaluating program impact prior to the second contracting period (July 2019 through June 2020). Additionally, the Department interviewed and observed program vendors to understand their processes and structures in administering CW STEP to inform the best fit for an evaluation methodology. The evaluation team at the University of Colorado-Boulder presented three potential methodologies to the Department: a matching design, an encouragement design, and a random assignment experimental design.

The Department chose to pursue a quasi-experimental matching design for the CW STEP evaluation. This choice requires no additional work from vendors or caseworkers. Using administrative data, the Department will be able to create a group of TANF recipients who did not participate in CW STEP, yet match that group with a group of CW STEP participants among several variables, including demographics, education, benefits history, and employment/earnings history. Comparing the outcomes among CW STEP participants to those of the matched group, the Department will be able to estimate the causal impact of CW STEP participation.

The Department has identified the following outcome measures to assess program performance:

- Receipt of high-quality childcare in the parents' community
- Post-participation wage progression
- Employment retention at 90 days
- Reduction or elimination of receipt of public assistance

²² Nan L. Maxwell and Dana Rotz. 2015. *Building the Employment and Economic Self-Sufficiency of the Disadvantaged: The Potential of Social Enterprises*. Working Paper 35, Mathematica Policy Research; David Butler, Julianna Alson, Dan Bloom, Victoria Deitch, Aaron Hill, JoAnn Hsueh, Erin Jacobs, Sue Kim, Reanin McRoberts, Cindy Redcross. 2012. *Enhanced Services for the Hard-to-Employ Demonstration and Evaluation Project: Final Results of the Hard-to-Employ Demonstration and Evaluation Project and Selected Sites from the Employment Retention and Advancement Project*. OPRE Report 2012-08, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.; Jacobs E. 2012. *Returning to work after prison: final results from the transitional jobs reentry demonstration*. MDRC, New York, Redcross, C., Millenky, M., Rudd, T. and Levshin, V. 2012. *More than a Job: Final Results from the Evaluation of the Center for Employment Opportunities (CEO) Transitional Jobs Program*. OPRE Report 2011-18. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

- Securing health and/or other benefits with employment
- TwoGen outcomes, including educational success (from early childhood through postsecondary), workforce development, economic assets, social capital, and health and well-being

R-05d Youth Services Day Reporting

The Department of Human Services is requesting \$0.7M General Fund to implement a day reporting pilot program with a comprehensive evaluation to support reducing youth recidivism rates. Day reporting is an option for youth ready to step down from community placement but who need continued counseling, support, and access to resources. These programs provide supervision, educational planning and assistance, independent living skills, community and recreational activities, and community service projects. Randomized controlled trials have established the effectiveness of day reporting in adult populations. The day reporting program will be monitored by regional staff who oversee juvenile parole and non-residential services youth receive while in transition and on parole. The request includes funding to evaluate the program's efficacy in achieving outcomes of interest including reduced recidivism and other measures for youth involved in this pilot program.



Department of Public Safety

R-01 Performance Based Contracting

The Department of Public Safety is requesting \$0.2M to implement performance based contracting. This funding will allow the Department to develop tools to measure standards and practices related to recidivism reduction and evaluation of core correctional standards. Performance based contracting is a results-oriented contracting method that focuses on the outputs, quality, or outcomes that may tie at least a portion of a contractor's payment, contract extensions, or contract renewals to the achievement of specific, measurable performance standards and requirements. This request will allow the Department to track and measure outcomes for community corrections clients and improve the performance of providers.



Department of Personnel and Administration

R-01 Paid Family Leave

The Department of Personnel and Administration requests \$10M to support the adoption of eight weeks of paid family leave for State of Colorado employees in FY 2020-21.



Paid Family Leave is a policy that has been shown through academic research to move the needle on a variety of social outcomes, including increased labor force participation, increased employee retention, increased lifetime earnings and retirement security (especially among women), and a reduction in the gender pay gap as a result of increasing usage of leave among working fathers. Research has also identified improved infant and child health outcomes, including reduced infant hospitalizations and fewer infants with low birth weight.²³

²³ Barbara Gault, et al., "Paid Parental Leave in the United States," Institute for Women's Policy Research, accessed on October 7, 2019. Available at:

R-02 Telematics

The Department of Personnel and Administration requests \$0.4M to install telematics within the State fleet, starting with 25% in the first year and expanding to 100% over four years. This technology solution allows real-time, accurate collection of data on fleet usage, speed, location, idling time, maintenance issues, and more. The implementation of this kind of data infrastructure will allow the agency to manage several outputs of the State's fleet system, making it a strong candidate for a Step 2 on the Continuum. The request also includes 1 FTE, who will manage the system, develop and help agencies use reports, as well as assist in setting long-term measurable outcomes for the State fleet, and elevating the request to a Step 3 over time. For example this could include reducing maintenance costs, reducing emissions, improving safety for State employees, and more.



 Department of Health Care Policy and Financing

R-06 Improve Customer Service

HCPF is requesting \$3.4M TF and \$1.0M GF to improve customer service to 1.2 million Medicaid members. HCPF will use artificial intelligence and chatbot technologies to automate common customer service requests, integrate multiple data systems to speed processing time, and hire four term-limited FTE to bolster its call center resources.



HCPF uses key metrics to assess its performance in delivering outstanding customer service. For example, HCPF measures the Average Speed to Answer (ASA) calls and the rate at which customers abandon their calls to the HCPF's customer service center. HCPF implemented several strategies in 2018 and reduced the ASA from 59 minutes to 25 minutes and reduced the abandonment rate from 25 percent to 7 percent. HCPF will continue to assess customer service metrics as it implements these proposals to improve customer service. HCPF has a goal to achieve an ASA of 9 minutes or less.

R-07 Pharmacy Pricing and Technology

HCPF is requesting \$4.9M TF and \$1.2M GF for initiatives to help control rising Medicaid expenditures for pharmaceuticals. One component of this request seeks funds to allow Medicaid prescribers to access Colorado's Prescription Drug Monitoring Program (PDMP), which will better inform their decisions related to opioid prescriptions.



Medicaid prescribers do not currently have complete data on opioid prescriptions for Medicaid members who may also access those drugs through private insurance. This inhibits prescribers' ability to prevent the overuse of opioids. Existing studies show that when states have expanded PDMP data access in their Medicaid programs, opioid use declines among Medicaid members, which can help address the ongoing opioid crisis.

<https://iwpr.org/wp-content/uploads/wpallimport/files/iwpr-export/publications/B334-Paid%20Parental%20Leave%20in%20the%20United%20States.pdf>

Department of Agriculture

R-01 Renewable Energy and Energy Efficiency (ACRE3) Funding

The Department is requesting both \$0.1M in General Fund and reestablishing a \$0.5M transfer of severance tax funds to support the Renewable Energy and Energy Efficiency (ACRE3) program. This program supports renewable energy and energy efficiency improvements to Colorado's agricultural producers. Projects may include recommendations from vetted agricultural energy efficiency audit reports, hydro-powered irrigation systems, and technical assistance and funding for solar electric, solar thermal, and geo-exchange projects, among others. To qualify for funding, projects must demonstrate that they have a payback period of less than 15 years and less than the project's lifecycle through a detailed, standardized technical study. Projects are further screened for eligibility and ranked for funding.



As part of its program management, the Department tracks the number of farms and ranches participating, estimated energy savings and electricity generated from renewable energy projects, as well as estimated energy cost savings and carbon dioxide reductions associated with energy efficiency projects. Additionally, the Department requests billing data on large projects to verify these savings, and all of these metrics are tracked and recorded in the Department's annual performance plan. In 2018-19, for example, the Department estimates that ACRE3 projects generated 2.3 million kWh of annual energy savings, saving producers \$147,000 yearly, and reducing 1,134 MT of CO₂.

Governor's Office - Office of Economic Development and International Trade

R-01 Extend Procurement Technical Assistance Center

OEDIT is requesting to extend a \$0.2M General Fund transfer and continue cash funding spending authority for the Procurement Technical Assistance Center (PTAC). The Colorado PTAC is a public private partnership operating under a 501(c)(3) non-profit structure, that helps eligible small businesses obtain and perform government contracts at federal, state, and local levels. The Colorado PTAC is required to track its outputs by statute, including, for example, the number of businesses served, the number of counseling hours provided, and the number of events sponsored. In addition to these statutory requirements, the Colorado PTAC also collects information from businesses on the value of government contract awards won by its clients to track the results of its work.

**R-02 Small Business Development Center Increase**

OEDIT is requesting an additional \$0.1M in funding to support rural Small Business Development Centers (SBDCs) in Colorado. SBDCs provide technical assistance to small business owners and aspiring entrepreneurs in the form of free one-on-one business consulting and low-cost training courses. SBDCs are, in part, federally funded in partnership with the federal Small Business Administration. OEDIT collects data on SBDC outputs, including the number of attendees at training courses and the number of clients receiving one-on-one consulting. OEDIT also collects data on the outcomes of businesses that work with SBDCs, including the number of new businesses created, the number of jobs created, the value of capital formation by those businesses, and the value of increases in sales. This information is collected from small business owners who indicate these outcomes are attributable to their work with the SBDCs, tracked in a database, and accredited every five years.



Department of Public Health and Environment

R-01 Enforcement, Compliance, and Permitting Initiative

The Department of Public Health and Environment (CDPHE) is requesting a \$2.4M increase in cash fund spending authority to protect and improve air quality in Colorado. New staff and funds, dedicated to the Air Pollution Control Division (APCD) will expand capacity for permitting, compliance, enforcement, and ambient air quality monitoring. The APCD oversees the development and implementation of Colorado's air quality program. Major functions of the APCD include the permitting and compliance oversight of industrial facilities (including but not limited to the oil and gas industry), air quality planning and policy, ambient monitoring of air quality, modeling of air quality, reduction of emissions from vehicles, reducing impacts from asbestos, chlorofluorocarbons and lead, financial stewardship and oversight of its programs and small business assistance.



The APCD tracks progress on a wide variety of outputs and outcomes, most notably reductions of greenhouse gas (GHG), volatile organic compound (VOC), and oxides of nitrogen (NOx) emissions. Outputs and outcomes that will be tracked as a result of this request include, but are not limited to, the number of Title V major sources permitted, the number of new infrared camera partial compliance evaluations conducted, the number for "first 90 days" inspections conducted, and reductions in oil and gas GHG, VOC, and NOx emissions.

R-02 Immunization Outreach

CDPHE is requesting an increase of \$2.5M General Fund to implement an evidence-based, multi-pronged, statewide approach to increase immunization rates in counties with low kindergarten measles, mumps, and rubella (MMR) vaccination coverage and to improve local response capacity. The Immunization Branch works to reduce vaccine-preventable disease statewide by promoting education, implementing policies that support vaccination, optimizing vaccine resources, and assuring access to vaccines to positively influence the uptake of immunizations.



Colorado's kindergarten MMR coverage rate of 87.4% in the 2018-19 school year is well below the 92- 94% community immunity threshold needed for protection against measles. As such, the Department proposes a statewide media campaign and a grant program for local public health agencies to implement interventions such as mobile health clinics, community/school-based vaccination clinics, reminder/recall notifications, efforts to improve data accuracy, and incentives for participation.

The Department has a successful history with media campaigns driving behavior change or awareness. Current literature also supports that mobile health clinics are successful in reaching vulnerable populations, by delivering services directly at the curbside in communities of need and flexibly adapting their services based on the changing needs of the community. Furthermore, evidence suggests that mobile health clinics produce significant cost savings and represent a cost-effective care delivery model that improves health outcomes in underserved groups. In addition, the Community Preventive Services Task Force (CPSTF) recommends community-based interventions implemented in combination to increase vaccinations in targeted

populations, on the basis of strong evidence of effectiveness in increasing vaccination rates.²⁴ The CPSTF also recommends client or family incentive rewards, used alone or in combination with additional interventions, based on sufficient evidence of effectiveness in increasing vaccination rates in children and adults.

Department of Higher Education

R-11 Colorado Opportunity Scholarship Initiative

CDHE is requesting an increase of \$3M General Fund to expand the Colorado Opportunity Scholarship Initiative (COSI), which provides scholarships and student support programs for high-achieving, low-income and underrepresented minority students. Sixty four percent of students receiving scholarship support through COSI were students of color in academic year 2017-18, as were 78 percent of students receiving wrap-around support through COSI's Community Partner Program (CPP) grants. In its first five years, COSI has served more than 74,000 students in 61 of 64 Colorado counties, awarding \$47 million in State funds and leveraging an additional \$28 million in local and private investment.



Internal studies using the latest available data show that 87 percent of COSI students enrolled in student support programs persist in their education path.²⁵ This is a significant outcome because the persistence rate of CPP students is 15 percentage points higher than that of peers in similar demographic groups. Students who receive COSI scholarships perform even better: 89 percent continue in their second and third years, outpacing their non-COSI counterparts by 25 percentage points. COSI recently implemented a new model for CPP grantees that provides greater structure and technical support and assistance and establishes more rigorous program metrics and evaluation.

Department of Labor and Employment

R-01 Expand Access to Work-Based Learning

CDLE is requesting an increase of \$1.2M cash fund spending authority to expand access and promote equity in the work-based learning continuum while increasing the availability of work-based learning opportunities in the early childhood care and education field. High quality, paid work-based learning opportunities, including apprenticeships, on-the-job training, and internships, offer numerous benefits to both jobseekers and businesses. According to the U.S. Department of Labor, people who complete an apprenticeship program can expect to earn an average annual income of approximately \$60,000, slightly above the 2016 U.S. national median household income. Employers retain 91% of apprentices once they have completed their programs.²⁶



²⁴ Community Preventive Services Task Force. Increasing Appropriate Vaccination: Community-Based Interventions Implemented in Combination. October 2014. Available at: <https://www.thecommunityguide.org/sites/default/files/assets/Vaccination-Community-Based-in-Combination.pdf>

²⁵ COSI Outcomes Reports. Available at: <https://sites.google.com/a/state.co.us/cosi/about#TOC-Program-Reports>.

²⁶ U.S. Department of Labor, "The Federal Resources Playbook for Registered Apprenticeships". Available at: <https://www.doleta.gov/oa/federalresources/playbook.pdf>

Work-based learning provides individuals with marketable business skills and real world experience, and has a lasting impact on students' future earnings.²⁷ Yet significant barriers exist to participation among women, people of color, and small businesses. This request seeks to provide the supports that businesses and underserved individuals need to access work-based learning opportunities, especially in early childhood education, where Colorado faces shortages of qualified workers.

²⁷ Reed, D. et al. 2012. An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States. Available at: <https://www.mathematica.org/our-publications-and-findings/publications/an-effectiveness-assessment-and-costbenefit-analysis-of-registered-apprenticeship-in-10-states>

Section 2: Selected New and Ongoing Program Evaluations

In order to use evidence to improve program design, implementation, and performance, State agencies and decision-makers must have information to inform those decisions. To complement other program evaluations underway in State agencies and beyond, this budget includes ongoing and newly requested funding to evaluate 10 programs (listed below). These evaluations of existing and proposed programs will provide information to improve program performance and inform future resources allocation.

Ongoing evaluations:

- School Health Professional Grant Program (CDE)
- Student Re-engagement Grant Program (CDE)
- Colorado Preschool Program (CDE)
- Early Intervention Program (CDHS)
- Colorado Works Subsidized Training and Employment Program (CDHS)
- Child Support Pass-Through Program (CDHS)

New planned or requested evaluations:

- Respite Care Program (CDHS)
- TEACH Scholarships for Early Childhood Education Professionals Program (CDHS)
- Youth Services Day Reporting Program (CDHS)
- Concurrent Enrollment for Educators (CDE)

Section 3: Additional Opportunities to Adopt Evidence-Based Policy

In addition to the specific requests included in the Governor’s FY 2020-21 budget, OSPB has identified promising programs that would advance evidence-based policy making in Colorado. The budget includes resources in the form of legislative placeholders for the policy areas below.

Department of Human Services

Fostering Opportunities

The Governor’s Budget includes a \$0.5M legislative placeholder to improve educational outcomes for children in foster care. While Colorado’s statewide graduation rate has increased to approximately 80 percent, students in foster care consistently graduate at a rate of 30 percent or lower. This discrepancy is larger than with any other vulnerable group. In 2018, the State of Colorado launched the Fostering Opportunities project, a pilot program designed to improve educational outcomes for students in out-of-home (foster) care. The Fostering Opportunities program deploys specialists to schools to meet with a caseload of 20 students on a weekly basis to advocate for, support, and mentor the students. Specialists work with school administrators to avoid unnecessary school changes whenever possible, and they advocate for transferable credits and other supports where school changes are unavoidable. This intervention is currently operating in Jefferson County Public Schools, and expects to serve 140 students over four years.



The Colorado Evaluation and Action Lab is conducting an independent evaluation of the Jefferson County project’s success using a randomized controlled trial (RCT). Full results will not be available until the conclusion of the four-year project term in FY 2023-24; however, initial results from a 2017 trial of the intervention in Jefferson County demonstrated measurable impact in academic achievement for students served.

Department of Public Safety

Pretrial Assessments

The FY 2020-21 budget includes a \$5M legislative placeholder for the Department of Public Safety to strengthen pretrial services in the state. Pretrial risk assessments are designed to provide information about the risk of failure that a given defendant poses if released before adjudication of his or her case. A pretrial risk assessment instrument (PRAI) can be used to classify defendants based on their flight risk and their threat to community safety. PRAIs have two primary goals: (1) to standardize pretrial recommendations/decisions and (2) to maximize the number of successful pretrial decisions. PRAIs are a way to make sure low risk defendants aren’t placed in jail as they await adjudication, reduce the use of cash bail, and reduce overcrowding in jails.



At the pretrial stage, defendants may be classified into one of four categories:

1. Low risk—individuals who can be released with little or no supervisory conditions with reasonable assurances that they will appear in court and will not threaten community safety.
2. Moderate risk—individuals who can be released with conditions placed on them with reasonable assurances that they will appear in court and will not threaten community safety.

3. High risk—individuals who can be released only with the most stringent conditions placed on them with reasonable assurances that they will appear in court and will not threaten community safety.

4. Highest risk—individuals who cannot be released with any reasonable assurance that they will appear in court or that they will not be a threat to community safety.²⁸

Research has provided evidence that quantitative risk assessment instruments provide more accurate information about a defendant's failure to appear and risk of reoffense than qualitative risk assessments.²⁹ By examining a national sample of pretrial programs, Levin found that jurisdictions using quantitative assessments (or a combination of quantitative and qualitative assessments) had fewer failures to appear and rearrests than jurisdictions that either did not have an assessment tool or relied solely on qualitative risk assessments.³⁰ Using quantitative risk assessment instruments may allow law enforcement to better allocate their resources to those offenders with the highest risk.

Department of Education

Improving School Climate and Safety

The Governor's Budget includes a \$3M legislative placeholder to support efforts to improve school safety, with a specific interest in supporting the implementation and evaluation of prevention efforts aimed at improving school climate and behavioral health.



In recent years, the Colorado General Assembly has invested in several measures to improve school safety. In the 2018 session, the budget was amended to address school safety with an additional \$35M in one-time funding. SB18-269 directed funding “to local school districts, BOCES, and public schools including charter schools to use for capital construction; assistance for physical security; communication improvements; the training of school personnel and school resource officers; and/or coordination with emergency response teams.” Thus, existing State money largely funds mitigation and response to school incidents; yet, limited funds are used for school safety prevention strategies that focus on improving overall school climate and the behavioral health of the student population.

The School Safety Interim Committee has met throughout Summer 2019 with the intent to study Colorado statutes governing school safety, emergency response planning, and prevention of threats, and to review and evaluate programs for identifying and monitoring students in crisis. Much of this conversation has centered around strategies to invest in proven programs to build stronger school climates and address student trauma.

Although limited data on school safety incident prevention exists, randomized controlled trials have demonstrated that socio-emotional programs in schools are associated with lower self-reported violence, lower parent-reported bullying at grade, higher life satisfaction, lower

²⁸ VanNostrand, M., and Rose, K. 2009. Pretrial Risk Assessment in Virginia. Report for the Virginia Department of Criminal Justice Services, Richmond.

²⁹ Levin, D. 2007. Examining the Efficacy of Pretrial Release Conditions, Sanctions and Screening with the State Court Processing Statistics Dataseries. Washington, DC: Pretrial Justice Institute.

³⁰ Ibid.

depression and anxiety, and lower school-level disciplinary referrals and suspensions.³¹ Trainings across the state could help educators through a “train the trainer” model in areas such as trauma-informed and restorative practices, social emotional learning, and mental health first aid. In addition, improving access to behavioral health professionals in schools is possible through the School Health Professional Grant program. Recent program evaluations show that:

- 8,632 (or 66 percent) of school personnel and educators indicated increased abilities to support behavioral health needs and identify signs/symptoms; and
- Nearly 80,000 parents reported an increase in knowledge or understanding of behavioral health and parenting.

³¹ Cantone E, Piras AP, Vellante M, et al. Interventions on bullying and cyberbullying in schools: a systematic review. *Clin Pract Epidemiol Ment Health*. 2015;11(Suppl 1 M4):58–76. Published 2015 Feb 26. doi:10.2174/1745017901511010058

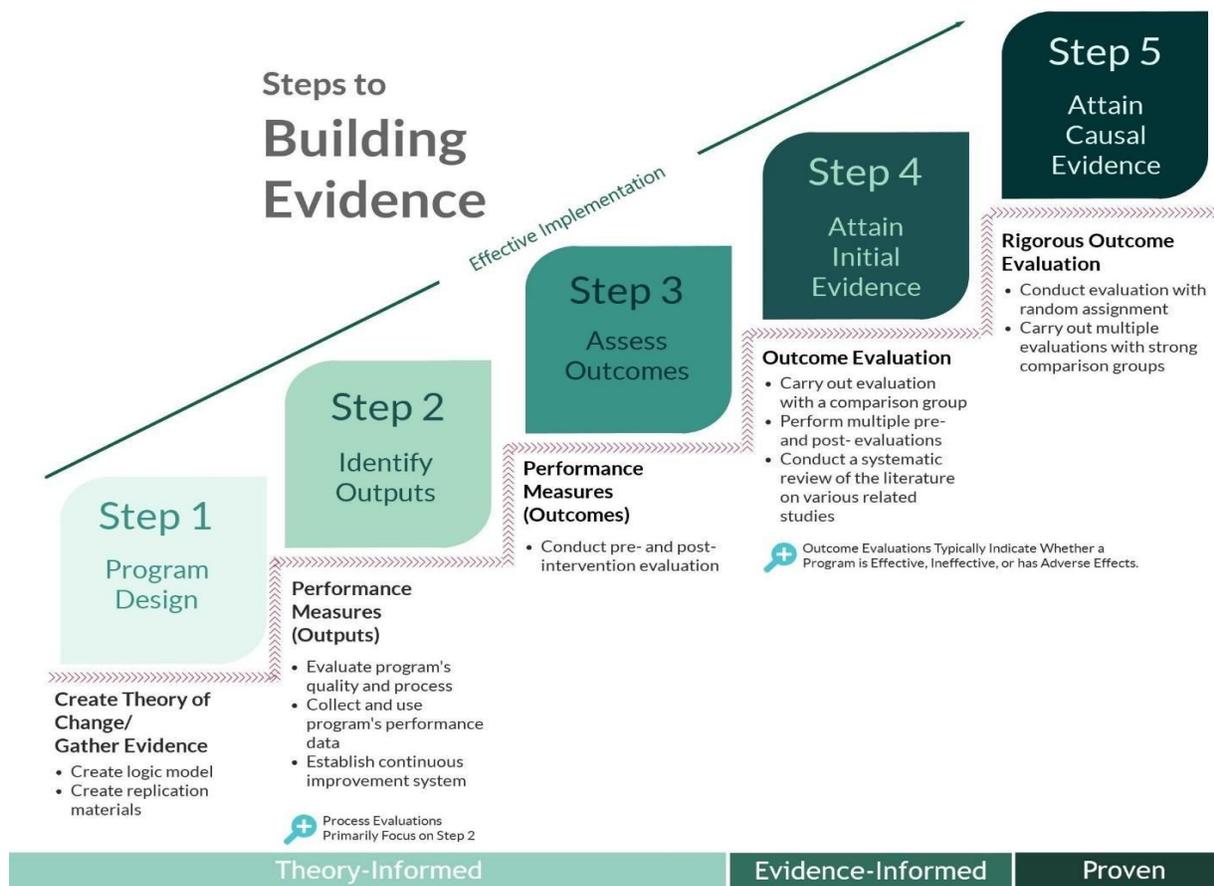
APPENDIX C – SPENDING REPORT ON GOVERNOR’S
OFFICE EVIDENCE-BASED PROGRAM EVALUATIONS

OSPB is pleased to submit this status report on Evaluation Grants. Colorado was recently honored as the top state in the nation for connecting its budget to data and evidence. We are making a concerted effort to focus our resources on programs that are proven successes through data and research. The Governor’s Office of State Planning and Budgeting (OSPB) is working with state agencies to improve the use of evidence-based policymaking to inform resource allocation, program design, and program implementation. OSPB will continue to expand the role of evidence-based policymaking and seek to help state programs progress along the Evidence Continuum, which has been jointly adopted by the Joint Budget Committee and OSPB (See Figure 1 below), in order to improve program outcomes for Colorado citizens.

In addition to supporting Departments in the application of the principles of evidence-based policy making and performance management as part of the budget process, OSPB awards grants to Departments for evaluation and implementation support. This funding helps Departments evaluate their programs and ensure proper program implementation.

For more information about OSPB’s evidence-based policy work please contact: Aaron Ray, OSPB Deputy Director for Education, Workforce, and Environment, at aaron.ray@state.co.us or 303-866-2067.

Figure 1: The Evidence Continuum



OSPB Evaluation and Implementation Grants

Beginning in FY 2017-18, the Governor’s Office of State Planning and Budgeting (OSPB) received an appropriation for evaluation and implementation support. OSPB provides funding to Departments to evaluate their programs and/or pay for support to ensure proper program implementation. OSPB is committed to meeting programs where they are and helping them advance on the Evidence Continuum.

OSPB solicited proposals from Departments in July 2017 and received 13 proposals from six Departments with funding requests totaling \$2.3M. After a rigorous review process, five projects were selected, totaling about \$1.7M spread across multiple years. Each project, with the exception of one, received funding for multiple years so that each evaluation could be completed without any interruption of funds.

	FY19	FY20	FY21	FY22
OSPB Evaluation & Implementation Grants				
Colorado Pretrial Assessment Tool (CPAT)	—>			
Colorado Opportunity Scholarship Initiative (COSI)	————>			
School Bullying Prevention and Education Grant (BPEG)	————>			
School Health Professionals Grant (SHPG)	—————>			
Student Re-engagement Grant Program (SRG)	—————>			

In FY 2020-21, OSPB will continue to support the evaluation and implementation of two grantees at the Department of Education, the School Health Professionals Grant (SHPG) and the Student Re-engagement Grant Program (SRG). OSPB intends to solicit new grant proposals in the Spring of 2020 for FY 2020-21.

Update on Ongoing Evaluations

School Health Professionals Grant (SHPG), Department of Education

Background

The SHPG was created in 2014 with funding from the Marijuana Tax Cash Fund to provide funds to eligible education providers to enhance the presence of school health professionals (school nurses, school psychologists, school social workers and school counselors) in K-12 schools. The SHPG implements substance abuse prevention education and provides resources to school staff, students, and families with the goal of reducing treatment and/or service barriers for enrolled K-12 students who are at risk for substance abuse and other behavioral health issues.

OSPB Grant Funds

OSPB grants funds have been used to conduct a performance evaluation of the SHPG program to determine if and how SHPG interventions are improving student outcomes. The project has a five-year timeline (FY 2017 - 2022).

Progress and Impact To-Date

The first year was focused on developing performance measures. To measure the goals of the SHPG, the evaluation started implementing the Results-Based Accountability methodology and utilizing the Clear Impact Scorecard as the web-based software for collecting and using data for evaluation and quality improvement. SHPG identified an “early adopters” group to provide feedback on 38 potential performance measures, ultimately selecting 18 performance measures based on priority and importance.

The second year was focused on training grantees. There were six events held for all of the 55 grantees to receive initial training on Results-Based Accountability and to become proficient at using the Clear Impact Scorecard. Results-Based Accountability focuses on three kinds of Performance Measures:

- How much did we do?
- How well did we do it?
- Is anyone better off?

For the evaluation, the performance measures are grouped into student, school, staff, parents and community. A copy of the Scorecard and performance measures can be found through the following link: <https://app.resultsscorecard.com/Scorecard/Embed/35479>

Future Goals

The SHPG aims to continue to move along the evidence continuum from Step 2 to Step 3. During the year, SHPG intends to continue data collection and further develop the evaluation by incorporating indicators or outcomes that show the SHPG’s collective impact or contribution to the success of students at the population level.

School Bullying Prevention and Education Grant (BPEG), Department of Education

Background

This program was created in 2012 to reduce the frequency of bullying in Colorado schools (although funds were not allocated until the passage of Proposition BB in 2015). One of the strategies within BPEG is to support the reduction of bullying in schools through the use of programs utilizing Positive Behavioral Interventions and Supports (PBIS). The two programs in the BPEG using PBIS are Bullying Prevention in Positive Behavioral Interventions and Supports (BP-PBIS) and Expect Respect.

OSPB Grant Funds

These funds are used to support an implementation specialist to provide robust support to BPEG grantees using PBIS intervention and to support the evaluation of the BPEG program overall. The project has a three-year timeline (2017-2020).

Progress and Impact To-Date

With funds from OSPB, CDE hired a Senior Implementation Consultant (SIC) in June of 2018. The SIC is responsible for training and supporting schools in their implementation and evaluation BP-PBIS and Expect Respect. Since starting at CDE, the SIC has provided over 200 hours of direct training and support to schools. Additionally, the SIC made over 50 direct visits to conduct in-person or on-site technical assistance for implementation and evaluation. The use of BP-PBIS and Expect Respect continues to increase, with 30 schools currently implementing the programs.

Schools have reported improvement through their self-assessment scores, which measure fidelity by identifying established bullying-prevention committees (BPCs); improved strategies for improving climate and culture; curriculum delivery; family, school, and community partnerships (FSCPs); student voice; and district-level bullying policies.

As detailed in the table below, with the support of the SIC, schools using the BP-PBIS and Expect Respect curricula have increased their fidelity of implementation for bullying prevention best practices. From the first administration of the BPEG self-assessment in FY 2016-17, schools have improved their implementation of best practices by:

- 25 percentage points in teaming;
- 32 percentage points in climate and culture;
- 60 percentage points in their evidence-based curriculum;
- 33 percentage points in the use of data;
- 35 percentage points in family, school, and community patterning;
- 45 percentage points in student voice; and
- 43 percentage points in policy.

On average, schools receiving support from the SIC have improved implementation of bullying prevention best practices by nearly 40 percentage points.

<i>Percentage of possible points earned on the BPEG self-assessment by program</i>							
<u>Program</u>	<u>BPCs</u>	<u>Climate and Culture</u>	<u>Curriculum</u>	<u>Data</u>	<u>FSCP</u>	<u>Student Voice</u>	<u>Policy</u>
2016-17	46%	51%	21%	50%	46%	29%	45%
2017-18	63%	72%	65%	71%	64%	70%	78%
2018-19	71%	83%	81%	83%	81%	74%	88%

Future Goals

Having seen strong growth in implementation as measured by the BPEG self-assessment, the next step is to determine the impact on outcomes. In the BPEG, outcomes are measured through a survey of students on their perception of, (1) being the target of bullying, and (2) witnessing bullying. Moving forward, the team will conduct analyses to determine the extent to which schools using BP-PBIS and Expect Respect have also experienced a reduction in bullying.

Student Re-engagement Grant Program (SRG), Department of Education

Background

Authorized by C.R.S. 22-14-109, and initially funded by the Marijuana Tax Cash Fund in 2016, the Student Re-engagement Grant Program (SRG) provides educational services and supports to maintain student engagement and assist student re-engagement at the secondary level. The SRG program was intended to decrease the dropout rate, decrease the number of out-of-school youth, and increase the number of students who attain a high school credential and are prepared for their next step after high school.

OSPB Grant Funds

Grant funds were used to bolster implementation supports and conduct a process evaluation of the Colorado Dropout Prevention Framework (CDPF) at 43 schools across 17 districts to understand the relationship between the use of CDPF methods, which are used by SRGP grantees (schools), and student outcomes. The project has a five-year timeline (2017-2022).

Progress and Impact To-Date

The past two years of the grant have resulted in 33 schools across 10 districts serving over 6,000 students at-risk for dropping out or who had previously dropped out. Grantees reported positive outcomes for 4 out of 5 students served (e.g., will continue in the program or school, graduated or completed).

Process evaluation study findings to-date have been used to generate recommendations for strengthening SRG, including:

- Engage grantees in conversations about equity and access;
- Expand investment to create continuity through school transitions for all grade levels;
- Target interventions and supports to students who change schools during 12th grade so that they are more likely to graduate;
- Sustain or increase investments in Check & Connect to help keep students in school;
- Accelerate investments in Title 1 and highly mobile students; and
- Require grantees to report program data at the student level.

Future Goals

The project has a five-year timeline (2017-2022) to collect longitudinal data and complete student-level analysis. Findings from the proposed analyses are intended to be validated in later years using current and future SRG data, and ultimately inform the development of the next SRG request for proposals. The goal for the coming year is to move from Step 2 to 3 by measuring program implementation fidelity.

Colorado Opportunity Scholarship Initiative (COSI), Department of Higher Education

Background

COSI was created in 2014 with the goal of increasing attainment of post-secondary credentials and degrees among under-served students in Colorado by addressing accessibility and affordability. To increase accessibility, the initiative funds programs that will help prepare students for post-secondary education, as well as support them through completion. To increase affordability, COSI provides tuition support to students via matching funds for community scholarships.

OSPB Grant Funds

Grant funds were used to establish measurable outcome metrics and create a plan to evaluate program benchmarks and return on investment. The project has a three-year timeline (2017-2020) to expand the use of evidence-based practices in implementation and evaluation while strengthening COSI's capacity to improve state-wide outcomes.

Progress and Impact To-Date

The first year of the grant focused on the redesign of COSI's Community Partner Program (CPP) grants to follow two prescribed models in pre-collegiate and postsecondary services. In Spring of 2018, COSI rolled out these new grants providing greater support for grantees

intended to create strong goals and objectives, align work with the overall mission and vision of higher level work, collect data and track outcomes, and implement evidence-based practices. Outcome reports focusing on qualitative and quantitative results show most COSI students enrolled in CPP program – 87 percent – persist in their education path, 15 percentage points higher than peers of similar demographic groups. Students who receive COSI scholarships perform even better: 89 percent continue on in their second and third years, outpacing their non-COSI counterparts by 25 percentage points. In Fall 2018, COSI began a similar effort to evaluate and restructure Matching Student Scholarship (MSS) grants and began implementing the expanded technical assistance and support (TA) of grantees using the CPP model designed in FY18.

COSI spent the second year preparing grantees monthly for year-end reporting, discussing ways to make sure they have the right information from grantees to track long-term outcomes, and rebuilding the data portal in order to seamlessly capture information from application through to end-of-year reporting. This all helps inform their outcomes and progress as a program. In FY19, COSI engaged ResultsLab to facilitate similar work to that which was conducted in FY18 with Colorado Evaluation and Action Lab, with an emphasis on strengthening the quality and impact of the MSS grant program. The redesign focused on key strategic and operational questions:

- What are common practices in scholarship programs that are important for maximizing funds and reaching student outcomes?
- What practices by current MSS grantees facilitate success?
- What program guidance and flexibility are needed to ensure more consistency and equity of the student experience across the program?
- What common practices should the MSS grantee network adopt to catalyze student outcomes?

The proposed redesign streamlines monitoring and evaluation of the MSS program by shrinking the number of approaches used across the grantee network from dozens to a small handful. Although many common practices exist across the grantee network, COSI discovered enough variation in approaches to make monitoring and evaluation difficult, if not impossible. The redesign converges the network into defined models of promising practice centered on: requirements outlined by statute, deliberate attention to closing the equity gap, awards designed to promote persistence and completion, and integration with CPP and other rigor-based support services. By aligning grantee approaches more closely to one another, as well as evidence-based practices in the field, COSI will be better positioned to support grantees in moving students toward successful outcomes and to use measurement to ensure MSS funds are optimized for impact and sustainability.

Future Goals

In the coming year, COSI will continue to move from Step 3 to Step 4 along the evidence continuum. Specifically, COSI is developing a strategic plan that will include key performance indicators and measures to evaluate outcomes for students receiving both CPP and MSS support, as compared to those receiving only one or the other. Aligning with this strategic plan, COSI will also provide enhanced technical assistance to CPP grantees to raise the level of awareness of the program and impact, in addition to helping grantees implement the new MSS models to ultimately lead to improved outcomes for vulnerable populations in Colorado. Last, COSI plans to continue aligning the network of grantees and sharing among one another through peer-sharing models and grantees meetings.

APPENDIX D – EVIDENCE-BASED COLLABORATIVE
HUB PROPOSAL

I. Introduction

The Colorado Evidence-Based Policy Collaborative supports the creation of an evidence-based¹ coordinating hub (Hub) in the State of Colorado. The Hub would be a nonpartisan entity that helps the State of Colorado document and achieve better outcomes for Coloradans by identifying opportunities for, promoting, and helping coordinate evidence-building, implementation, and policy research activities throughout the state. The Hub, in coordination with evidence-based policy (EBP) partners both locally and nationally, can strengthen the way Colorado governs and improve outcomes for Coloradans by:

- Supporting all three branches of government and local communities to help identify, select and effectively implement evidence-based practices/policies;
- Facilitating capacity-building, training, and education on EBP for interested state partners;
- Making recommendations on how to strengthen the use of evidence in the state's work;
- Conducting/coordinating evidence reviews and literature analysis; and,
- Helping coordinate cross-system research projects.

II. Background

Colorado has taken many steps over the last decade to create and integrate EBP and performance improvement initiatives into state government to create better outcomes for Coloradans, better stewardship of taxpayer dollars, and promote a culture of learning, continuous improvement, and accountability. These include:

- The 2013 SMART Act, which requires state agencies to identify key goals, develop performance plans to achieve these goals, and report metrics to the Governor and Legislature that track progress towards the goals;

¹Evidence-based policy refers to policy decisions that are informed by rigorously established objective evidence.

- Lean performance improvement, which works with agencies to streamline government systems and improve customer experiences;
- The Performance Management Academy, which trains agency staff in strategic planning, operational planning and evaluation, the lean process improvement process, implementation and organizational culture, operational excellence, and how to be customer focused;
- The Evidence-based Practices Implementation for Capacity Resource Center (EPIC) in the Department of Public Safety, which provides implementation science support within the criminal justice and human service policy areas; and
- In November 2018, the Joint Budget Committee (JBC) elevated the state’s commitment to EBP by adopting an evidence continuum² as the foundation for budget recommendations and decision-making. *(The continuum refers to how rigorously programs and policies have been evaluated. It ranges from “opinion-based,” which means that a program or policy has been evaluated using satisfaction surveys and personal testimonials, to “proven,” which means that a program or policy has been evaluated by at least two well-executed randomized control trials. The Office of State Planning and Budgeting (OSPB) is using this continuum in the development of the SFY21 Governor’s budget.)*

As the JBC and OSPB move to rely more heavily on the evidence continuum for funding decisions, their staff, members of the General Assembly, and state agencies will need support from the implementation science, research, and evaluation communities to ensure that research and evidence best practices are being upheld. Additionally, as programs and policies are evaluated in more rigorous ways, or as they move along the continuum, feedback about their progress can help keep programs focused on continuous learning and improvement, moving toward greater efficiency and effectiveness, and ensuring that the state is being a good steward of taxpayer money. A coordinating hub can provide needed supports by helping to facilitate discussions,

² See Appendix I

provide summaries and updates, and by helping to apply the evidence continuum in a consistent, accurate, and timely manner.

There is no existing national model for organizations charged with coordinating EBP initiatives. While some states, including Colorado, are leaders in this field (Pew, 2017), Colorado would be the first state to establish an entity to support and coordinate these activities.

III. Problem/Opportunity and Proposed Solution

Colorado is facing several challenges that research and evidence can help solve. Like other states, we face challenges with the opioid epidemic, developing and supporting a strong workforce in the face of workplace automation, and helping to ensure that residents, regardless of whether they live in a rural, suburban, or urban area, can thrive by having access to effective and affordable healthcare, reliable internet service, and educational opportunities. The state can and should leverage the lessons learned from those across the country who are working hard to tackle these same challenges. The state should also invest in documenting and sharing our lessons learned so that we can help programs improve and ultimately improve lives.

A coordinating hub would connect existing but siloed resources and fill gaps to ensure Colorado has access to the full continuum of EBP supports across policy areas. It would help the state leverage, create, and share research and evidence. Additionally, it would extend Colorado's existing capacity to support state-funded entities to inform policy and practice decisions; generate new evidence to move an existing program or policy along the evidence continuum; establish an evidence base for an innovative program or policy; evaluate cross-system outcomes and returns on investment; support the high-quality implementation of programs; and support the development of innovative new programs and policies that are responsive to the future needs of the state. A coordinating hub would act as a partner and trusted resource to state-funded entities to help them achieve their performance goals, and it would impose no new requirements on state or local partners.

Roles of a Proposed EBP Coordinating Hub

The Colorado Evidence-Based Policy Collaborative (the Collaborative), a nonpartisan group comprised of professionals from the nonprofit, private, and public sectors, contracted with Vangaard Evidence-Based Consulting, LLC in May 2019 to make recommendations about the structure of a potential coordinating hub in Colorado. The Collaborative operationalized and built upon Vangaard's recommendations to propose four roles for the Hub: **strategic planning, stakeholder outreach, program analysis, and coordination of EBP partners and projects**. A high-level summary of these roles and proposed associated responsibilities are below.

1. **Strategic Planning** – The Hub can serve as Colorado's thought leader in evidence-based policymaking by:
 - Enlisting subject matter experts, such as the Collaborative and an advisory board, to develop a vision for the state around EBP that includes goals, priorities, and action steps for:
 - Furthering the promulgation of evidence-based approaches in policy development;
 - Examining the cross-system impact of such policies; and
 - Identifying and supporting the adoption or enhancement of policies, programs, and practices that best fit needs across systems that impact our residents.
 - Annually (or on some other consistent schedule) reporting to the General Assembly and the Governor on the state's progress in EBP. This could include updates on challenges or barriers to EBP and recommending next steps, including trainings and capacity building efforts to help further the use of evidence and research in the state's work.
2. **Stakeholder Outreach** – The Hub can help build executive, legislative, judicial, and local community stakeholder understanding, support, and use of evidence-based programs and policies. This role includes ongoing outreach to local communities statewide, elected officials and their key staff, agency leadership, etc. about Colorado's current evidence-based initiatives, the possibility of expanding or deepening successful initiatives, or developing or

adopting others that are backed by evidence. The Hub would enlist subject matter experts, including local and national EBP partners to:

- Build the capacity of OSPB to support state agencies in submitting budget requests that situate programs accurately along the evidence continuum and identify necessary associated implementation and evaluation supports.
- Build the capacity of agencies submitting budget requests to include the necessary evidence-based structural supports to enhance their likelihood of successful outcomes.
- Facilitate regular and ongoing information feedback loops with JBC members for state-funded projects designed to move programs along the evidence continuum.
- Coordinate discussions, needs analyses, and necessary supports for local communities to enhance mobility toward evidence-based approaches.

3. **Program Analysis** – The Hub can work with budget staff and policy leadership in all branches of government and local communities to help target funding toward programs that are evidence-based or are actively building an evidence base. The Hub would:

- Provide unbiased support to OSPB for making evidence-based budget recommendations for the Governor’s budget. Specific activities the Hub can assist with include:
 - Providing independent quick-turnaround summaries of the literature to determine where specific programs or policies fall on the evidence continuum.
 - Gaining access to full text of journal articles.
 - Providing direct consultation to OSPB analysts who are trying to make sense of the literature in complex situations. For example, suppose a program targeting families demonstrates strong evidence of changing parent behavior but not child behavior. The appropriateness of funding that program depends on the policy goal.
 - Supporting OSPB analysts in applying the principles of the evidence continuum to areas outside of social policy (e.g. budget requests from the Department of Revenue or the Colorado Energy Office).

- Supporting OSPB analysts in determining which programs would benefit the most from evaluation or other supports necessary to move along the evidence continuum.
 - Supporting OSPB in providing training and resources to agencies in the proper application of the evidence continuum so they can start incorporating the process not only in their budget proposals but also in their business as usual activities.
 - Provide consultation to the JBC around leveraging evidence to make informed funding decisions in situations with unique demands, including, but not limited to:
 - When programs or policies have the potential for cross-system impacts.
 - The Hub can provide information about the feasibility and costs of measuring those impacts given existing administrative data and recommend analytic strategies based on legislative goals.
 - When a program or policy is at high risk of not meeting legislative goals.
 - The Hub can make recommendations for what kinds of support to provide to mitigate the risk.
 - When a program or policy has not met legislative goals.
 - The Hub can provide an after-action review that assesses why it did not meet the intended goals and what to do differently in future situations to avoid the same outcome.
 - Provide support and consultation to Legislative Council where necessary or appropriate.
 - Facilitate evidence reviews for specific programs through contracted partners.
 - Maintain a publicly available library of evidence reviews conducted through the Hub to prevent duplication of effort.
4. **Coordination of Evidence-Based Policy Projects** – The Hub can provide project scoping, research design, project management, data security, and dissemination support for cross-system implementation, research, and evaluation projects initiated by state agencies, other arms of the state, and the legislature. The Hub would be positioned to support more complex, long-term projects and activate quickly in response to time-sensitive needs (e.g.

opportunities to leverage federal dollars or to assist programs that are at risk of not succeeding).

By default, projects that have a natural home within an agency should stay there. The Hub would not be a substitute for existing research and evidence resources in the state including those within individual agencies. Rather, the Hub would be well-positioned to support cross-system projects that fall into categories such as:

- Projects that do not have a natural home and require convening subject matter experts across state systems and research entities. The Hub's stakeholder outreach role would position it to cultivate relationships with subject matter experts across policy areas and activate them to serve project goals.
- Projects that have a natural home but the amount of effort required to coordinate across systems is beyond what is reasonable to ask of one agency without additional support or new FTE.

Specifically, the Hub can be a resource for coordination of three different types of projects:

- **Cross-system research initiated by agencies or other arms of the state.** Often, agencies or other arms of the state (e.g. counties) need support laying the groundwork for making EBP decisions and associated funding requests when the work crosses systems. In these situations, logistical, cultural, and political barriers can prevent cross-system collaboration. The Hub could provide this support when a project does not have a natural home, but the amount of effort required to coordinate across systems is beyond what is reasonable to ask of one agency without additional support. When a cross-system research need is identified, the Hub could:
 - Coordinate (a) scoping across multiple entities, (b) contracting, (c) project management, and (d) communication and dissemination of findings.
 - Ensure a rigorous and actionable research design
 - Search and vet appropriate implementation, evaluation, or research partner(s)
 - Support agency awareness and appropriate use of state data resources.

- Support agencies in meeting state and federal policies, regulations, and requirements around data security (e.g. Colorado Office of Information Security policies and procedures, FERPA, HIPAA, etc.)
- **Cross-system projects initiated by the legislature.**³ The JBC or legislation could direct implementation or evaluation projects to be coordinated through the Hub when the project does not have a natural home, but the amount of effort required to coordinate effort across systems is beyond what is reasonable to ask of one agency without additional support. When projects are directed to the Hub through the General Assembly, the Hub could:
 - Coordinate (a) scoping across multiple entities, (b) contracting, (c) project management, (d) communication and dissemination of findings, and (e) liaising with the legislature about project status and findings.
 - Ensure a rigorous and actionable research design
 - Search and vet appropriate implementation, evaluation, or research partner(s)
- **Time-sensitive EBP projects.** The Hub could also be used to be responsive to time sensitive implementation, research, and evaluation needs that may include leveraging federal dollars, advancing a key initiative, or protecting an investment. Again, the Hub could:
 - Coordinate (a) scoping across multiple entities, (b) contracting, (c) project management, (d) communication and dissemination of findings, and (e) liaising with the legislature about project status and findings.
 - Ensure a rigorous and actionable research design
 - Search and vet appropriate implementation, evaluation, or research partner(s)

³ See Appendix III for examples of cross-system projects that the Hub could assist with. Legislators might consider these for the 2020 Session.

IV. Reporting

The Hub would submit an annual report to the General Assembly describing the work undertaken in the previous year consistent with the core roles the Hub would play in **strategic planning, stakeholder outreach, program analysis, and coordination of EBP partners and projects.**

V. Location of Coordinating Hub

Since the Hub is intended to be a nonpartisan, unbiased resource to multiple branches and levels of government (and other entities) in the State of Colorado, the Collaborative recommends that the Hub be situated in an entity external to state government. However, the Hub should be accountable to, and have oversight by, an entity within state government. The Collaborative defers to the Legislature for further direction on this point. The Collaborative recommends that external entities be invited to apply to be the Hub provider through an open and competitive RFP process.

VI. Building Period

In order to thoughtfully set up the Hub and ensure its success, the Collaborative recommends an initial 24 month building period during which an advisory board would work with the Hub to develop, test, and confirm business practices, and support the development of processes related to the Hub's core functions. The advisory board would meet with the Hub on a regular schedule during the building period to help create a timeline to operationalize the activities of the Hub.

The Collaborative recommends that an advisory board consist of individuals representing both parties, all three branches of government, local government, and individuals with expertise in EBP and practice.

VII. Funding Model

Based on the scope of the work described above (i.e. **strategic planning, stakeholder outreach, program analysis, and coordination of EBP projects**), the Hub's annual base operating expenditures are proposed to be roughly \$1,843,000 General Fund. Please see the table below.

Expenses		
Expense Type	Details	Cost
Base Staff	Director, Deputy Director, EBP Manager, and Administrative Assistant	\$525,000 (salary) \$158,000 (fringe)
General Operating	Hub Operating Costs (TBD based on structure)	\$60,000
EBP Expansion Activities (e.g. Capacity Building, Education and Evidence Reviews)	External Contracts	\$100,000 (minimum)
Cross-System Research	At least 60% will be external contracts	\$500,000 (minimum)
Time-Sensitive EBP Projects	At least 60% will be external contracts	\$500,000 (minimum)
Total		\$1,843,000
Cross-System Projects Initiated by the Legislature	At least 60% will be external contracts	Flexible

Note: Appendix II lists position descriptions of the base staff. Base costs assume a public university hosting the Hub would supply overhead costs and shared services (e.g. legal services, Institutional Review Board). General operating is inclusive of travel, non-project specific supplies, capacity building events, specialized statistical software, hardware, etc. External contracts will cap indirect costs at 15 percent.

A five-project minimum each for **cross-system research initiated by agencies or other arms of the state** and **time-sensitive EBP projects** ensures that there will be support across policy areas. Please note that while there is funding for agency-initiated projects, the \$500,000 for **time-sensitive EBP projects** is available for topics of interest from the Legislature.

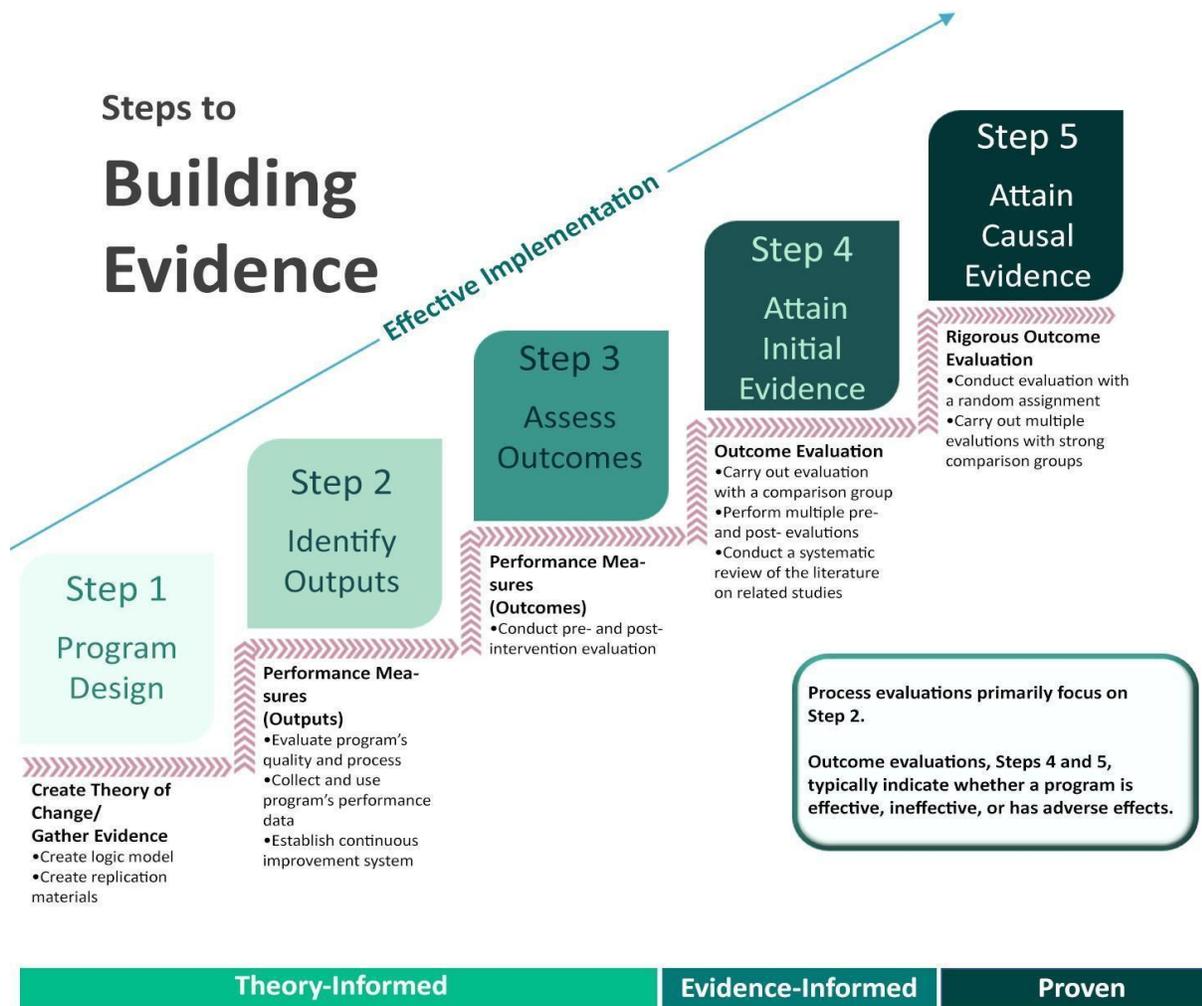
Up to forty percent of project costs will remain at the Hub for (a) scoping and/or coordination across multiple entities, (b) ensuring a rigorous and actionable research design, (c) searching and vetting appropriate implementation, evaluation, or research partner(s), (d) contracting, (e) project management, (f) communication and dissemination of findings, and (g) liaising with the legislature about project status and findings. It is anticipated the Hub will hire experienced project manager(s) and/or senior researcher(s) commensurate with the number and complexity of projects to ensure timely and high-quality completion of the work. The balance of funds will

be subcontracted out to the implementation, evaluation, and/or research community to actively support implementation needs or execute the research according to the Hub-approved design. As the evaluation and research community increases its capacity to engage in other aspects of the work in a mutualistic, responsive, and action-oriented fashion, additional responsibility and funds will be pushed out accordingly.

Funding for **cross-system projects initiated by the legislature** is not included in base operating expenditures and will instead be appropriated on a project-specific basis as determined by the JBC or statute. Variation across fiscal years in the amount of funding (from \$0 on up) is sustainable with the following assumptions: (1) base staffing costs and operating expenses are fully funded (2) up to forty percent of project costs will remain at the Hub for (a) scoping and/or coordination across multiple entities, (b) ensuring a rigorous and actionable research design, (c) searching and vetting appropriate implementation, evaluation, or research partner(s), (d) contracting, (e) project management, (f) communication and dissemination of findings, and (g) liaising with the legislature about project status and findings. The balance of funds will be subcontracted out to the implementation, evaluation, and/or research community to actively support implementation needs or execute the research according to the Hub-approved design.

Funding for coordination of EBP projects is *not* intended to replace the evaluations that individual agencies can manage successfully in house or the option for agencies to request state funds to conduct independent evaluations of a specific program. Agencies may, however, elect to outsource independent evaluations to the Hub to reduce burden on their staff (e.g. project management, identifying a qualified research team, RFP development, and/or contracting). These types of requests would be negotiated directly between an agency and the Hub and not as part of this line item.

Appendix I: Evidence Continuum



The steps to moving along the continuum by building evidence are demonstrated in the figure above. The state's performance improvement efforts primarily target steps 2 and 3. Research-driven implementation of evidence-based practices, the focus of the state's investment in EPIC, is important across all the steps but is typically addressed most intensely during steps 1 and 2. It is important to note that each lower step serves as a building block for the following step. Also, steps 4 and 5 may not be feasible for many population-based strategies such as public health (e.g. air quality), transportation (e.g. road safety), and agriculture (e.g. conservation). Thus, the appropriate use of the continuum can look very different depending on the situation.

Appendix II: Base Staff Position Descriptions

Director (1 FTE): Accountable for all work undertaken by the Hub. Leads **strategic planning and stakeholder outreach**. Works closely with the advisory board during the building period and representatives of all three branches of government to ensure the work of the Hub is transparent and executed in line with expectations. Engages government officials in discussions as early as possible when the Hub is being considered for projects that do not meet the Hub's eligibility criteria or the Hub is not being considered for projects that do meet the criteria. Leads the identification and development of a network of researchers that can be activated to meet project-specific needs of the Hub. Leads efforts to leverage federal grant funding and private dollars to support EBP in Colorado. Other tasks as needed to meet Hub commitments.

Deputy Director (1 FTE): Supports the Director and manages all other staff. Leads **coordination of EBP projects** including scoping and prioritizing of projects and creating analysis plans with rigorous and actionable research designs. Supports the search for and vetting of appropriate implementation, evaluation, or research partners. Is the primary oversight of budgets, contracts, and deliverables. Other tasks as needed to meet Hub commitments.

EBP Manager (1 FTE): Leads **program analysis** efforts and works with the Director on **stakeholder outreach and strategic planning**, including coordination with external EBP partners and experts. This role will be responsible for advancing EBP knowledge in the state through capacity building and education efforts. This position will also be responsible for managing requests for evidence reviews and surveys of the literature on specific policy challenges. This position will oversee at least \$100,000 that will go towards capacity building efforts, educational opportunities, and external evidence reviews.

Administrative Assistant (1 FTE): Coordinates advisory board during the building period and manages processes developed by the advisory board. Manages budgets, contracts, and Hub website including evidence review library. Other tasks as needed to meet coordinating Hub commitments.

Note: Additional staff may be hired based on the priorities that are set for the Hub and the corresponding workload.

Appendix III: Examples of Cross-System Projects That the Hub Could Assist With

Family First Prevention Services Act (FFPSA): FFPSA has created an opportunity for states to draw down more federal funds for prevention services that strengthen families and meet rigorous evidence standards. There is a requirement for ongoing rigorous evaluation or continuous quality improvement studies of each service that is reimbursed with federal dollars under FFPSA, and FFPSA allows for fifty percent of evaluation costs to be covered by federal funds. FFPSA is driving the need for states to build evidence for programs so they can leverage federal funding to its fullest potential. Additionally, for programs shown to work, there is a need for states to support implementation and capacity building efforts of programs to translate them into replicable practices.

FFPSA evaluation requires substantial scoping of projects with expertise in randomized controlled trial and quasi-experimental designs. Coordination across evaluation projects, state and local government, and providers is also necessary to ensure the feasibility and validity of studies. The Hub would be well positioned to assist with evaluation and evidence building activities, lowering costs as efficiencies across projects can be identified. The Hub can also serve as a strategic partner for ensuring proper implementation of proven programs and by developing a comprehensive service array that can help the state leverage federal funds most effectively.

Perinatal Substance Exposure Data Linkage Project (aka Substance Exposed Newborns): SB19-228 is designed to leverage administrative health care claims data, child welfare records, vital records, and prescription drug monitoring program data to identify and connect dyads of mothers and infants. Research teams with subject matter expertise will describe these dyads' engagement in multiple public systems (e.g., health care, child welfare, early intervention) to answer policy questions about how to strengthen families affected by substance use during the prenatal period.

SB19-228 is intended to inform multiple state funded entities and requires coordination across agencies. There is currently \$50,000 allocated to this project for SFY21 and additional resources are needed to:

- Understand health and child welfare outcomes for dyads of mothers and babies as compared to the general population.
- Answer key questions that can inform strengthening families such as:
 - What are the characteristics of dyads with the highest mortality rates and separately, the characteristics associated with appropriate post-partum and preventative health care for mother and baby?
 - What are the prevalence rates of key conditions associated with substance exposure and how do health care outcomes for mothers and babies relate to their child welfare involvement?

The Hub would be well-positioned to help answer these questions by further facilitating cross-system research by engage experts in designing, conducting, and applying the study to action.