

# MEMORANDUM



## JOINT BUDGET COMMITTEE

TO Members of the Joint Budget Committee  
FROM Mitch Burmeister, JBC Staff (303-866-3147)  
DATE February 8, 2023  
SUBJECT Evidence-based Decision Making Review

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In general, evidence-based decision making asserts that policy decisions should be based on, or informed by, rigorously established objective evidence. This evidence can be acquired from an outside source such as a national data clearinghouse that sets standards and provides data on studies conducted around the country. Evidence can also be acquired directly from existing programs within the State. While clearinghouse data can be helpful to assist in policy decisions, data and results directly from existing programs is the ideal source – so long as the evaluation methodologies are sound.

The Governor’s Office of State Planning and Budgeting (OSPB) has an established history of working with the General Assembly and with outside partners to implement a form of evidence-based decision making in the State’s budget process, but until recently, had not had a dedicated partner in this effort. With the passage of S.B. 21-284 (Evidence-based Evaluations for Budget), Joint Budget Committee Staff was formally required to begin interacting with evidence-based policy. This is an evolving relationship as OSPB and JBC Staff determine the best ways to work together to make evidence-based decision making vital to Colorado’s budget process.

### **HISTORY OF EVIDENCE-BASED DECISION MAKING IN COLORADO**

The idea of using evidence to inform policy decisions in Colorado is not new. The first formal attempt at this came in 2009 with the creation of the Evidence-based Practices in Implementation for Capacity (EPIC) resource center, which worked to improve capacity in five Colorado criminal justice agencies for the implementation of evidence-based practices.

Following this first foray into using evidence to inform policy, the State then partnered with the Pew-MacArthur Results First Initiative. This was a joint effort between the General Assembly and OSPB. This work started by taking program inventories in five policy areas: adult criminal justice; juvenile justice; child welfare; behavioral health; and prevention. OSPB reported that over a three-year period, they identified \$100.4 million in expenditures on evidence-based programs.

OSPB continued their work beyond the scope of the Results First framework and beginning in the FY 2017-18 budget process, began denying agency funding requests for programs that had proven ineffective and supporting agency funding requests for new programs that had proven effective.

Building off this work, OSPB in 2017 established the Colorado Evaluation and Action Lab at the University of Denver to conduct studies of Colorado programs to advance the use of evidence-based decision making in Colorado.

### **SENATE BILL 21-284**

At the beginning of the 2021 legislative session, JBC staff presented a memo<sup>1</sup> to the Committee on how evidence-based decision making (EBDM) was being implemented in the budget process, and

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<sup>1</sup> [https://leg.colorado.gov/sites/default/files/eb\\_policy-01-28-21\\_0.pdf](https://leg.colorado.gov/sites/default/files/eb_policy-01-28-21_0.pdf)

how the JBC could best use the information from OSPB in the yearly budget submission to inform their budget decisions. Based on this memo, legislation was formulated by the Committee and Staff and approved by the General Assembly. This legislation, S.B. 21-284, set into statute guidelines for how evidence-based decision making should be used, definitions on how to categorize levels of evidence used to evaluate a program's effectiveness, and the roles of the Committee, JBC staff, and OSPB in implementing evidence-based decision making in the budget process.

#### *GUIDELINES FOR HOW EVIDENCE-BASED DECISION MAKING SHOULD BE USED*

The statute states that:

- When appropriate, the use of data and outcome-related evidence in the analysis of programs implemented and delivered by state agencies is an effective means through which funding decisions concerning program improvement and expansion or redirection of funds can be achieved; and
- The integration of evidence-based evaluation with the budget process can be useful in the prioritization of requests for funding for new or existing programs and services in the State.

#### *DEFINITIONS OF LEVELS OF EVIDENCE*

The statute includes five definitions for the levels of evidence to be used when evaluating evidence-based budget requests.

- **Opinion-based**
  - A program or practice that reflects a low level of confidence of effectiveness, ineffectiveness, or harmfulness, as based on satisfaction surveys, personal experience, or for which there is no existing evidence about the effectiveness, ineffectiveness, or harmfulness of the program or practice.
- **Theory-informed**
  - A program or practice that reflects a moderate to low or promising level of confidence of effectiveness, ineffectiveness, or harmfulness as determined by tracking and evaluating performance measures including pre- and post-intervention evaluation of program outcomes, evaluation of program outputs, identification and implementation of a theory of change, or equivalent measures.
- **Evidence-informed**
  - A program or practice that reflects a moderate, supported, or promising level of confidence of effectiveness, ineffectiveness, or harmfulness as determined by an evaluation with a comparison group, multiple pre- and post-evaluations, or an equivalent measure.
- **Proven**
  - A program or practice that reflects a high or well-supported level of confidence of effectiveness, ineffectiveness, or harmfulness as determined by one or more high-quality randomized control trials, multiple evaluations with strong comparison groups, or an equivalent measure.
- **Not applicable**
  - None of the above definitions apply to the request. (For example, a request for 1.0 FTE for administrative assistance is not applicable because you can't measure outcomes from the addition of the FTE.)

*ROLES OF THE JBC, JBC STAFF, AND OSPB*

The statute also briefly described the roles of these entities as follows:

- Joint Budget Committee
  - Shall consider any available evidence-based information when determining the appropriate level of funding of a program or practice.
- Joint Budget Committee Staff
  - Shall independently analyze and describe – using the definitions above – any evidence-based evaluation of a program or practice that is provided by a state agency in a budget request; and
  - Shall include any information related to evidence levels as part of any recommendation it makes regarding a budget request.
- OSPB
  - Shall describe any evidence-based budget request using the defined evidence levels;
  - Shall provide any research that supports the implementation, continuation, or expansion of the program or practice, including any research demonstrating improved or consistent outcomes achieved by those who benefit from the program or practice;
  - Shall provide any research that supports a decrease in funding for a program or practice that may be shown to be ineffective or harmful to those receiving services; and
  - Shall provide information concerning how the evidence referenced was used in the development of the budget request.

**COLORADO EVALUATION AND ACTION LAB COLLABORATION**

Over the 2022 interim, JBC staff worked with OSPB and the Colorado Evaluation and Action Lab to formulate a framework for the future of Evidence-based Decision Making in Colorado. Together, we created a more precise definition of evidence-based decision making, articulated a commonly accepted vision for Colorado’s approach to evidence-based decision making, and assigned roles and responsibilities across all branches of government that align with the vision.

This collaboration has elevated evidence-based decision making from something done sporadically and somewhat piecemeal among OSPB and JBC staff to something that will hopefully move forward with a shared goal among all branches of state government and within all state agencies.

The culmination of the work done over the interim is a memo titled “Advancing Evidence-Based Decision-Making in Colorado Policymaking: A 5-Year Vision Focused on Culture and Structure”.<sup>2</sup> A few of the highlights of that memo are included here.

*SHARED TENETS OF EBDM CULTURE IN POLICYMAKING*

There are three main ideas that are agreed upon as being the driving forces behind a cultural shift toward EBDM. They are:

- Using data to drive better outcomes;
- Using evidence to inform investment and resource decisions; and
- Using a collective approach to sustain change.

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<sup>2</sup> <https://coloradolab.org/projects/evidence-based-decision-making-in-colorado-a-5-year-vision/>

If all stakeholders agree on these three ideas, then EBDM can shift from something done only by OSPB and JBC staff to something that is fundamental to any funding request or decision made anywhere in the state.

#### *DEFINING FEATURES OF EBDM CULTURE*

While agreement on the three overarching tenets is essential in moving toward an EBDM culture in Colorado, certain features of this culture will indicate that Colorado is set up for success in implementing EBDM. Those features are:

- A **common understanding** of what EBDM is and how it works among decision-makers, agency leadership, and staff;
- **Commitment to and consistent participation in** agreed-upon EBDM strategies by decision-makers, agency leadership, and staff;
- Necessary **resources, skills, and time** for decision-makers, agency leadership, and staff to acquire the best available evidence and apply it to decision-making;
- **Systemic and robust** use of research evidence in decision-making; and
- **Engagement in an iterative process** of using existing research evidence and **generation of new research evidence** by decision-makers, agency leadership, and staff.

When these features are routinely engaged in and seen in practice, Colorado will be in a much stronger position as regards the future of EBDM.

#### *ROLES AND RESPONSIBILITIES*

Finally, the memo lays out what the roles and responsibilities of the various stakeholders in EBDM are. Included in this list of stakeholders are the legislative branch – including the Joint Budget Committee and Staff, the executive branch – including the Governor’s Office, agency leadership, staff, and legislative liaisons, and non-governmental partners – including the Colorado Evaluation and Action Lab, independent researchers and evaluators, clearinghouses, and constituents.

Staff recommends referencing the memo for a more detailed explanation of how the roles and responsibilities of each of these groups is envisioned.

#### **JBC STAFF PROCEDURE AND WHAT THE COMMITTEE CAN EXPECT TO SEE**

As a result of S.B. 21-284, JBC Staff has been hard at work to both understand how best to support the Committee regarding EBDM and how best to carry out our new statutory requirements. To that end, staff has refined its approach to presenting EBDM information in our budget documents since last budget cycle.

Last year, the Committee saw reference to evidence levels in staff briefing document, supplemental documents, and figure setting documents. This took the form of a separate subheading within the documents that explained what levels of evidence meant, the level of evidence that OSPB assigned to each budget request, and the level of evidence JBC staff assigned to requests and how their assignment differed or agreed with OSPB’s indications.

This year, staff did not include mention of evidence levels in briefing or supplemental documents, but will include these indications in our figure setting documents. The Committee can expect to see less space on the page dedicated to evidence-based decision making, but that does not mean that staff is

not spending less time on evaluating and identifying requests that have a level of evidence assigned to them.

- First, at the beginning of each figure setting document just after the Table of Contents, there is a small section titled “How to Use This Document.” We have added another paragraph to that section alerting the reader to the fact that they may encounter ‘levels of evidence’ in the document and referring them to the place in statute (Section 2-3-210 (2), C.R.S.) that defines those levels of evidence.
- Next, in each decision item for which OSPB or an Elected Official assigned a level of evidence, staff will include a section at the beginning of their write-up, between the “Recommendation” and the “Analysis” subheadings. This section will look like:

*RECOMMENDATION:* Staff recommends .....

*EVIDENCE LEVEL:* The Department indicated that this request item is *level of evidence*, and staff agrees with this designation **OR** but staff believes that this request should be classified as *level of evidence*.

*ANALYSIS:* This request.....

This section is to serve as a quick reference for the reader to know 1) if OSPB or the Elected Official assigned a level of evidence to the request, and 2) if JBC staff agrees or disagrees with this designation and why.

- Finally, if staff is referencing a level of evidence for the first time in a document, they will include in the “Evidence Level” section the definition of the level of evidence. This will look like:

*EVIDENCE LEVEL:* The Department indicated that this request item is evidence-informed, and staff agrees with this designation. **When a request item is designated ‘evidence-informed’ it means that the program “reflects a moderate, supported, or promising level of confidence related to the effectiveness, ineffectiveness, or harmfulness as determined by an evaluation with a comparison group, multiple pre- and post-evaluations, or an equivalent measure.” (Section 2-3-210 (2)(a), C.R.S.)**

The purpose of this is to again remind the reader where in statute to find these definitions, and what this specific level of evidence means.

The Committee should not expect to see any additional reference to levels of evidence consistent across all documents, but will likely see more information about staff evaluations of evidence levels in write-ups that either disagree with the OSPB/Elected Official designations or where staff feels that additional discussion of evidence levels would add value to the Committee’s decision-making process.

If, of course, the Committee has additional questions regarding evidence levels in certain write-ups, do not hesitate to ask staff to explain their evaluations or provide more information on how staff came to the conclusion they did.



## Advancing Evidence-Based Decision-Making in Colorado Policymaking: A 5-Year Vision Focused on Culture and Structure

### Memo Purpose

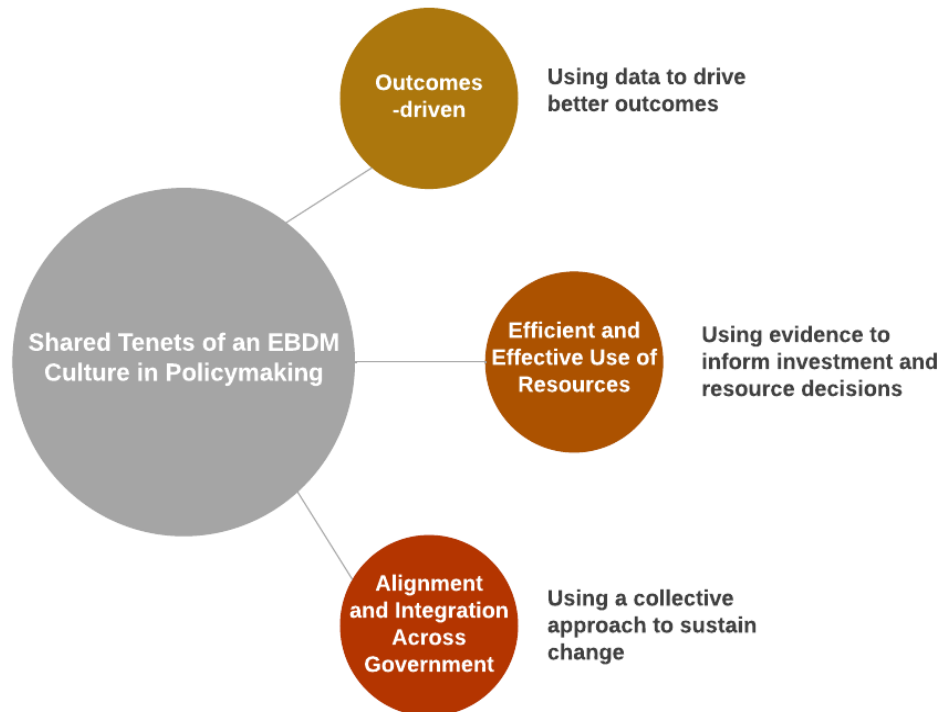
The purpose of this document is to articulate a commonly accepted vision for Colorado’s approach to evidence-based decision-making in policymaking and to align roles and responsibilities across branches of government with this vision. By making explicit our shared understanding of the work to be done and our approach to it, we can accelerate progress and build on the good work that has come before.

### Why Evidence-Based Decision-Making?

#### Evidence-Based Decision-Making (EBDM) in Policymaking

EBDM is the intersection of the best available research evidence, decision-makers’ expertise, and community needs and context. EBDM recognizes that research evidence is not the only contributing factor to policy and budget decisions. Other equally important contextual factors include resourcing, cultural values, community voice, and feasibility of implementation.

**Shared Tenets of an EBDM Culture in Policymaking:** EBDM is critical to driving smart state investments, continuous quality improvement, innovation, and outcomes. A successful culture of EBDM is anchored in shared tenets that cross stakeholders, time, and space.



How do these shared tenets show up in practice? Consistent with being **outcomes-driven**, evidence-building should inform continuous quality improvement and learning to strengthen implementation. Research evidence on outcomes is also critical to ensuring **efficient and effective use of resources** when measuring whether target goals are being met or prioritizing services for scaling. Finally, generating and using research evidence can help cross-system partners better **align and integrate** as they work to understand service gaps in reach and access, and then innovate and evaluate solutions to identified problems.

Promoting an EBDM culture requires collective effort across levels and branches of government, including elected, appointed, and career leadership and staff. A common understanding of the **why, what, and how** of EBDM allows leadership from diverse systems to identify shared goals and develop strategies that contribute to achieving them. This, in turn, promotes consistency among public sector staff, regardless of branch of government or state agency, in what it means to fulfill Colorado's commitment to EBDM. As a result, research evidence use can help strengthen outcomes and return on investments for Coloradans.

**Memo Foundations:** The vision articulated in this memo builds off a strong foundation of evidence-based practice and policy in Colorado. In fall 2018, the Joint Budget Committee (JBC) of the General Assembly supported the use of evidence standards recommended by the Colorado Evidence-Based Policy Collaborative, which subsequently informed [SB21-284](#) (Evidence-Based Evaluations for Budget). **SB21-284** describes how research evidence should be used to inform funding decisions for programs implemented and delivered by state agencies; however, funding decisions are just one use case in EBDM. Without an explicit framework for EBDM in Colorado, including agreed-upon definitions of terms and clear roles and responsibilities, there is the potential for miscommunication and inconsistency across, and even within, branches of government. This memo aims to provide that framework.

This memo leverages the robust body of **literature on the use of research evidence** in policy decision-making to help ensure that purpose, vision, and strategies are aligned with the "evidence of using evidence." Across policy areas, rigorous research evidence has identified the conditions needed to achieve an EBDM culture that is meaningful, efficient, and effective. These studies were used in crafting vision, content, and approach.

Finally, this **vision was co-developed** with members of the executive and legislative branches as well as non-governmental partners, including JBC members and staff; the Governor's Office of State Planning and Budgeting, Office of Operations, and Office of Information Technology; General Assembly members; representatives of several state Departments; and the Colorado Evidence-Based Policy Collaborative. Together, these stakeholders helped to shape content and articulate the value of Colorado's approach to EBDM in policymaking.



## What Does a Successful EBDM Culture Look Like? A Shared Vision

It is important to articulate how we will know when we have achieved a successful EBDM culture. By defining the key features of a successful EBDM culture in Colorado, we can build capacity for successful implementation, measure progress over time, invest resources in areas that are proving difficult, and ensure every department, agency, and decision-maker has the support necessary to meaningfully contribute.

Five Defining Features of an EBDM Culture
Decision-makers, agency leadership, and staff have a <b>common understanding</b> of what EBDM is and how to achieve it.
Decision-makers, agency leadership, and staff <b>commit to and consistently participate in</b> agreed-upon EBDM strategies, including evidence-building, consistent with their role.
Decision-makers, agency leadership, and staff have the <b>resources, skills, and time</b> necessary to acquire the best available evidence, make meaning of it, and apply it to the decision-making context.
Use of research evidence in decision-making is <b>systemic and robust</b> enough to withstand changes in decision-makers, agency leadership, and staff.
Decision-makers, agency leadership, and staff <b>engage in an iterative process of using existing research evidence and generating new research evidence</b> , including ongoing measurement of outcomes and revisiting decisions periodically in light of new evidence.

Embedded in these five defining features is the difference between “evidence-based decision-making” and an “evidence-based practice.” Being designated an “evidence-based practice” is the result of a rigorous review of existing evaluations about a specific practice, typically by a scientific clearinghouse or registry. In contrast, EBDM is a more comprehensive approach to building and using research evidence across a wide variety of decision-making use cases—from operational to strategic—as articulated in this memo.

## How Do We Achieve an EBDM Culture?

Achieving an EBDM culture requires a clear understanding of how the best available evidence can—and should—be used by decision-makers with different roles and responsibilities.

Defining “Best Available Evidence”
“Best available evidence” refers to the weight of the research evidence from the most rigorous studies available about a program or practice. “Research evidence” refers to empirical findings generated from the systematic and rigorous application of methods and analyses to help answer a question, hypothesis, or topical investigation.

Using a “best available evidence” approach can help decision-makers **overcome three known EBDM challenges**, as illustrated in the table below.



The Challenge	The Solution	Example
Taking a narrow or one-size-fits-all approach to evaluation	Meet programs and practices where they are, matching evaluation approach to need. An EBDM culture embraces the reality that not every policy area can approach evaluation the same way so what constitutes the “best available evidence” will vary widely during budget and policy decision-making.	Randomized controlled trials may be appropriate for established programs, but ill-advised in other situations, such as for new programs and population-level practices.
Biased uses of research evidence and managing conflicting evidence	Develop and implement transparent processes that leverage existing community and scientific expertise to promote a non-partisan approach to identifying the best available evidence.	Using results from evidence-based clearinghouses to source, understand, and apply the most rigorous evidence.
Confusing the absence of research evidence with evidence of ineffectiveness	Recognize that the best available evidence may be limited. In these cases, the default assumption cannot be that the program is ineffective. Rather, the program or practice should be assessed for evaluation readiness and evidence-building.	County-designed programs may measure outputs like reach or access, which may suggest program potential, but on their own, do not illustrate effectiveness.

**Four Essential Tasks:** There are four essential tasks that support decision-makers in using the best available evidence.

1. **Acquire (find and access)** the best available evidence on the topic
2. **Critically appraise and summarize** the best available evidence
3. **Make sense of (interpret)** the best available evidence in relation to relevant context
4. **Apply the best available evidence and contextual factors** to make decisions

In the tasks above, decision-makers work with the best available evidence *that already exists* to make a decision. In the course of the decision-making process, it is vital that opportunities to build evidence are also identified, incentivized, and rewarded as appropriate. This includes determining what additional evaluation is needed to inform future decisions, measuring the impacts of decisions made, and strengthening implementation over time. Pairing the evidence-building process with evidence application is critical to achieving maximum value of EBDM.

**Roles and Responsibilities:** Together, the roles outlined below contribute to both (a) making today’s decisions using the best available evidence, and (b) generating the new research evidence necessary to make even better decisions in the future. Each branch of government has their own unique perspectives and needs as well as legally assigned responsibilities in which EBDM can be embedded. As such, application of EBDM in each branch will look different. In the table below, EBDM best practices are summarized. The list is not exhaustive, but rather, illustrative of the major areas for embedding EBDM. It is important to have transparency in process as well as sufficient cross-checks (trust with accountability) when implementing EBDM systemwide.

Branch of Government	Role	Summary of Responsibilities
Legislative Branch	Joint Budget Committee (JBC) Budget and Policy Analysts	<p>Provide JBC members the best available evidence in a non-partisan, comprehensible way so research evidence can appropriately inform budget and policy decisions.</p> <p>Analyze budget requests from the Executive Branch and make recommendations to the JBC concerning departmental resource allocation.</p> <p>As requested, support legislators in incorporating the best available evidence into legislation.</p>
	Legislators, including JBC members	<p>Use the best available evidence, as applicable, to inform and prioritize budget and policy decisions, while also considering context factors like community needs, resource availability, and feasibility.</p> <p>Identify opportunities to build the capacity of decision-makers, staff, and agency leadership to generate and use research evidence.</p> <p>Fund agencies to build research evidence for programs and practices matched to the needs of Colorado residents, including sustainability plans for pilot programs.</p> <p>Use the best available evidence in developing and considering legislation.</p>
Executive Branch	Governor’s Office	<p>Make requests to the JBC on resource allocation for programs and practices aligned with the Governor's priority issue areas and, as applicable, informed by the best available evidence.</p> <p>Coordinate performance management for existing and new programs and practices.</p> <p>As applicable, support agencies in building research evidence for programs and practices matched to the needs of Colorado residents, including program design, implementation, and evaluation priorities.</p> <p>Identify opportunities to build the capacity of agency staff and leadership to use research evidence in decision-making.</p>

Executive Branch (cont'd)	Agency Leadership, Staff, and Legislative Liaisons	<p>Participate in capacity-building opportunities to improve the use of research evidence in decision-making.</p> <p>As applicable, understand and use the best available evidence to inform and prioritize budget and policy decisions on issue areas aligned with agency and administration priorities.</p> <p>Make budget requests to the Governor's Office of State Planning and Budgeting that includes the best available evidence, as applicable.</p>
Non-Governmental Partners	Colorado Evaluation and Action Lab	<p>Serve as boundary spanning leadership for decision-makers across the policy process, upholding an independent, non-partisan commitment to capacity-building, coordination, and strategy that supports growth of Colorado's EBDM culture.</p> <p>Measure progress in developing and executing this EBDM vision over time.</p> <p>Support development of EBDM best practices and tools for decisions makers, agency, and leadership to be effective and efficient in research evidence use and evidence-building.</p>
	Researchers/Evaluators	<p>Support evidence-building for programs and practices matched to the needs of Colorado residents.</p> <p>Together with executive and legislative decision-makers, identify research priorities to inform policy decisions.</p>
	Clearinghouses	<p>Through a rigorous review process, synthesize existing research evidence on programs and practices of interest to policymakers.</p>
	Community Voice and Constituents	<p>Identify priorities of relevance with which evidence-building goals and investments should align.</p> <p>Contribute to meaning making and contextualizing as research evidence is applied to make decisions.</p>

### Next Steps – From Vision to Execution

Moving toward a broad-based culture of EBDM in Colorado is a long game. The next step is to co-develop a 5-year strategic plan for executing the vision with representatives from the various roles outlined in this memo. The strategic plan will also include communications, change management, and implementation plans that roll out over the next 5 years. This memo will anchor us to the agreed-upon vision and serve as the “evergreen” as we develop the full suite of tools, structures, and best practices needed to build capacity for an EBDM culture and execute this vision. We invite you to join the conversation by contacting [Dr. Courtney Everson](#).