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UNDERSTANDING THE USE OF EVIDENCE-BASED PRACTICES BY STATE LEADERS AND STAFF

Current State, Challenges, and Outlook



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In recent years, there has been a growing emphasis on evidence-based practices, data-driven management, and evidence-based policymaking in public management. Both the general public and government officials are pushing for better use of evidence by state leaders and staff.¹ Employing rigorous causal evidence during decision-making can help leaders understand “what works”, impacting the allocation of billions of dollars annually and improving thousands of lives.

In order to better understand how state leaders and staff use and interpret research, this analysis used qualitative interviews and an online survey of policymakers in the executive branches of three U.S. states— one each from the Midwest, Southeast, and Mountain West. In this report, we share how state leaders and staff understand different types of evidence and systematic barriers they encounter when attempting to enhance the use of scientific evidence. Notably, we find:

More than half of the 323 survey respondents (54%) said that evidence-based practices (EBP) are helping their agencies with budget, policy, and contracting decision-making. **About two thirds (68%) said that EBP will help** with these activities in the future.

All else equal, state-level policymakers were **22% more likely to support a program with an "evidence-based" label** than one without this designation. Absent this label, policymakers did not show a preference for any types of research methods employed.

When presented with a hypothetical program to fund based on randomly assigned research characteristics, holding all else constant, state-level policymakers demonstrated a preference for programs that met the following criteria:

- **Research methods that identify causality and outcomes** over research that reports outputs (such as the number of people served or achieving an outcome).
- Research that **shows program effectiveness not only for the average participant but also some or multiple demographic groups.**
- Research **produced by independent state government research teams, universities, and national think tanks.**
- Research that is **recent and generated from within their state.**

Respondents said that **lack of time for rigorous evaluations (59%), lack of resources for beginning/sustaining efforts (46%), fragmentation of decision-making (46%), and research evidence not being inclusive** of certain communities (44%) had a significant or major impact on their ability to implement EBPs in their agencies.

In the near term, this report points to how proponents of evidence-based practices can present information to increase the likelihood that programs with rigorous evidence are supported. Over the longer-term, we hope these findings provide information to State leaders, their staff, researchers, and supporting partners so that they can reflect on it to improve their use of evidence in the decision-making process.

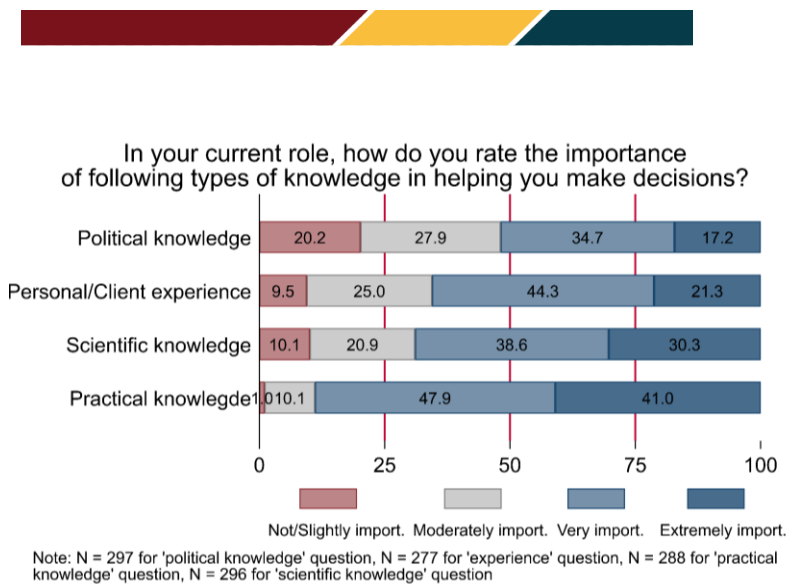
¹ Vanlandingham, G. R., & Drake, E. K. (2012). Results first: Using evidence-based policy models in state policymaking. *Public Performance & Management Review*, 35(3), 550-563.

Presentation of the Survey Results and Findings

The data of this report is collected from a survey involving 323 state government leaders and staff from three U.S. states—one each from the Midwest, Southeast, and Mountain West, representing both blue and red states. In the survey, we asked a range of questions regarding government decision makers’ perceived importance and barriers to implementing EBPs in their agencies. We also designed a conjoint experiment in the online survey to better understand how they evaluate evidence and make decisions when different dimensions about evidence are presented to them.

Relative Importance of Scientific Evidence in State Government Leaders and Staff’s Decision-making Process

Among the four types of knowledge government decision makers often use to make policy and program decisions, scientific knowledge ranks second, positioned between practical knowledge and personal experiences, but ahead of political knowledge (see Figure 1). An overwhelming majority of respondents (N=284) feel that practical knowledge is important in aiding government decision makers’ decision-making processes, with 88% of survey respondents considering it as very or extremely important.



Scientific knowledge is ranked second-highest in importance, with 69% of respondents acknowledging its significance. The third most important category is personal and client experience, with 65% of respondents recognizing its importance. Lastly, 52% of respondents acknowledged the importance of political knowledge. While practical knowledge consistently ranked as the most important for the three states. The ranking for the other three types of knowledge varies considerably. For example, respondents from one state ranked scientific knowledge the least important

Figure 1. Percentage of Respondents’ Perception of Knowledge Sources in Decision-Making

² Political knowledge is defined as “the know-how, analysis and judgment of political actors and legislative directions”. Scientific knowledge is defined as “the product of systematic analysis of current and past conditions and trends, and analysis of the causal relationships”. Practical knowledge is defined as “practical wisdom of professionals and the organizational knowledge associated with managing program implementation”. Personal and client experience is defined as “tacit and experiential knowledge from personal experiences and interaction with the clients”. These different types of knowledge are based on Head (2008): <https://www.cebma.org/wp-content/uploads/Head-The-Three-Lenses-of-Evidence-Based-Policy.pdf>

State Government Leaders and Staff's Familiarity with Evidence-based Practices

According to our survey findings, more than 60% of respondents expressed being “familiar” or “very familiar” with such practices (see Figure 2). Only 4% of respondents indicated having no familiarity with evidence-based practices. This implies awareness is not a major impediment to the application of EBPs among various types of people who make decisions in state government.

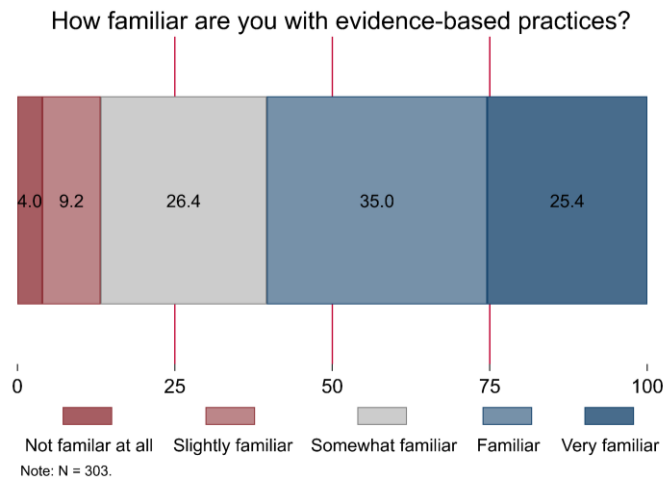


Figure 2. Percentage of Respondents Familiar with Evidence-based Practice

Assessment of the Past, Current, and Future Importance of EBP in State Government Agencies

More than half of respondents (54%) feel that evidence-based practices have been beneficial in facilitating decision-making within their respective agencies (see Figure 3). Additionally, half of the respondents acknowledge that evidence-based practices have helped with past decision-making. An even larger proportion of respondents (68%) agree that evidence-based practices would be more helpful in the future. Overall, respondents are optimistic about evidence-based practices playing a larger role in guiding future decision-making.

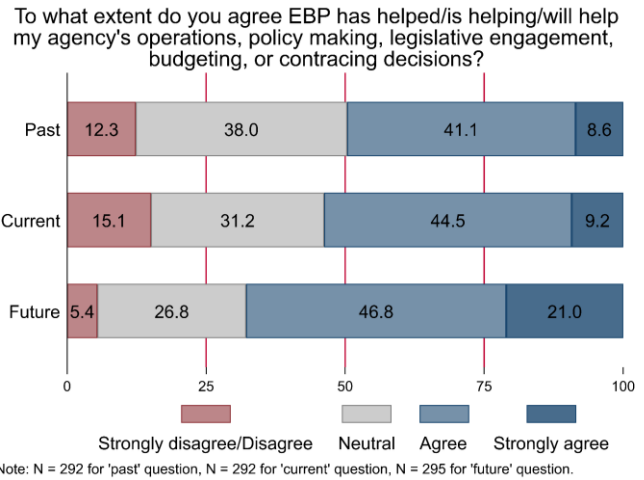
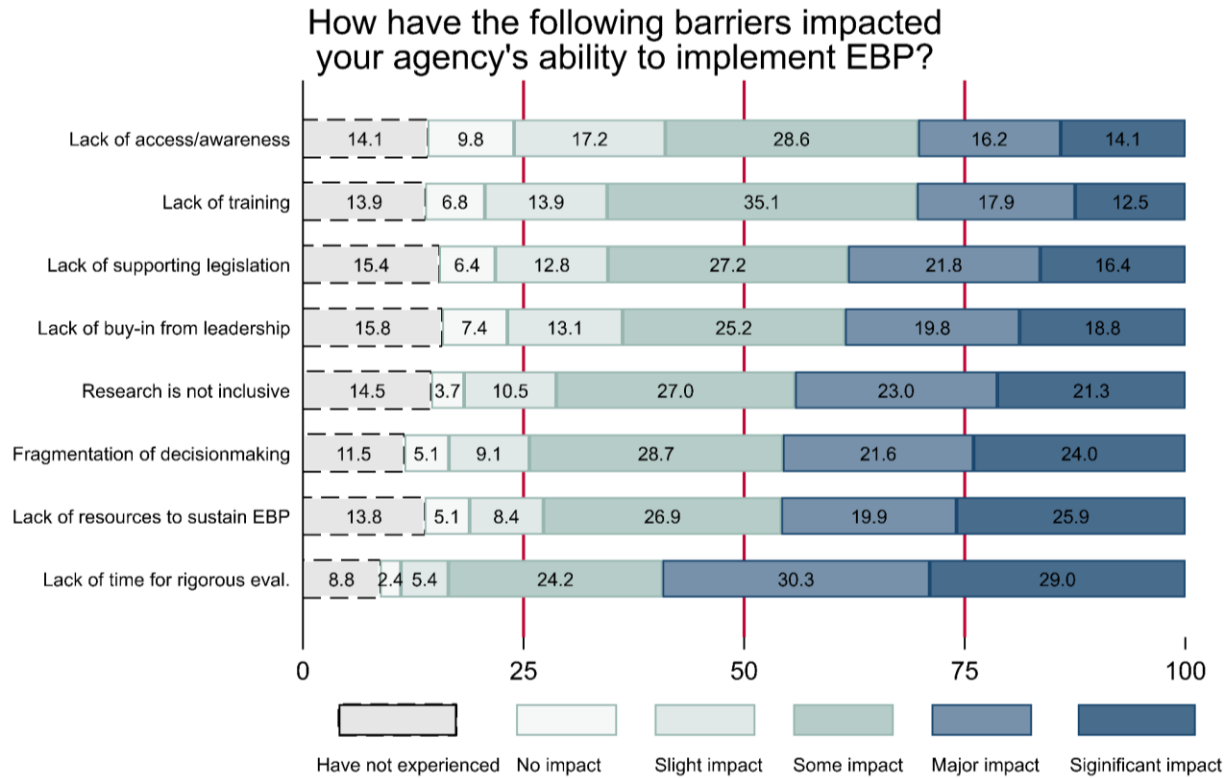


Figure 3. Respondents' Evaluation of the Importance of EBP Over Time (%)

Perceived Major Barriers in Implementing Evidence-based Practices

Figure 4 highlights the primary barriers faced by state government leaders and staff when implementing EBP. The most significant obstacle, as reported by over half of the respondents (59%), is the “lack of time for rigorous evaluation on the policy or program.” Following that, other barriers include (from most impactful to least impactful):

- Lack of resources to begin and sustain EBPs (46%)
- Fragmentation of decision making (46%)
- Current research is not inclusive of certain communities (44%)
- Absence of supporting legislation and legal frameworks for action (38%)
- Lack of training on EBPs (30%)
- Limited access or lack of awareness in how to access high-quality scientific research (30%)
- Lack of buy-in from the top and political leadership (29%)



Note: N ranges from 296 - 298 dependent on the question.

Figure 4. Barriers to EBP Implementation (%)

Dimensions that Motivate the Use of Evidence by State Government Leaders and Staff

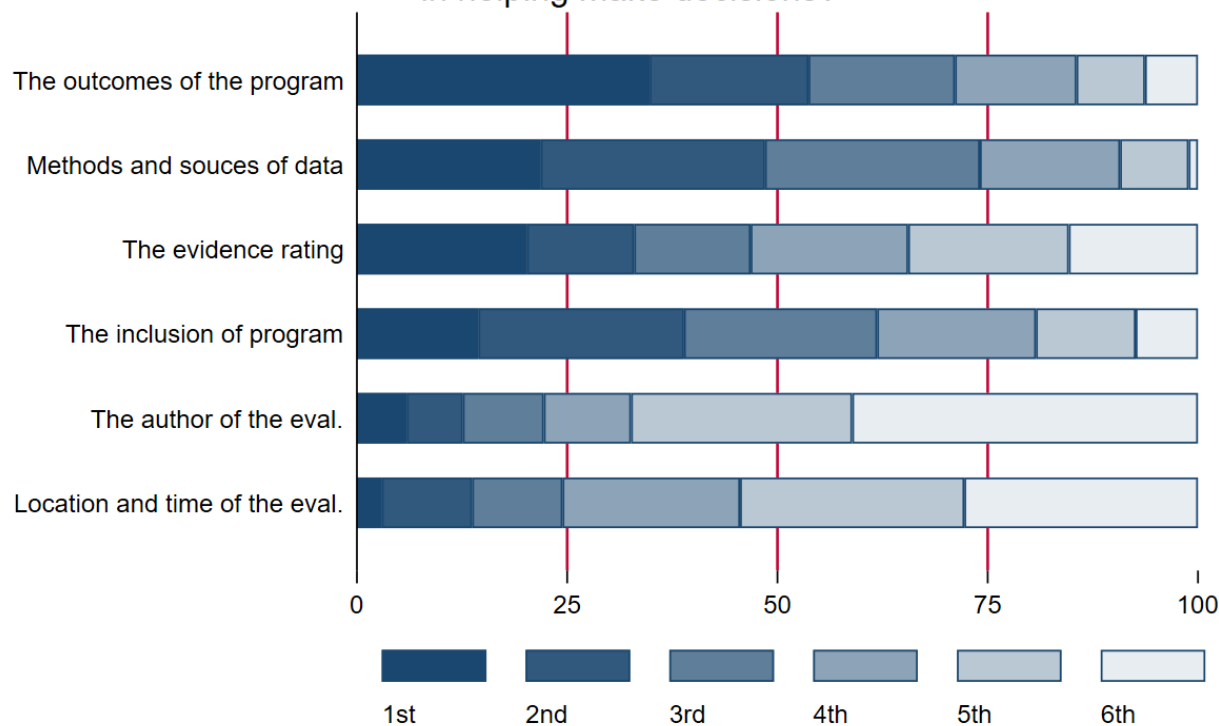
Now that we know the perceptions of EBPs among state government leaders and staff, below we analyze the factors that motivate their use. To analyze this question, we rank each response to understand which dimensions of evidence are the most critical factors. Additionally, we conducted a survey experiment to examine how variations in each dimension influence participants' willingness to fund programs, holding other dimensions constant.

A. Ranking different dimensions of evidence

Figure 5 presents our findings on the importance attributed to various factors when evaluating evidence. When asked, "As you read an evaluation of a program similar to one you are considering implementing/funding in your state, how would you rank the importance of the following factors in helping make the decision?" respondents ranked the importance of each factor as following (from most important to least important): (1) the outcome of the programs, (2) the methods and source, (3) the evidence rating, (4) the inclusion of the program effectiveness, (5) the author of the evaluation, and (6) location and time of the evaluation.³

³ All factors are derived from the survey. The outcome of the programs refers to "The outcomes of the program based on the evaluation report (e.g. whether the program has positive impacts on participants)". The methods and sources of data refers to "the methods and sources of data used in the evaluation (e.g. whether the evaluation compares the outcomes of both program participants and non-participants)". The evidence rating refers to "The evidence rating (e.g. whether the evaluation's methods and outcomes meet your state's definition of 'evidence-based')". The inclusion of the program refers to "The inclusion of program effectiveness information by demographic characteristics regarding the effectiveness of the program (e.g. whether the program tracks participant outcomes by race and ethnicity)". The author of the eval. refers to "The employees of the evaluations who conducted this evaluation (e.g. whether the evaluation is carried out by an academic researcher or an internal agency research team).. The location and time of the evaluation refers to the "The location and time of the evaluation (e.g. whether the evaluation is carried out in a neighboring state in recent years."

How do you rank the importance of the following factors in helping make decisions?



Note: N ranges from 267 - 270 dependent on the question.

Figure 5. Importance of Factors in Program Evaluation (%)

B. Choosing hypothetical programs to fund:

Our survey experiment instructed participants to choose between two hypothetical programs to fund based on evaluations. We manipulated various dimensions of the evaluations associated with each program. The outcomes of this selection process are depicted in Figure 6, which illustrates the influence of each element of evidence on participants' final decisions regarding which programs to fund.

B1. The Method and Data Sources of the Evaluation:

Overall, participants displayed a preference for programs supported by evidence generated through causal scientific methods, such as Randomized Controlled Trials (RCTs) and Quasi-Experimental Designs (QEDs). They were more than 20% more likely to select a program with evidence from these sources than an evaluation that reported the number of people served. However, the experimental results indicate that the presence of an evidence rating ("The evaluation's methods and outcomes meet the state's definition of evidence-based") primarily drives this

preference. When an evidence rating is unavailable, survey participants demonstrated a minimal preference for programs backed by evidence derived from causal identification strategies, such as RCTs and outcome group comparisons. This highlights the need for additional support to identify and report on the evidence-bases of proposals being decided upon by government officials.

B2. The Comprehensiveness and Inclusiveness of Program Effectiveness:

Programs backed by evidence displaying positive impacts across various demographic groups were strongly favored over those showing negative results or insufficient information. Specifically, compared to programs with evidence that didn't provide information about the impact on different demographic groups, survey participants were 15% more likely to select programs with evidence showing positive impacts across diverse demographics. Conversely, they were approximately 8% less likely to choose programs supported by evidence indicating negative impacts on specific demographic groups.

B3. Location and Time of the Evaluation:

When other factors were held constant, programs with recent evidence originating from within the respondent's state were more likely to be chosen for funding. Programs supported by evidence generated within the respondent's state exhibited a 10% higher likelihood of being chosen. In comparison, a program backed by evidence from more recent years (e.g., from 2015 instead of 2010) had a 15% greater likelihood of being selected to fund.

B4. The Author of the Evaluation:

Programs with evidence generated by independent state government research teams, university researchers, and national think tanks had a higher likelihood of being selected for funding compared to programs with evidence

generated by advocacy groups. Specifically, when compared to program evidence created by an advocacy organization, evidence from independent or state government research increased funding probability by 21%, university studies by approximately 18%, national think tanks by 10%, and internal agency research by 7%.

B5. The Effectiveness of the Evidence-Based Label

Our study confirmed that including the "evidence-based" label significantly impacted program selection. While the specific definition of this term may vary across states, it generally implies causal evidence generated through rigorous causal identification strategies, such as RCTs and QEDs. With the label, programs supported by evidence using RCTs and QEDs are more likely to be selected, which shows that the label facilitates evidence-based practice.

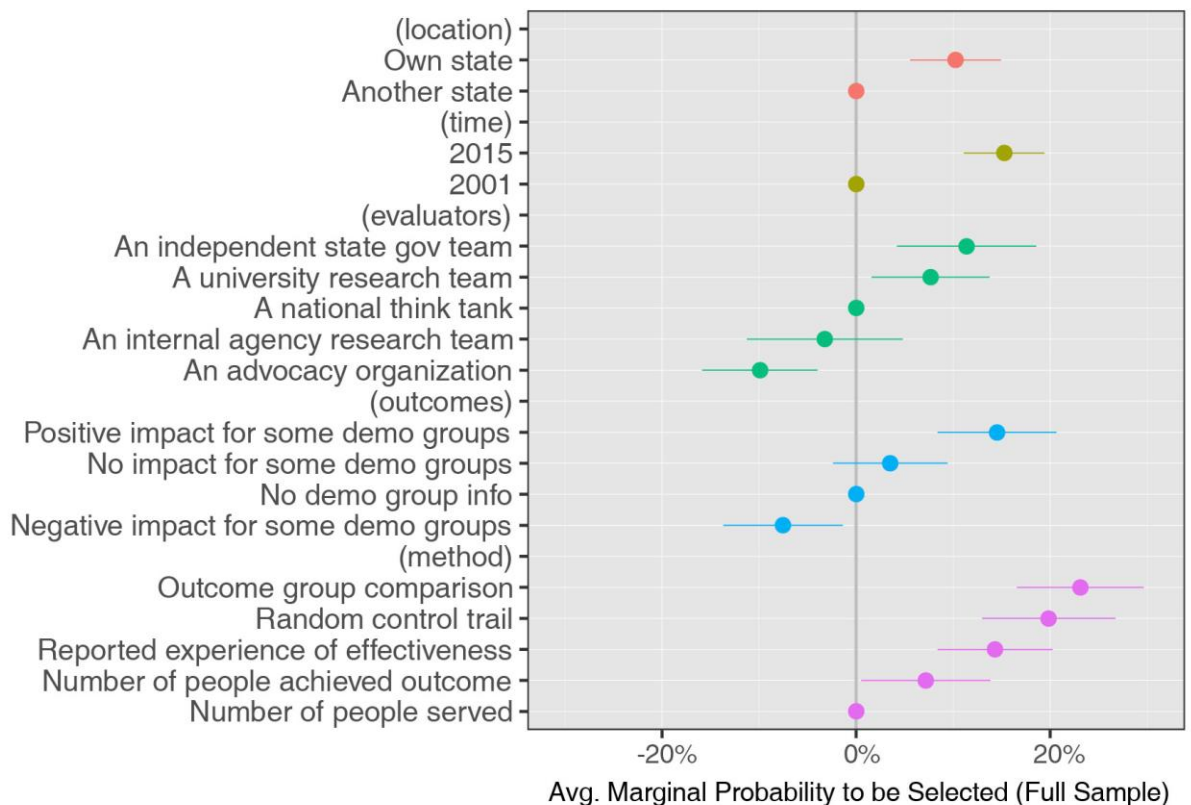


Figure 6. Average Influence of Evidence Dimensions on Program Selection ⁴

⁴ Dots with error bars (95% confidence interval) show how such a factor influenced the likelihood of one program being picked for funding consideration, compared to the baseline condition indicated by the solid line in the middle. A positive number (right of the middle line) means an increased likelihood to fund that policy.

Conclusion

This report captures the current state of how evidence-based practices are implemented by state government leaders and staff in the executive branch. The findings demonstrate both progress and challenges in adopting EBP among government decision makers. There is a growing recognition and awareness of the significance of EBP, and the "evidence-based" label is an effective tool for evaluating the quality of scientific evidence. This has immediate implications for how we talk about evidence-based practices to increase the likelihood they are funded by policymakers. Numerous obstacles and barriers persist, however, in incorporating EBPs into decision-making processes for state government leaders and staff. These challenges include integrating diverse types of evidence, lack of consensus of prioritizing scientific knowledge, information on the impact for various socio-demographic groups, and time and institutional constraints imposed by existing bureaucratic and political systems. Addressing these challenges will be crucial to further advancing the use of evidence-based practices in state government operations.



Appendix 1: Reported Barriers to Using EBPs from Interviewees in the Midwest State

Lack of time and resources for EBPs

- "But it is challenging. And then when session hits, when we're in the middle of legislative session, there's just so little time to do adequate analysis."
- "...we cannot do all of the research in the world or all of the literature reviews in the world to answer all of the questions that come up from state agencies. So we're not staffed to be a clearing house."
- "Honestly, a big barrier, huge barrier to me reading journal articles is I don't have access to them. No free access. So even if I wanted to do a search on a particular topic, I can't."

Lack of training in EBPs

- "We might say, oh, this would be a great policy and intervention, but nobody's actually trained in that model."
- "But here I am now with a pile of qualitative data, zero capacity to analyze it."
- "I think one reason why academic research probably isn't used as much as it could be is just because it's so dense, sometimes it's hard to understand. It's very complicated."

EBPs are not inclusive of certain demographic groups and do not integrate multiple ways of knowing

- "There's a number of issues related to that given that established evidence based practices don't often include persons of color or broader population groups and typically are normed around white standards."
- "...there were multiple community members who shared that evidence based to them. When they hear that they think white, they think two, they think quantitative, and they think that doesn't help my community. And it's actually a turnoff to them... They don't feel seen. And so in that way, I guess that's my only concern is if it's [the term evidence-based practice] thrown around a lot, it could be not inclusive or people have maybe negative associations attached with it."
- "I feel frustrated by it because it's a very white dominant culture way of knowing, and I just am not convinced that white dominant cultural way of knowing is something I should be working to adapt to my decision making."

Lack of consensus from political leadership & lack of supporting legal frameworks

- "But the people that are advocating for that or advocating based on the politics of fear and so their evidence and their data is based on news, reports and scare tactics and things like that...that type of evidence is very hard to counter because it hits you where it's hard to listen to the data."
- "...because decision makers are only around for two years at a time or four years at a time in the Senate, I think that hinders it because a lot of the policymakers, it's not that they're not swayed by it [evidence based decision making]."
- "...not everyone at the legislature is going to be motivated by data or information. "
- "... in my experience, they [legislators] are listening to their loudest advocates and it's all about the money or making a name for themselves, and then they try and justify it with evidence. But I don't think they're actually doing a scan of evidence and deciding what makes the most sense and then voting on that policy. That's not my experience."

Appendix 2: How Interviewees in the Midwest State Report Overcoming Barriers

Use community voices and integrate multiple types of evidence

- "So I think one of the most important data to me always is what are we hearing from community, from families, from people with lived experience."
- "To me the answer is that we not make decisions based on one person's story, but that we actually look for patterns across stories to help inform whether or not done that."
- "You just rely on, I don't even want to say the word anecdotal, but you rely on people's experiences, firsthand experiences, I guess. And you just give them the benefit of the doubt, I guess.... Unless it's something that's clearly not helping people."
- "I think it's a myth that culturally responsive programs do not are in contradiction with evidence-based. And I just feel that's totally a myth. Cultural responsiveness itself is an evidence-based concept."

Skim evidence, take shortcuts, or don't use evidence at all

- "But I've had to do research in those kinds of areas or just Google research because I haven't, in my, before when I was a policy lead, I didn't always have access to real research."
- "And sometimes we don't have that evidence or what the evidence we have is these group of people who would be impacted by this policy said it would work, so should we give it a shot?"
- "So they might not want to have an evaluation on their program because they're afraid that maybe the outcomes aren't that good, maybe there isn't great evidence on that program. So I think there is perhaps some reluctance or at least fear on the part of folks in government to have rigorous evaluations of their programs because they think that maybe that will undermine support for it."

Reliance on institutional knowledge, co-workers & outside entities

- "I rely on peers, on my supervisor, I consult I think I try to cast a wider net to help me try to find the evidence I need in order to make the right decision."
- "And also often we do contract with the university directly to do certain work. And so it's a way that we kind of sideways bring the research into the work by trusting that the research experts can help us do trainings or deliver services or bring it into the reports, into the work that we are doing."
- "So a lot of what I read are executive summaries from national organizations that have expertise"

Communicate with high-level information & be transparent about data limitations

- "So if I'm in charge, I will give myself the time that I need. If I am not, I will protect myself in the work product by making sure the caveats are very clear and explicit."
- "So I think we try to keep it as high level as possible, try to tell simple stories which can be difficult because sometimes the data is complex and doesn't always tell a simple story. But I think we do try to provide as clear narratives as we can and try to, if we do have data, try to present very simple graphs, very simple information to legislators because it's trying to compete with all the other advocates who are coming into a committee hearing to present their ideas and they have limited time to take in data."