# The role of bias in knowledge translation: Lessons learned from a dissemination of best practices in maternal opioid use

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## Abstract:

**Introduction:** Increases in opioid use during pregnancy fueled concerns among reproductive health advocates, policy makers, and providers in North Carolina, United States. A stakeholder group designed a set of knowledge translation (KT) interventions to increase the use of evidence-based practices across relevant health care and social service arenas. Efforts to decrease stigma was included as a best practice. Understanding the process and the contexts in which KT intervention activities occur can help increase their effectiveness. Toward that end, this study examined how stigma was addressed and how audiences responded to evidence-based messages. **Methods:** Data were collected over a seven-year period and included observations of KT activities (conferences, workshops, and community meetings), focus groups and interviews conducted with providers, and a review of publicly available documents, including KT intervention materials. Clarke's situational mapping was initially applied, and stigma emerged as a critical contextual element. Data were then analyzed to identify how stigma was addressed and how evidence-based messages were received. **Results:** Despite direct stigma-reduction messages, biases against maternal drug use and ambivalence toward evidence-based recommendations of harm reduction principles were found in audience responses. Findings also revealed tensions around the interpretation of knowledge and the appropriate implementation of best practices between "experts" and among practitioners. **Discussion:** Stigma and professional biases may serve as significant barriers to KT activities. Results suggest that even under the best of circumstances, evidence-based practices for highly stigmatized and controversial issues are difficult to disseminate and may require unique approaches.

**Keywords:** stigma | knowledge translation | evidence-based practice | perinatal substance use

## Article:

Knowledge translation (KT) is a complex, social process that includes knowledge generation and synthesis as well as adapting knowledge to local context, facilitating exchange between knowledge generators and users, and identifying and overcoming barriers to knowledge

utilization.[1–4] Defined this way, KT is more than just the movement of knowledge; it encompasses all that goes into transferring knowledge from one sector to another and covers thorny issues such as how practitioners understand knowledge that is generated, synthesized, and transferred as well as how they accept, interpret, and use that knowledge.[4] As a bidirectional exchange,[5] it should also include how knowledge generators perceive evidence and their relationship to the translation of evidential knowledge.

Bias is inherent in how knowledge is generated and understood. How practitioners make sense of knowledge is central to the translation of knowledge into action.[2] Therefore, it is important to understand the role bias plays in KT interventions. Although bias is not frequently studied within KT, it is a critical construct for understanding how interventions work. This study examined a naturalistic set of KT interventions to better understand the role of bias, as a contextual element, in how evidence-based messages were received.

## KT INTERVENTIONS

KT, a relatively young field, is rife with inconsistent terminology. Likewise, definitions of what constitutes a KT intervention are varied. At its broadest, a KT intervention can be conceptualized as "activities intended to increase KT at the level of practice, systems, and policies."[6] Research conducted on KT interventions usually focus on the transfer of knowledge around a packaged program or specific strategy within a single institution or type of institution.[4,7] However, many public health issues require strategies that favor process over programs and that reach across multiple institutions, including health care and social services.[8] Evidence-based practices are likely to have varying constraints and interpretations across settings and both health care and social service systems are complex, multifaceted, and rife with uncertainty.[9,10] This has a number of implications for translating knowledge. It means simple messages that come from a single source are not likely to be effective. Instead solutions are often complex and may seem unclear, with knowledge needed to implement change coming from different sources within and between organizations and disciplines.[11] Therefore, it is important to examine KT interventions designed to address multisector, complex, or "wicked"[12] health issues and that target practitioners across a variety of health care and social services.[3] Qualitative studies that examine the process of implementation and can identify important contextual issues affecting implementation effectiveness are critical in advancing KT research.[3,13]

Greig et al[11] argue knowledge is neither a product nor a commodity to be transferred between individuals but rather that organizational learning occurs collectively and socially within specific contexts. A potentially critical context is the socialization of practices and norms within disciplines and professions. In fact, professional identities and norms can be a potential source of resistance to effective KT.[4] When information that contradicts or refutes established practice within an organization and/or a discipline is presented, providers socialized within that discipline are likely to reject the new information rather than change their belief system.[14] In this article, we demonstrate how professional identities and norms can carry biases that may disrupt the translation of evidence into practice in a set of KT interventions focused on maternal opioid use.

## MATERNAL OPIOID USE

Maternal opioid use is a complex public health challenge. It makes an interesting case for studying KT interventions because of its complexity and the number of health and social systems it crosses. Addressing maternal opioid use requires joint efforts from a variety of professionals including researchers, clinicians, nurses, public health practitioners, and practitioners of other social agencies. Although many sustainable solutions have been identified, implementing them has proven to be a challenge. These challenges occur because of the complexity of the systems involved, the lack of committed resources, and from biases against both treatment strategies and women themselves.[15] Maternal opioid use is a particularly relevant issue because of the current opioid epidemic and the marked increases in maternal opioid use nationwide.[16]

Best practices in maternal opioid treatment center on harm reduction strategies, which are based on solid empirical evidence,[17] yet providers can find them counterintuitive. Many practitioners' first response to a pregnant woman's substance use is to promote abstinence or, at minimum, a significant reduction of use. However, the standard of care for maternal opioid use discourages tapering off, instead promoting regulated medicated-assisted treatment (MAT), in the form of methadone or buprenorphine.[18]

This study examined a set of statewide KT interventions designed to translate knowledge of best practices in maternal opioid treatment to practitioners in multiple health care and social service arenas. The aims of the study were to understand how stigma and bias was addressed in the KT interventions and how the intended audience received messages delivered through the interventions.

**NORTH CAROLINA'S RESPONSE TO MATERNAL OPIOID USE**

North Carolina has been particularly hit hard by the rise in maternal opioid use. Neonatal abstinence syndrome (NAS) rates increased from 2.7 per 1000 hospital births in 2009 to 10.5 per 1000 hospital births in 2017.[19] As rates of NAS started to rise across the state, small groups of stakeholders began meeting to discuss ways to address the issue. One group focused on exploring best practices. The group comprised of providers, researchers, and advocates, formed the North Carolina Pregnancy & Opioid Exposure Project (NCPOEP). The NCPOEP identified best practices for each step in the process of care, from how to screen women for substance use during prenatal care visits to how to screen and care for infants with NAS.

NCPOEP's efforts to translate knowledge of evidence-based practice to frontline providers included addressing both myths and misperceptions of harm reduction practices and stigma and judgment toward the use of MAT and pregnant women using substances. Because stigma directed toward pregnant women using opioids can be a barrier to obtaining health care and social services,[15] reducing stigma is itself a form of evidence-based practice. A set of KT interventions were implemented, including two statewide conferences, a pdf toolkit, a website, and a series of one-day workshops. A core group of 4 to 5 stakeholder members also attended multiple community and/or coalition group meetings and met with state policymakers on numerous occasions. Stakeholder members regularly presented at other statewide conferences targeting providers.

It is important to recognize that the authors identified and defined the set of KT interventions from activities performed across the state. Because it was not a fully coordinated effort, conceived in the same way by all parties throughout the activities, it represents how KT is enacted in practice settings rather than through a planned research design.[20] Naturalistic interventions, such as this one, can be messy and complicated. For example, not all parties worked together on the same issue; instead several overlapping agendas were pursued in different workshops, conferences, and meetings. Examining KT in naturalistic, practice-based settings can provide an important view into KT efforts.[3,4,21]

**METHODS**

Study Design

Data came from a larger grounded theory study designed to understand how care is provided to pregnant women affected by substances. Although the study examined substance use broadly, maternal opioid use became a central focus of discovery given the recent rise in opioid use. During the life of the study, a statewide response to maternal opioid use was identified and documented. The authors' institutional review board approved the study. The larger grounded theory study was implemented using intersectionality[22] and social constructivism[23,24] as theoretical lenses. The KT interventions case study was identified, and additional analyses were conducted to examine both how knowledge generators positioned knowledge being translated and how that knowledge was received by practitioners.

Applying an intersectional lens allowed us to examine the relational nature of multiple social locations and systems of oppression while acknowledging the historical and sociopolitical contexts in which these relationships exist.[22] This process illuminated stigma as central to our understanding of the set of KT interventions. A deeper examination into the intersections of stigma by gender, addiction, and harm reduction informed how we understood the ways stigma was addressed in the set of KT interventions and how the knowledge being translated was understood by practitioners.

Data Collection

Data collection occurred between November 2011 and October 2018. Observations, which comprise most of the data, were conducted at local and regional committee meetings (n = 13), program planning meetings (n = 7), and conferences, symposiums, and workshops (n = 5). Observations lasted between 60 and 90 minutes for meetings and 8 hours for conferences, workshops, and symposiums. Extensive field notes were taken at each meeting or event, with a focus on information being shared, questions raised by participants, actions proposed and/or taken, and identified issues that affected the population. Documents were collected at observation sites, including attendance sheets, informational handouts and slides, meeting minutes, and shared notices/emails. Publicly available documents on county-level and state-level initiatives and data were also collected as were newspaper articles, blog posts, and policy documents on maternal substance use and the evolving topic of a growing state and national opioid epidemic.

Nine one-on-one formal interviews and four focus groups were conducted with providers working with pregnant women who use substances. Providers were selected from members of a local community of practice and represented health and social welfare agencies as well as advocacy programs. Providers had been the recipients of KT intervention activities. On average, interviews lasted 45 minutes and focus groups lasted 90 minutes. Interviews and focus groups were audiotaped and transcribed verbatim. Semistructured guides were used to query participants on their experiences working with the population, challenges they faced providing services, and their work coordinating services with other agencies in the county. Three of the focus groups presented preliminary findings to better understand providers' perceptions of early interpretations from the study as well as to explore how providers related to the information being presented and the relevance of the information to their own work.

Analysis

Analysis began with immersion in the data through reading and rereading of transcripts, field notes, and documents. Initial memos captured early reactions and critical issues as they emerged. Open coding of field notes and transcripts was conducted, which led to a developed codebook for focused coding.[23] Research poetics,[25] a form of data reduction that can synthesize voices and perspectives across data points, was used to engage more deeply with the original data. Key passages relevant to service provision were identified in transcripts and field notes. Passages were condensed into stanzas to compare and contrast across participants and observations. This process led to the development of analytic poems that illuminated specific positions in the data, such as how information on methadone was disseminated. Simultaneously with coding and research poetics, situational and social arena mapping[24] was used to identify and integrate contextual issues. Memos were written throughout the study to document the coding and analysis process, identify and explore contextual issues as they emerged, and examine relationships between situational elements. Memos were reviewed periodically to capture categories and themes that arose across the life of the study. Examples include distinguishing the types of stigma addressed through the KT interventions and how providers reacted to disseminated information. Provider responses were examined through observations of question and answer (Q&A) sessions and during breaks as well as within discussions that arose in focus groups. A final step for the current case study included writing up a thick description of both what was delivered through the intervention and how providers responded to the messages. Findings are presented in that order.

**FINDINGS**

Oral Presentations

The KT interventions consisted of both in-person presentations and written materials disseminated through websites and toolkits. Presentations by experts in the field, which occurred at conferences, one-day workshops, and in regional coalition meetings, directly addressed stigma. Several types of stigma were addressed and positioned as key sources of interference in quality care for both mothers and infants. Presenters discussed stigma directed toward addiction, toward harm reduction approaches, and toward women themselves. Table 1 provides an overview of the information provided during presentations along with example quotes.

**Table 1.** Addressing Stigma Through Presentations

| Addressing Stigma | Description and Example Quotes |
|---|---|
| Addiction | Presenters used analogies to neutralize stigma, likening patients with addictive disorders to patients with less-stigmatized chronic conditions such as diabetes or hypertension and noted the inadequacy of treatment approaches that "use an acute treatment model for a chronic disease." |
| Harm reduction | Presenters discussed stigma surrounding MAT generally and methadone specifically. They provided the history of methadone use and described scientific studies on effectiveness of MAT in maternal opioid use. Presenters also described common arguments against MAT to refute them: "People think of MAT as counter-intuitive— why are we treating drug use with a drug? We're not. We're treating a brain disorder with medication." |
| Prevalence and impact of provider bias | Presenters shared anecdotes detailing effects of provider bias on the care of women and infants, with a focus on bias held against methadone and/or how provider knowledge of in utero methadone exposure led them to attribute all symptoms to that exposure. Presenters described how "methadone becomes a lightning rod" and how they "worked with nurses who see things that are not there because of mothers' methadone dose." |
| Types of drug use | Presenters made the point that not all women who use opioids during pregnancy struggle with addiction; some enter into drug use through prescribed medications often to deal with chronic pain. They explained the issue was not limited to one behavior or population; instead women may differ in (and move among) types of opioid use. |
| Judging pregnant women | Although some presenters directly stated pregnant women who use substances were stigmatized and considered "the worst of the worst," most did not mention stigma or bias directly but instead presented ways which women were "judged" by providers. Judgment was often normalized and situated as protectiveness toward infants. As one presenter explained "it is hard not to have feelings of blame against the mother." |
| Experiences of pregnant women | Across venues there was an effort to give women who had experienced maternal opioid use a chance to "tell their stories." These stories shared many similarities. Most women were recruited through addiction treatment centers and many of them were first introduced to opioids through legal prescriptions. Women's treatment entry timelines varied; some began treatment during pregnancy, some began after giving birth. Some had experienced loss of custody, but most had received gender-responsive residential treatment that allowed them to stay with their children. Several described being on a form of MAT noting that although they hoped to be off one day, they recognized they needed it to remain sober and to be a good mother. All of the women described feeling guilty. Most mentioned being judged by providers and family. |

MAT, medicated assisted treatment

Field notes collected during presentations show multiple instances of discussion regarding controversies and tensions within the field, which occurred along with more conventional evidence-based messages and explication about the role of stigma. For example, presenters, particularly researchers, would explain that while solid evidence exists for best practices, gaps remained in the research and/or study designs were not optimal. Presenters underscored gaps around the ethical issues that made the "gold standard" RCT studies impossible and problems with confounding factors, such as polysubstance use. Although many presenters, particularly researchers, made claims about there being "*plenty of hard evidence for decades,*" that supported best practice recommendations, they also often noted inadequacies within the studies.

There was also disagreement among researchers and biases presented about the "best" practices. At one conference, with presentations from national and international experts, points of fissure within maternal opioid treatment practices were highlighted when disagreement arose over

topics, such as treating infants with NAS, assessing infants for NAS, and making dosing decisions for pregnant women. Presenters agreed on an overall message emphasizing harm reduction strategies for maternal opioid use and the need to directly address stigma and prosecution for pregnant women who use opioids. However, presenters' interpretation of the research undergirding best practices varied. Another example illuminated in the data was a question related to treating pregnant women with methadone or buprenorphine. Some presenters reported buprenorphine was the better choice because it is easier than methadone to wean off, meaning that people who are addicted to opioids have a better chance of achieving abstinence. Other presenters suggested buprenorphine has a higher risk of relapse than methadone and thus should be avoided because of the detrimental effects relapse can have on the fetus. Rhetoric used by presenters often conveyed their bias. For example, one presenter stated she "thinks of buprenorphine as one of the flimsy magnets you get from doctors' offices—hold stuff on fridge but not much stuff."

Disseminated Materials

In contrast to the oral presentations, stigma was not as directly addressed in intervention materials that were disseminated through websites and toolkits. Instead, using nonjudgmental language was the primary focus along with establishing trusting relationships. For example, NCPOEP's toolkit stated: "Effective engagement of women requires that the professional use a trauma-informed approach and utilize non-stigmatizing language, such as 'person first' language." Examples of nonstigmatizing language used with motivational interviewing techniques were provided in a video on their website. Another document that detailed the standard of health care for the population had multiple references in using "a nonjudgmental approach," which included being "honest," "caring," and "respectful." Specific recommendations included "keep messages clear, simple, and realistic," "do not predict the outcome of a particular pregnancy," and "be sensitive to legal implications." An appendix provided scripted examples of nonjudgmental language, such as "I'd like to review lifestyle factors that may affect your health and the health of the baby, would that be ok?" - pause and listen.

Given the potentially wider reach of the disseminated materials, as compared with the oral presentations, it is not clear why stigma was not addressed directly. Promoting the use of nonjudgmental language in the absence of any attempt to contextualize the role of stigma as a barrier in accessing care and/or to change provider attitudes would seem to decrease the utility of the message. Likewise, although some examples were provided on nonjudgmental language, there was no guidance on developing trusting relationships or delivering compassionate care.

Provider Responses

Responses at Oral Presentations

Examining provider responses to presentations illuminated their beliefs and emotions around topics of harm reduction and maternal opioid use and provided further detail about the role of bias in KT interventions. A common response was to struggle with feelings of judgment against the mothers. For example, at the end of an hour-long presentation on the importance of

advocating for mothers, an audience member stated: "it was hard to treat the mother when their main concern was to protect the baby." She then asked the presenter if he could "speak to that and help them with it?"

Providers sometimes disagreed with practices being presented, which often connected with their feelings of negative judgment. A presenter at a one-day workshop facilitated an open discussion with the audience about a practice of sending infants diagnosed with NAS home and instructing mothers to administer their medication. Most of the audience had strong negative reactions to such a practice that was captured in the field note excerpt below.

The audience seems shocked and makes comments such as "it's bizarre." They question how they assure the child is getting what is needed. . . Another person says she does not agree with it: "this is scary." (Maternal Opioid Workshop).

Provider reactions were also captured in field notes describing informal conversations during breaks and lunches. The following example demonstrates how some providers distrusted information that contradicted their own experiences.

A perinatal social worker tells me she was having a difficult time with all she was hearing. . .she has heard things here that do not jive with her experience—she gives the example of meth addiction and women who are incoherent and how that doesn't jive with (the presenter's) research. (NAS conference).

Interactions at oral presentations proved somewhat double edged because they provided opportunities for knowledge sharing and creation about effective, ethical treatment strategies while also offering a platform for sharing biases. In this way, the in-person KT interventions at once more directly addressed the problems that stigma presented for effective care, while ironically offering an opportunity to share the very biases that undergird stigma against mothers who use substances during pregnancy.

Responses From a Regional Committee

The design of the study did not allow us to observe the same providers over time because they attended different conferences and workshops. However, there were multiple observations of a regional committee of providers, most of whom regularly attended and participated in events. This committee often invited experts to present on maternal opioid use. Most meetings included at least a few new participants. Although the group seemed to grow more knowledgeable as a whole, meetings centered on the same general questions. The core group of regular participants never took ownership nor did they share knowledge gained in previous meetings. Instead, there was often a sense that the information was new. In addition, when new members used biased, stigmatizing, and/or inaccurate language, such as "babies born addicted," the more "senior" members did not correct them or mention the importance of language use.

Even more striking were discussions among providers in a focus group conducted at the end of the four-year lifespan of the committee. During the group discussion, MAT, as a best practice, was contested with rationales often relying on intuition and biases over evidence. One provider

expressed such strong reservations that she said she stopped coming to meetings for a while because she never heard another position put forward, as detailed below:

I'm a recovery proponent and I struggle, here. . .I'm going to say what I have to say anyway, but I struggle with every single pregnant woman being put on methadone. I just struggle with that. Mainly because I know what the other side of that is. I know the relapses. I know the con jobs. I know the struggles the babies go through afterwards. (committee focus group).

Another participant reminded the group of a presentation that encouraged the use of MAT noting, "there is another side and it's backed by research" but was unable to articulate the specific benefits of MAT. This same participant stated that providing MAT was "almost like it was worse than not treating them" earlier in the discussion. Although at least one member defended MAT for women unable to go the abstinence route, engaging with practitioner intuition, which often manifested as bias against harm reduction approaches, seemed to exert a destabilizing effect. By the end of the focus group, there seemed to be a consensus among participants that we "just don't know enough" about several best practices. This was attributed to the lack of quality studies and the ambiguity of findings.

Likewise, during a breastfeeding discussion in a focus group of doulas trained to assist pregnant women using opioids, a participant expressed doubt over encouraging mothers on methadone to breastfeed. Although she had been presented with supporting evidence, it was contrary to her personal bias and thus difficult to accept. She felt "methadone during pregnancy was harmful but necessary but believed that mothers should not breastfeed."

**DISCUSSION**

The set of KT interventions were proactive and cutting edge, engaging in activities that promoted knowledge acquisition, discussion, and collaboration. Stigma was a focal point in interventions disseminated through oral presentations. Participants and presenters seemed committed in reducing stigma in practice even as some held biases toward best practices that included harm reduction techniques. There was a concentrated effort to address stigma through education, empathy, and exposure. However, some methods of presenting information, along with the normalization of judging women for perinatal substance use, may have inadvertently substantiated participant bias and reinforced stigma against women with substance use addiction disorders. Applying an intersectional lens[22] to the development of intervention messages may alleviate this in the future.

Although the NCPOEP identified stigma as a barrier in accessing and receiving appropriate care, they did not seem to consider its effects on providers' ability to receive the knowledge. There was evidence that some providers did not completely "buy into" evidence-based messages, particularly messages that promoted harm reduction practices, and this lack of buy-in allowed individual bias to become part of—instead of contested by—KT activities. Research has demonstrated that physicians hold stigmatizing attitudes and resist harm reduction practices promoted for curbing the opioid epidemic, even when they agree with the evidence.[26] Research has also found resistance to new knowledge can stem from providers' personal experiences and professional norms.[3,27,28] For example, NICU nurses may experience conflict between

professional values, such as nonmaleficence toward mothers, and discipline-based beliefs about what is best for the infant.[29] Similarly, many addiction counselors, through training and personal experience, have strong beliefs about promoting abstinence-based recovery.[27] Understanding the role discipline-specific identities, norms, and biases play in the uptake or resistance to evidence-based practice may be especially important in complex public health concerns that cut across multiple service arenas.

KT interventions must account for beliefs, emotions, and the role of bias. NCPOEP's KT interventions used a variety of strategies in their attempts to both illuminate and refute stigma associated with both harm reduction strategies and perinatal substance use. Yet, some frontline providers still struggled with bias against the population and/or harm reduction practices. In addition, presenters disseminated mixed messages about controversial practices, with several acknowledging the lack of "quality" studies underlying the evidence. These messages combined with individual biases, may have allowed providers who struggled with biases to disregard best practice recommendations.

It is important to note that this set of KT interventions was not disseminating a packaged program or a specific protocol within a bounded system. Instead, they were disseminating best practice strategies and guidelines in an attempt to affect daily decision making of frontline providers across disciplines and institutions in health care and social services. Naturalistic interventions, such as this one, are rarely studied in KT research.[3,4,21] Yet, they may play an important role in the promotion of evidence-based practice through the community level. Although providers exposed to this set of interventions may have resisted some of the best practices, the collective effort of the KT interventions raised awareness of the issue, increased knowledge of best practices across the state, and fostered new programming within specific counties. A number of follow-up activities, including a Project ECHO (Project Extension for Community Health Outcomes)[30] focused on perinatal substance use, occurred after the original KT interventions concluded. Future studies may need to develop alternative evaluation methods to capture the full effect of these types of interventions.

Limitations

Audiences at oral presentations and regional meetings were frontline providers who chose to attend the conferences, meetings, and workshops. Most professed a vested interest in helping the women and acknowledged problems of stigmatization. Continuing education credit was offered at most of the events, and this may have attracted some providers with little investment in stigma reduction. On the whole, however, it is likely participants did not represent the "average" health care or social service provider working with the population. Despite an audience that was likely to be more open and receptive to stigma reduction messages, the study still provides examples of providers rejecting or downplaying the importance of evidence-based practice when it contrasted their beliefs and experiences. They struggled with their own biases against and intuitions about maternal drug use. Many also struggled with biases against harm reduction approaches. Therefore, the study likely under represents the degree that stigma and bias can affect KT interventions.

**CONCLUSION**

To truly translate knowledge, we need to understand and apply what we know of how knowledge is learned and how beliefs are changed.[7] We learn in interaction with one another, over time, as providers work together and solve problems.[31] Relationships are a key to successful KT. This includes relationships between generators of research evidence and practitioners or policymakers but also relationships within communities of practice. Project ECHO has been suggested as a promising approach for knowledge exchange[30] that may be particularly salient for stigmatized issues and marginalized patients. More research is needed on both the process and effectiveness of knowledge exchange activities, such as Project ECHO, that allow for providers to grapple with discipline-specific biases and beliefs.

Stigma and bias are barriers to the uptake of knowledge associated with best practices for harm reduction techniques in maternal opioid use. Reflexivity that simultaneously scaffolds synthesis of different types of knowledge, including experiential, and questioning of individual beliefs may be a critical component that is often left out of KT interventions.[3] Addressing best practices and evidence-based decision making within a community of practice combined with reflexivity may be our best approach for delivering compassionate and trustworthy care to woman affected by opioid use during pregnancy.

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**Lessons for Practice**

- Contextual elements, such as bias, are critical considerations when designing KT interventions.
- Stigma is not just a barrier in accessing services but also a barrier in getting evidence into practice.
- KT interventions should provide opportunities for practitioners to reflect on personal and discipline-specific biases as well as grapple with and adapt proposed strategies.

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