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Steps for Implementing Measurement-Based Care: Implementation Planning Guide Development and Use in Quality Improvement

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Although the benefits of measurement-based care (MBC) are widely noted, MBC remains underutilized in mental health services. In 2016, the Department of Veterans Affairs, Veterans Health Administration began the MBC in Mental Health Initiative to implement MBC as a standard of care across VHA mental health services. Subsequently, in January 2018 The Joint Commission (TJC) revised their behavioral health care standards to require implementation of MBC. Based on key informant interviews with early adopters across VHA, we developed an MBC Implementation Planning Guide to support implementation of MBC in diverse mental health settings. In this article, we present the MBC Implementation Planning Guide, describe how it was developed, and suggest a process for its use by implementation teams within an overall quality improvement framework to support implementation of MBC consistent with local context and TJC requirements.

Keywords: measurement-based care, routine outcome monitoring, quality improvement, implementation planning guide

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There has been a recent impetus to improve the quality of mental and behavioral health services through the implementation of measurement-based care (MBC; Institute of Medicine, 2006; The Kennedy Forum, 2015). MBC is the systematic process of

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collecting patient self-report data throughout the course of care and using that information to monitor treatment progress, assess outcomes, and share data with patients to inform shared, clinical decision making over time (e.g., Howard, Moras, Brill, Martinovich, & Lutz, 1996). Despite well-documented benefits of MBC within mental health (e.g., Dowrick et al., 2009; Knaup, Koesters, Schoefer, Becker, & Puschner, 2009; Poston & Hanson, 2010) and high-profile calls to action (Norcross & Wampold, 2011; The Kennedy Forum, 2015), implementation of MBC in mental health has yet to be optimized.

Recently, Lewis and others (2018) proposed a 10-point agenda to enhance the use of MBC in routine clinical practice and highlighted the importance of identifying strategies to further support implementation of MBC. Consistent with this goal of developing strategies to support implementation of MBC, the purpose of this article is to provide readers interested in implementing MBC in mental health with a step-by-step MBC Implementation Planning Guide adaptable to their local settings. We describe how the guide was developed, and present readers with a suggested process for using the guide within the context of local quality improvement initiatives.

Evidence for MBC Implementation

There are multiple, well-documented benefits of implementation and utilization of MBC in mental health (MH) services. For example, consistent monitoring of self-report data over time has been demonstrated to improve outcomes (e.g., Hawkins, Lambert, Vermeersch, Slade, & Tuttle, 2004), increase patient-provider communication, enhance patient involvement in and understanding of care, and improve treatment fidelity (Dowrick et al., 2009; Eisen, Dickey, & Sederer, 2000; Knaup et al., 2009; Lambert, Harmon, Slade, Whipple, & Hawkins, 2005; Poston & Hanson, 2010). There is evidence that both providers and patients benefit from the incorporation of MBC into routine practice, with patients reporting that tracking progress on measures over time is a positive and affirming experience (Dowrick et al., 2009; Eisen et al., 2000; Hawkins, Baer, & Kivlahan, 2008). Simultaneously, MBC provides a context to initiate and guide patient and provider conversations about lack of symptom improvement or regression, leading to shared decisions about treatment plan modifications and changes in care (Lambert, 2017). It is well documented that reliance on clinical judgment alone often results in failure to correctly identify deterioration of functioning often leading to continuation of ineffective interventions (e.g., Hatfield, McCullough, Frantz, & Krieger, 2010; Vinson, Turner, Manning, & Galliher, 2013). The benefits of using standardized self-report measures to recognize lack of progress or deterioration may be especially beneficial early in care (Lambert, 2017). Based on the well-described empirical support, MBC has been identified as an evidence-based practice by the Presidential Task Force on Evidence-Based Therapy Relationships (Norcross & Wampold, 2011) and a national call to action establishing MBC as the standard of care in mental health has been issued (The Kennedy Forum, 2015).

The benefits of MBC are applicable beyond the individual patient and provider level, as data can be used as part of routine outcomes monitoring (ROM), by aggregating patient-level data to inform panel, clinic, and system level quality improvement initiatives. MBC can also inform quality improvement initiatives by identifying potential disparities in service delivery for specific populations and may be helpful for professional development (Pinner & Kivlighan, 2018). Further, the use of ROM is increasingly becoming relevant to third-party payers (Fortney et al., 2017; Sederer, Hermann, & Dickey, 1995; Smith, 1996) and external accrediting organizations (Scott & Lewis, 2015). Taken together, expanding the use of MBC has the potential to improve the quality of mental health services, including benefits for patients, providers, health care delivery systems, third party payers, as well as regulators and accrediting organizations (Institute of Medicine, 2006; The Kennedy Forum, 2015).

Despite these benefits and cross-system relevance, barriers to implementation remain. In 2015 it was reported by the Kennedy Forum that only 11% of psychologists and 18% of psychiatrists across the United States routinely use patient self-report symptom outcome assessments (The Kennedy Forum, 2015). Van Der Wees and colleagues (2014) documented two primary challenges to routine use of MBC; these include the highly complex processes required to initiate systematic routine data collection and potentially conflicting purposes for use of MBC across various stakeholders. Further, administrative burden such as increased time and paperwork combined with limited resources have been identified as specific barriers to MBC implementation (Hatfield & Ogles, 2007). In addition to these system and organizational level challenges, barriers to implementation of MBC have been identified at both the patient (e.g., concerns about how information is being used) and provider level (e.g., overreliance on clinical judgment; Lewis et al., 2018). As with any innovation with a substantial evidence-base but limited clinician uptake, implementation assistance (e.g., technical assistance) using a flexible, evidence-informed implementation framework, including tools and resources designed to address known barriers to implementation, may be helpful to bridge the research to practice gap. More specifically, as part of their 10-point research agenda and recommendations for clinical practice to support MBC use, Lewis and colleagues (2018) emphasized the need to provide multifaceted or blended implementation strategies, which can be tailored to address local barriers.

MBC Implementation in the Department of Veterans Affairs

In 2016, as part of ongoing quality improvement initiatives, The Department of Veterans Affairs Health Administration (VHA), launched a large-scale, multiphase initiative to implement MBC across VHA mental health as the standard of care (Veterans Health Administration, 2017). Shortly after the launch of the MBC initiative within VHA, The Joint Commission (TJC) revised their standards related to the assessment of outcomes to require the use of standardized tools or instruments for all programs accredited under the Behavioral Health Care Standard (The Joint Commission, 2017). The updated requirements emphasize that data from these tools must be used to track individual progress and to inform collaborative, treatment decisions as part of MBC, and requires that organizations use these data for ROM. TJC also notes the need to consider the process of implementation through a general change management or quality improvement approach (The Joint Commission, 2017).

Rationale for the MBC Implementation Planning Guide

To support the implementation of MBC, the authors sought to develop an MBC Implementation Planning Guide for use by local quality improvement teams. Tools that support this type of process have multiple names in the quality improvement and implementation literature, including, but not limited to, implementation planning guides, implementation checklists (Fortney et al., 2009), planning or implementation worksheets, toolkits, and roadmaps; these terms are often used interchangeably (Ritchie et al., 2017). For the purpose of this article, we have selected the term MBC Implementation Planning Guide and will use this term to refer specially to the tool intended to be used as an adaptable local resource.

Implementation planning guides are frequently used to support implementation of evidenced based practices, or innovations that require substantial organization change, including adaptations to operational flow, provider behavior, and other existing structures and processes (Ritchie et al., 2017). Implementation planning guides are intended to be used as tools to guide local implementation or quality improvement teams through a planned sequence of steps, ultimately enhancing successful and sustainable implementation (Fortney et al., 2009; Ritchie et al., 2017). Therefore, the MBC Implementation Planning Guide provides a series of steps with corresponding decision points and suggestions. These steps and decision points provide local implementation teams a pathway for collaborative conversations about program development tailored to their unique context.

The MBC Implementation Planning Guide was based on data obtained from interviews with VHA MBC early adopters. We used the integrated-Promoting Action on Research Implementation in Health Services (i-PARIHS) framework (Harvey & Kitson, 2016) to provide a theoretical foundation for analyzing interview data and identifying relevant themes and implementation steps.

The i-PARIHS framework provides a useful theoretic model to guide and inform the implementation and sustainment of MBC. Based on the tenets of i-PARIHS, successful implementation of MBC, or any innovation, results from the facilitation of the innovation being implemented, with the recipients (individuals and teams) in the inner (i.e., local) and outer context (Harvey & Kitson, 2016). Thus, successful implementation is influenced by internal contextual features such as leadership support, organizational priorities, organizational culture, and external contextual features such as policies, incentives, and mandates. Features of the innovation itself, such as complexity, usability, extent of evidence (research and experience), influence implementation as well. The motivation, values, goals, beliefs, time, and resources of those implementing (i.e., the recipients) also influence implementation. The framework identifies implementation facilitation as a fourth domain, which is the active process to support successful implementation (Harvey & Kitson, 2016). For example, it is through the application of implementation facilitation that existing barriers in context, recipient, or associated with the innovation itself can be overcome. Implementation facilitation is a bundled set of implementation support strategies (e.g., academic detailing, audit and feedback, formative evaluation, and marketing) applied to support locations with significant implementation barriers associated with either context, the innovation, or recipients allowing the site to overcome the barriers and achieve implementation. i-PARIHS also provides a useful framework through which processes associated with the implementation of MBC can be documented, reviewed, and expanded upon to enhance larger-scale implementation. Thus, i-PARIHS informed our work and is integrated within each step of the planning guide, ensuring that users will have access to step-by-step decisions points incorporating key factors known to influence implementation.

Method

The overall structure for the MBC Implementation Planning Guide was based on existing implementation planning guides, developed as part of prior initiatives to implement evidence-based practices (e.g., Fortney et al., 2009; Landes et al., 2015; Ritchie et al., 2017). The format was based on an implementation planning guide designed to enhance implementation of evidence-based practices for posttraumatic stress disorder (PTSD) developed through a joint VA/Department of Defense (DoD) collaborative initiative (McGee-Vincent et al., 2015). This project was reviewed by a local medical center Institutional Review Board (IRB), which determined the project was not human subjects' research and met the qualifications for IRB exemption.

Participants

To identify the specific steps necessary to support MBC implementation across MH treatment settings, two of the authors conducted qualitative interviews with eight MBC early adopters at six VA facilities. We defined early adopters as key informants at locations that demonstrated high use of MBC in mental health before the national initiative and policy mandates. Prospective sites were identified from a list of locations with high levels of implementation of MBC in mental health, defined as having administered two or more measures for depression (Patient Health Questionnaire 9; Kroenke, Spitzer, & Williams, 2001), anxiety (Generalized Anxiety Disorder-7 (GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006) substance use disorders (Brief Addiction Monitor; Cacciola et al., 2013) and/or PTSD (Posttraumatic Stress Disorder Checklist for *Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition* [*DSM–5*]; Blevins, Weathers, Davis, Witte, & Domino, 2015) during a 6 month period to the same Veteran. Letters were sent to mental health leadership asking them to identify the clinic where this was occurring and a key informant that could describe the institution of MBC. The early adopters identified were primarily front-line clinical staff who were not in full-time leadership positions.

Data Collection

Interview guide development. A semistructured qualitative interview guide was developed and used throughout these interviews (see Table 1). The interview guide was informed by the i-PARIHS framework and early adopters were specifically asked questions aligned with the factors that influence implementation, including items about context, recipients, and features of the innovation (i.e., MBC) such as differences in the application based on location features and the measures selected.

Two of the authors conducted qualitative interviews by telephone using the interview guide. One author interviewed partici-

Table 1
Measurement Based Care Early Adopter Interview Guide and Associated i-PARIHS Domains

i-PARIHS domains	Interview items
Context and recipient	1. We contacted you because an analysis of administrative data suggested that your site has been actively using standardized measures as part of clinical care. Which program(s) at your facility are actively using standardized measures? Which one of these does the most (or which one of these are you most familiar with)?
Innovation	2. For how long have you been utilizing these standardized measures in clinical care (e.g., as part of MBC)?
Context, recipient, and innovation	3. What were the motivators behind implementing MBC?
Context and recipient	4. In what settings are MBC being used (both clinic type and what level of care)? What proportion of clinicians is using the measures in those settings?
Innovation, recipient, and context	5. Do you have a standard protocol for administering measures? What measures are used, with whom, and on what schedule; how many patients are experiencing MBC?
Innovation	6. How do you collect the data from the veteran? (paper, kiosk, MHA, tablet, etc.)
Context, recipient, and innovation	7. Does all of the data collected by all participating clinicians get into the medical record? To MHA? To VISTA? (e.g., the underlying administrative database associated with the VA electronic medical record)
Context	8. How do you use the measures (incorporate into veteran care, program evaluation, etc.)?
Context, recipient, and innovation	9. Tell me about the steps you went through to implement MBC?
Context, recipient, and innovation	10. Do you have any lessons learned from the implementation process?

Note. i-PARIHS = integrated-Promoting Action on Research Implementation in Health Services; MBC = measurement-based care.

pants and took detailed notes, while a second author typed complete responses. After the interview, notes were added to the transcript, and the final document was reviewed by both authors for accuracy.

Implementation steps. We asked early adopters to report the process of implementation of MBC at their local program, including specific steps and decisions they made as they worked toward full implementation. Early adopters were asked to walk through each step they took to implement MBC, beginning with the planning phase, and through implementation and sustainability.

Overarching themes. To identify the barriers and facilitators to implementing MBC, each early adopter was asked detailed questions about their MBC program. The interviewers asked a series of MBC implementation questions (see Table 1), aligned with i-PARIHS constructs of recipient, context, and innovation.

Data Analysis

The data collected in the interviews were analyzed for two related but distinct purposes: first, to understand the concrete implementation steps each early adopter took to implement MBC at their setting, and second, to identify how early adopter sites addressed barriers and facilitators that influenced MBC implementation. The implementation steps early adopters described were synthesized and translated into the distinct steps in the MBC Implementation Planning Guide. The overarching themes helped to inform the guidance provided along with each step, including key decision points for each step, and guidance for how to use the Implementation Planning Guide as part of a larger quality improvement process. We defined overarching qualitative themes as information about constructs that influenced the MBC implementation process, including lessons learned, facilitators and barriers related to context, recipients, and the innovation that were described during our interviews distinct from specific implementation steps. Steps were defined as the responses we received, when interviewees were directly asked to describe the specific steps they went through to implement MBC.

Implementation steps. The interviewers synthesized the implementation steps identified by early adopters and created an initial draft of the MBC Implementation Planning Guide. This draft was then reviewed and edited by all authors. The authors collaboratively arranged the steps into a sequential implementation order.

Overarching themes. One interviewer combined answers to like questions across participants into a table. The interviewers then independently identified overarching qualitative themes recurring across interviews related to how sites addressed, or recommended addressing, barriers and facilitators that influenced implementation, reaching consensus when there was disagreement. Rather than discussion about distinct implementation steps, this data included descriptions about lessons learned, as well as facilitators and barriers related to context, recipients, and the innovation. Once thematic saturation was reached, the final themes were organized into a table form using the i-PARIHS framework. Themes were then framed as recommendations for influencing implementation and helped to inform the guidance provided along with each step, as well as guidance for how to use the Implementation Planning Guide as part of a larger quality improvement process.

MBC Implementation Planning Guide

The MBC Implementation Planning Guide (Figure 1 and expanded version in supplemental material) is a synthesis of all data sources, with the implementation steps creating the structure, and the overarching themes providing additional context for decision making. The guide is designed as a worksheet, deliberately including columns for implementation teams to document local decisions, action items, time frame, and responsible parties. Below we first provide an overview of the overarching implementation themes, and then present the MBC Implementation Planning Guide steps and user guidance as a process for guiding MBC implementation.

Results

Overarching Qualitative Themes

Themes that emerged from qualitative interviews with early adopters to facilitate implementation of MBC (see Table 2) include

MBC Implementation Planning Guide

Quick Start

- Completing an implementation plan was identified as a key step to success during within the Department of Veterans Affairs MBC in Mental Health Initiative.
- There are many key decision points for the implementation of Measurement Based Care (MBC). You and your site/clinic get to decide who/what/where/why/when/how to implement MBC in a way that fits for your setting.
- Many sites have found that working through the document below helps them to brainstorm different decision points and create a plan towards successful MBC implementation.
- It is best to fill out the plan with input from everyone on the team who will be involved in MBC. The best way to do that is to complete it collaboratively during staff meetings, but it also can be shared via email using edits made using track changes.
- The plan works best when it is reviewed regularly in team meetings and revised as needed. You should consider it to be a "living document" that changes over time as you learn more about what works for your setting.
- Overwhelmed? Start by circling 2-3 items on the plan that you/your team anticipates can be completed first.
- **REMEMBER: There is no wrong way to fill out the implementation planning guide!**

Site:

Identified Lead:

Steps	Actionable Items/Examples*	Plan (including timeframe, who's in charge and potential barriers/notes)
1. Identify Setting and Participating Staff • Clinic(s)/Team(s) • Local Lead • Participating Providers	• Identify setting(s): _____ • Identify Local Lead" _____ • Determine staff to participate: e.g., LCSWs, Psychiatrists, Psychologists, Addiction Therapists, trainees, admin support staff, etc. o *We strongly encourage participation of as many providers as possible*	*We recommend doing this ASAP!* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
2. Engage & Train Staff	• Engage all staff through meetings and communications. • Ensure all staff completes all MBC training as needed. Training includes basic MBC concepts, clinical interpretation of selected measures, and local SOPs. • Determine which staff will be involved in Implementation Planning process (a meeting to complete the rest of this sheet) o *Recommend as many participating staff participate in implementation planning as possible*	*We recommend that staff is trained up within 60 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:

Figure 1.

Steps	Actionable Items/Examples*	Plan (including timeframe, who's in charge and potential barriers/notes)
3. Determine MBC Start Date	• Identify start date for MBC o Recommend starting ASAP (e.g., complete this plan and be up and running with each of the components within 90 days) o It is ok to have kinks in the plan- this is about learning together not about doing it perfectly. o Some sites with several barriers or more complex implementation plans have opted for a phased approach- starting with a more bare bones implementation plan for the first few months and then adding more measures, etc. later on.	*We recommend doing this within 90 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
4. Decide how to Engage and other stakeholders	• Identify how clinic/team will collect and incorporate stakeholder input/feedback on implementation of MBC. (e.g., Random selection to complete a satisfaction survey on the MBC process, coordination with consumer Councils, consultation with advisory boards and other stakeholder groups).	*We recommend doing this as soon as possible to assist with your implementation planning, but within 90 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
5. Determine Who to be Assessed	• Identify population to receive MBC o All served by participating providers/programs or clinics o Subset of population (e.g., those engaged in new episodes of care, group tx, individual tx, those who screen positive for specific diagnoses, etc.) • *Recommend initiating MBC with those engaged in a new episodes of care since changes in outcomes are more likely to occur and be reflected in outcome measures earlier in treatment* o Other_____	*We recommend doing this within 45 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
6. Determine Measures & Frequency	• Select Measures o PHQ-9 o GAD-7 o PCL-5 o BAM-R o Other_____ *For programs that are accredited under the Joint Commission (TJC) Behavioral Health Standards: TJC requires at least one standard measure used for all in the program.* • Determine timing of measurement (*encouraged to be at least every 30 days)* o Intake into clinic? o Post treatment? Mid-treatment? o Every relevant MH encounter? o Clinical judgment? o As recommended by a particular roll out that clinic has been involved in? o Other predetermined intervals? If so, document_____	*We recommend doing this within 45 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:

Figure 1. (continued).

Steps	Actionable Items/Examples*	Plan (including timeframe, who's in charge and potential barriers/notes)
7. Determine Administration Process: Method, Who, and When	• Determine method to administer measures o Paper survey o Computer (Secure Desktop) o Provider reading aloud o Other _____ • Determine who administers (this may be redundant depending on response to previous question) o Provider o Other staff (e.g. admin support, trainees) o Other _____ • Determine timing of when administration happens during visit: o Lobby, before session o In session with provider o Different at intake/first visit than subsequent visits? o Other _____	*We recommend doing this within 90 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
8. Determine Method of Documentation within a standardized tracking system and Who Documents	• The team must select a standardized tracking system - Spreadsheet - Commercially available product - Other:_____ • If administration method is paper/pencil or otherwise not directly linked to data tracking system, identify who will enter the data: o Provider o Other clinical staff o Administrative support o Other_____ • When will data entry happen? o At time of administration o Other _____ *In cases where the data is collected via paper/pencil, the timing of the data entry is crucial. Optimally data entry will occur within 24 hours of the data collection.*	*We recommend doing this within 90 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
9. Determine Clinical use of MBC	• Based on data collection method, determine if scores can be available at time of visit • How will you know that all providers have competency to use the selected measures? • Create standard operating procedures (SOPs) to ensure appropriate follow-up care with LIPs and/or urgent care when results from measures indicate that care is needed outside the provider's scope of practice o How will you ensure that all providers are trained on clinically appropriate follow-up when scores/items require intervention?	*We recommend doing this within 60 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:

Figure 1. (continued).

Steps	Actionable Items/Examples*	Plan (including timeframe, who's in charge and potential barriers/notes)
10. Determine how data will be aggregated and how aggregate data will be used	• Programs that fall under Joint Commission standards will need to aggregate MBC data. Other programs may elect to do this as well. • Determine what measures will be aggregated and what time points will be reviewed (e.g., admission, during treatment, discharge, post discharge). • Determine how data will be extracted and aggregated. What tools are available to support aggregating data? • How frequently will aggregate data be reviewed? • At what level will aggregate data be reviewed (team, program, facility)? • What staff will participate in review of aggregate data? • What role will data play in quality improvement efforts?	*We recommend doing this within 60 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
11. Defining MBC Success	• Identify why this is important; what are your clinic/team's goals and how would you define success?	*We recommend doing this within 60 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
12. Develop implementation support plan	• Identify ways that leadership can support and encourage participants • Examples of additional support: o *Provide recognition for participating providers.* o *Consider site-specific resources that may be available to support implementation (e.g., admin support, dedicated time for local champion during initial implementation phase, budget support for MBC support materials, e.g. color printers, clipboards, etc.).* o *Provide opportunities for participants to present to local leadership on progress.* • Identify frequency/format of meetings for clinic implementation team to self-assess progress, navigate any barriers, celebrate successes (e.g., MBC implementation becomes a boilerplate agenda item on team meetings). • Determine which staff will join support conference calls/Community of Practice calls calls (Local Lead, others?). • Other ideas _____	*We recommend doing this within 60 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:
13. Determine how to Sustain MBC	• Develop Standard Operating Procedures (SOP) for MBC (=this document as it evolves) • Celebrate small gains • Celebrate implementation of MBC. • Consider creating a sustainability action pan	*We recommend doing this within 90 days.* Timeframe: _____ Who's in charge: _____ Potential barriers: _____ Notes:

Figure 1. (continued).

Table 2
Sample Early Adopter Quotes by Overarching Qualitative Themes Influencing MBC Implementation and i-PARIHS Domains

Overarching qualitative themes	i-PARIHS domains	Sample early adopter quotes: Including lessons learned, and practical guidance to overcome barriers in associated i-PARIHS domains
Be collaborative	Context and recipient	"Involve the providers and engage them in coming up with their own plans and not be top-down. Don't make this a mandate from above, it may not meet our needs. If we can't make it relevant to front-line providers, they won't want to do it. Work collaboratively to design a process that works for front-line clinicians. Focus on efficiencies that can be gained—how processes can be changed to help them work at the top of their professions if they'd be willing to use screening."
	Context	"Use carrots not sticks. Not another thing that will be imposed on them."
	Recipient	"Do not dismiss all of the players/stakeholders. Team coordinators and clerk supervisors—they need to know that this is how we make decisions about care—are they in the right place, do they need more care? Once they understood that this was about care, they were willing to help."
	Context and recipient	"You don't want to waste their time. We constantly roll things out without attention to the line level. It's just disastrous. How is this really going to work in the clinics? If it's mandated it will be a rocky experience."
Ensure measures are targeted (actionable)	Innovation	"It's very easy with our research hats to make a too-long battery of measures. We need to be targeted and keep the battery short."
	Innovation	"I've been hearing things about functioning measures which is great—and consistent with the recovery movement. But remember—in the PTSD clinic we care about PTSD symptoms. Needs to be targeted."
	Innovation and recipient	"The main mistake—thinking you're going to measure a whole bunch of stuff and that things will get better. Need to find measures, support staff and clinics that will help them do something that they actually want to use. It's not going to work unless you think about what changes you expect will happen and then select the measure that will help you get there."
Provide vision and rationale	Context	"Contextual information—why we're doing it is so important. During team meetings we talk about successes—who's got a win (e.g., high change score). We talk about it all the time, try to make it part of the culture."
	Context and recipient	"Know that you're a stranger in a strange land, but you need to fully understand WHY. Won't be buy-in unless you can really help to communicate that."
Provide vision and rationale, and provide training and mentoring	Context and recipient	"Need to continually provide education to help providers understand why we do this. People need to be continually exposed to this—including leadership. Constant vision about where we want to go."
Provide training and mentoring	Recipient	"Clinicians were reinvigorated by the training and spread the enthusiasm at their clinic."
	Recipient and context	"Mentoring is important. We have someone paired with a mentor for a full year when they first start here. It's part of the learning process to learn how we do it here."
Pay attention to quality and format	Innovation	"We wouldn't put in data that seems very inconsistent with what the Veteran reports. We should have some way to include whether or not the data is valid (for whatever reason)—a checkbox that states that the data shouldn't be included."
Develop local champions and provide protected time	Context	"Champions are really important. Need to have one at each site with time allotted to support others. One champion as able to use her involvement in to get a promotion. Very much need to see how the data is used in clinical care to make sure that providers see why they're doing it."
	Context	"Need good management. There needs to be enough time for supervisors and administrators to really manage the clinic. Can't do this kind of supervision with the amount of admin/supervisory time it really takes to do this well."
Minimize potential for an over-emphasis on mandated outcome data	Context	"Worried about people 'gaming' outcomes. We have to be careful because human nature can take over for providers and they may skew data and reporting. If we mandate PCLs and it becomes a performance measure, I worry that people with game the system."
	Context	"You can't mandate good care."
	Context	"This can turn into 'just another thing to do.' Recent emphasis on smoking cessation and diabetes are examples of additive reporting requirements. You should not add a requirement without taking another away."

the need to: (a) be collaborative; (b) ensure that measures are targeted to individual patients and are actionable; (c) provide vision and rationale, and routinely communicate the vision and rationale to all stakeholder; (d) provide sufficient training and mentoring in the incorporation of MBC into clinical practice; (e) pay attention to data quality and format; (f) develop local champions to promote MBC; and (g) provide protected time for activities related to implementation. Concerns also emerged about the potential for an overemphasis on mandated outcome data and the potential misuse of data. Sample quotes from the

early adopters within each theme are provided within Table 2 and aligned with the most relevant i-PARIHS domains.

MBC Implementation Planning Guide Steps and User Guidance

Thirteen distinct steps emerged from the interviews to become the MBC Implementation Planning Guide action items (see Figure 1). Overarching themes were integrated with the action items to provide context and key decision points. Below we describe each step and suggest how implementation teams can use the guide for their local planning.

Step 1: Identify setting and participating staff: Clinics/ teams, leads, and participating providers. In small clinics the setting may be obvious. However, in larger systems or hospital settings, it may be important to clearly define the exact clinics, programs, or services that will be actively engaged in implementation. As the clinic setting is identified, it is important to identify which staff will be involved in the process, including identification of a local lead or champion to spearhead and guide the local process.

Step 2: Engage and train staff. Based on the themes that emerged in the qualitative interviews and consistent with implementation literature (Kitson, Rycroft-Malone, Harvey, McCormack, Seers, & Titchen, 2008; Ritchie, Dollar, Kearney, & Kirchner, 2014), Step 2 builds on the importance of obtaining early engagement from staff members and including multiple stakeholders in the design process. Early engagement and active stakeholder involvement in planning and decision-making combines top-down and bottom-up approaches, creating system-wide synergy through a collaborative process. Plans should be developed to engage and train all staff members, including both those who will be directly involved, as identified in Step 1, and those who are not involved in the initial implementation process, but may have supporting roles or work in programs that will interface with services implementing MBC. The implementation team should identify the strategies for engagement and training, understanding that the amount of information and training required will vary based on the role of specific providers and should be adjusted accordingly (e.g., Ritchie et al., 2017). For example, those directly involved will need more intensive training (e.g., measure administration and interpretation) than staff members who will not be part of the initial roll-out and only need to understand the basics of the program and how it interfaces with the services they are offering.

Step 3: Determine MBC start date. Our interviewees recommend selecting a specific start date, such as a formal "kick-off" meeting to increase engagement and enthusiasm about MBC. This start date should be as early as possible, upon completion of the planning guide and any other necessary preimplementation tasks (see below). Because the plan is intended to be adapted over time, it is more important to get started with a not yet perfect plan, rather than to delay implementation. Although some implementation teams will decide to implement the full MBC initiative at once, others may prefer a phased approach starting with an initial small-scale pilot followed by modifications to the plan with a phased expansion.

Step 4: Decide how to engage patients and other stakeholders. As with any new initiative, it is important to thoughtfully engage and involve as many stakeholders as possible in the program design, creating the conditions for increased buy-in and greater likelihood of sustainability after initial implementation (Ritchie et al., 2017). Thus, implementation teams should carefully identify key individuals for involvement (e.g., patients, administrative team members, local mental health councils, and advisory boards), how their input will be obtained, the extent to which they will be involved, and the processes to engage each group of stakeholders.

Step 5: Determine who to be assessed. This step highlights the need to identify the exact population that will receive MBC. For example, some locations may decide to include their entire population (e.g., all patients served in the settings identified in Step 1), while others elect to start with a smaller subset (e.g., those initiating new episodes of care). Other potential options include patients who screen positive for specific conditions (e.g., depression) or those who recently started a new medication. The implementation team is encouraged to think about their population served as well as the continuum of services offered, and jointly determine which groups are logical initial populations.

Step 6: Determine measures and frequency. The implementation team should identify specific patient-reported outcome measures to implement based on the patient population and program goals. TJCs standard requires use of at least one standard measure for all patients receiving services across a program or track (The Joint Commission, 2017) but outside of programs accredited by TJC under the Behavioral Health Care Standards, there may be a pool of measures from which providers may select those which have most clinical relevance. After implementation teams select the measures, the next step is to determine the frequency of routine assessment within the appropriate timeframe established in the literature for each measure being used. Additional decision-points include whether or not to incorporate assessments into every clinical encounter or at specific predetermined intervals. The key feature is to ensure that a standardized protocol for administration consistent with the evidence is established, and that administration is frequent enough to detect important treatment gains, lack of improvement, and/or deterioration requiring adjustments to the treatment plan.

Step 7: Determine administration process: Method, who, and when. Administration processes should be developed that work naturally within the existing resources and flow of the clinic. There are many ways to administer self-report measures, from the basic use of paper and pencil to the continually advancing technological innovations integrated into medical record systems and/or stand-alone systems, such as online, tablet, and smartphone apps. A wide range of measures are in the public domain and free to use, but others are proprietary and require financial resources. Implementation teams should consider various options and make choices based on available financial and information technology resources, patient population needs, and clinic context, such as provider receptivity to technology, to identify the methods of administration most likely to be successfully established in their clinic.

Once the implementation team identifies the method of administration, it is important to specify who will support the administration (e.g., the clinician, the administrative team, other supporting staff members) as well as the specific timing of administration, for example, at each clinical encounter. For example, clerks/secretaries may provide measures in a waiting area at check-in to be completed before appointment start, or clinicians may prefer to provide the measures for completion at the start of the appointment. Individual locations are encouraged to think creatively about this step and work to identify solutions that incorporate existing structures and processes. It is important to create solutions that match provider preferences while still allowing patients to complete measures independently, to minimize demand biases.

Step 8: Determine method of documentation within a standardized tracking system and who documents. Some implementation teams may want to break this step into a few component parts to ensure it can be successfully completed in its entirety. Substeps include selecting a tracking system, defining a standardized process for data collection, and identifying which team members will enter the data. The first step is to ensure that there is a standardized database tracking system available to allow data entry at multiple points in time. This system should allow for tracking at multiple levels, ideally including synthesizing data at the patient, panel, clinic, and population level, especially if aggregated data are needed to meet external mandates, such as TJCs mandate for ROM. This can be as simple as a shared, secure, tracking spreadsheet, or could involve advanced patient tracking software programs commercially available for these purposes (e.g., Fortney et al., 2017). Decisions made in the prior step will influence the methods selected. For example, some computer programs will combine these steps, serving as both a platform for administration and tracking. However, if an implementation team decides to use pen and paper administrations, a separate, distinct process for entering this information into a standardized system will need to be developed. Once a tracking system is selected, the implementation team should work to develop a process to ensure that MBC data are routinely entered into this system and identify the team members who will complete any necessary data entry, whether it be providers entering their own data, or engaging administrative support staff in the process.

Step 9: Determine clinical use of MBC. To move beyond simply collecting patient outcome data to actively using information to inform treatment though shared-decision making processes, the implementation team should discuss how clinicians will use the MBC information in clinical practice. For example, determining if scores will be available before the initial visit allows the provider to review them with the patient early in the process of care, or if they will be collected during or after the initial visit. The implementation team should set expectations for how data will be used to promote shared decision-making and individualize treatment, such as when patients should receive feedback from providers about their scores. It is recommended that implementation teams create standard operating procedures (SOPs) to ensure that patients receive appropriate follow-up care with licensed independent practitioners (LIPs) and/or urgent care when results from measures indicate that care is needed outside the initial provider's scope of practice. Further, although general training is included in a prior step, it is important to ensure that all providers are trained on clinically appropriate follow-up when scores/items require intervention, including when and how to intensify treatment options if there is evidence of clinical deterioration, to step down to a less intensive level of care when indicated, or to discontinue treatment as symptoms improve.

Step 10: Determine how data will be aggregated and how aggregate data will be used. One of the benefits of standardization of MBC is the capability to aggregate data at multiple levels (e.g., panel, clinic, and population). This element is required as part of the updated TJC requirements (The Joint Commission, 2017). There are many possible ways that this information can improve processes and care. Among other key decisions noted in Figure 1, implementation teams should determine what measures will be aggregated, as well as the frequency of review, and the process for extraction. Most importantly, the team should consider how these data will be used to inform ongoing quality improvement efforts.

Step 11: Defining MBC success. Implementation teams should a priori operationally define how to measure implementation success, by asking themselves to consider what will be the indicators of full implementation. Ideally, implementation teams will select well-defined benchmarks and goals. Implementation teams should also identify the process and time frame for monitoring and continued adaptation if goals are not being achieved. Without clearly defining these programmatic goals and monitoring progress before implementing MBC, the implementation team will struggle to determine if the initiative has been successful.

Step 12: Develop implementation support plan. As one of the final steps, the implementation team should identify what additional resources are needed to ensure successful local implementation of MBC. Items within this step could fall within the categories of team members, supplies, time, training, and recognition. For example, will local champions need additional protected time devoted to implementation efforts? The implementation team might investigate the availability of learning collaboratives or communities of practice from which they could benefit. The implementation team should routinely engage leadership and identify how leadership can further support implementation. For example, leadership may provide recognition to those participating in the initiative. Finally, the implementation team should identify the frequency and format of meetings to self-assess progress, navigate any barriers, and celebrate successes.

Step 13: Determine how to sustain MBC. It is never too soon to think about how to sustain a practice, even as the implementation team is just starting the implementation process. Many of the activities performed during the preimplementation and throughout the implementation phases can prepare the site to sustain the innovation over time. Upon initial implementation, initiatives that are well-integrated into existing programs, processes, and structures are more likely to be sustained over time (Schell et al., 2013). To further ensure sustainability, a routine process for engaging and training all new staff should be identified. Engaging clinical and senior leadership throughout all phases, using communications about ways the clinical innovation is aligned with agency mission, culture and resources, will support the changes over time. To create an infrastructure that will support sustainability, the following items should be considered, (a) Create an ongoing monitoring system that documents adherence to the clinical innovation; (b) Develop policies and standard operating

procedures that support the clinical innovation; (c) Foster ongoing systems improvements to ensure the integration of the clinical innovation into care processes; and (d) Create a mechanism through which adherence may be incorporated into performance plans, incentives, or rewards. Some sites may wish to establish a separate Sustainability Action Plan (SAP; Chambers, Glasgow, & Stange, 2013) to supplement implementation plans.

Discussion

As delineated within the i-PARIHS framework (Harvey & Kitson, 2016), successful implementation is influenced by multiple variables, including characteristics of the organizational context, the recipients targeted by the innovation, and the innovation itself. Implementation facilitation, as the active ingredient in the i-PARIHS framework can help locations overcome implementation barriers experienced in these domains. Despite the well-documented benefits, MBC remains underutilized in mental health, little is known about the specific barriers and facilitators to implementation, and few implementation resources have been created. Our implementation planning guide provides concrete guidance for those wishing to implement MBC and is informed by early adopters, who were able to implement MBC before national initiatives or mandates. The MBC Implementation Planning guide is an initial implementation resource informed by the experiences of these successful early adopters.

While the implementation guide provides step-by-step guidance for implementation, attention to the overarching themes influencing MBC implementation that emerged from the qualitative interviews also hold valuable guidance for sites embarking on MBC implementation. We have incorporated these themes within the step-by-step guidance contained within the MBC Implementation Planning Guide. More specifically, the themes that were found to influence implementation provide valuable guidance based on the experience of early adopters to overcome potential barriers associated with context, recipients, and the innovations (see Table 2). The first identified theme describes the importance of using a collaborative process that genuinely involves front-line providers in the implementation process. For example, one respondent reported, "If we cannot make it relevant to front-line providers, they will not want to do it" (see Table 2). It is well-established within implementation science that simply mandating or funding a large-scale initiative will be insufficient to see the transformation realized (Kearney et al., 2018; Leykum et al., 2007). Thus, meaningful dialogue and stakeholder involvement throughout the implementation design process is critical; this is incorporated into the MBC Implementation Planning Guide through suggestions in Steps 1, 2, and 4.

Another theme identified by all MBC implementation experts was that although MBC implementation cannot be a solely top-down initiative, key leaders must support the initiative and ensure that team members have the resources, training, incentives, rewards, and consistent expectations required for successful implementation. Throughout the implementation process, it is important to be mindful of ways that leadership can support and encourage providers to engage in MBC. A related, but often overlooked, theme that emerged is the need for leadership to agree to dedicated and protected time for identified MBC champions to engage in implementation activities, such as completing the MBC Implementation Planning Guide, self-educating, and finding time for training and engagement of front-line providers and stakeholders. Respondents were also asked about facilitators to implementation of MBC and identified that monthly interprofessional team meetings with case presentations including MBC data and highlighting how MBC was used to inform the process of care were extremely helpful. Ensuring that there is protected time for these activities was considered central to implementation success.

The final overarching theme identified by the MBC experts was the importance of using MBC data responsibly. Patient outcome data are powerful tools for significantly improving the quality of care, but they also can be a source of anxiety for clinicians. Concerns emerged through our qualitative interviews about the potential for overemphasis on mandated outcome data and the potential misuse of data. Our interviewees expressed concerns that providers may be unfairly penalized if patients were not showing substantial evidence of improvement, despite delivery of high-quality, evidence-informed interventions. There are multiple reasons why the patients of talented, high-performing providers might not show gains, such as a uniformly high level of severity on a caseload, or although less common, patients who may not fully report improvement because of concerns related to loss of secondary gains, for example, monetary compensation, if symptoms improve. Thus, use of outcome data to evaluate provider performance should be done with great care. Raw outcomes and raw change scores cannot be reliably used to evaluate providers because of patient differences. Supervisors may choose to use scores as part of training and supervision; but, evaluation of provider performance using patient-reported outcome measures, without random assignment to caseloads, is antithetical to the spirit of MBC.

MBC Implementation Planning Guide: Process for Use

Consistent with the recent TJC requirement (The Joint Commission, 2017), the MBC Implementation Planning Guide we developed is intended to be used within a team-based, continuous quality improvement (QI) process involving multiple stakeholders. It is a resource to assist the implementation team to facilitate MBC implementation as they conduct collaborative conversations in support of program development tailored to their unique context. For each step, there are decision points, many of which we reviewed above, and included within the Actionable Items/Examples column of the MBC Implementation Planning Guide (see Figure 1). The local implementation team should recognize that there are not necessarily right or wrong answers for each of these steps. Rather, the goal is to discuss the various options as a team and reach consensus to determine the preferred process with the highest potential to result in a program that can be implemented into their existing context while maintaining fidelity to the evidence base.

Further, it is expected that each location will adapt and modify the MBC Implementation Planning Guide to meet their local needs. The MBC Implementation Planning Guide is intended to be a living document and we fully expect that it will evolve over time as it is applied by diverse users in diverse settings. Users are encouraged to adapt the Implementation Planning Guide to the needs of their local setting. Some locations may identify additional steps while others may opt to remove or modify steps based on

their specific context. It is not intended to be a static document, but rather a document that meets the needs of diverse users as it evolves while applied across diverse settings with different contexts.

We recommend that the Implementation Planning Guide is used by an MBC implementation team. Teams ideally should include representatives from all relevant stakeholders who meet regularly to review the Implementation Planning Guide. Each step should be discussed sequentially, and the columns reviewed and completed together.

Each column in the MBC Implementation Planning Guide (see Figure 1) has a specific purpose. The first column, labeled "Steps," lists the specific action steps in a numbered and sequential order. The second column, labeled "Actionable Items/Examples," provides additional action items or decision points for each step, and is intended to guide discussion and provide a place to document the specific decisions the QI team makes. Using Step 1 "Identify Setting and Participating Staff" as an example, under the actionable items/examples column, the team would identify and then list the identified settings, the local lead, and the participating staff. Examples of staff who might be involved in the process are provided in the planning guide to facilitate discussion and generate ideas for inclusion. The third column, "Plan (including timeframe, who's in charge, and potential barriers/notes)" is intended for the site to document the plan the team agrees upon including the expected timeframe to accomplish the action items within each step, as well as a place to document who is in charge or responsible for accomplishing each task. This column also provides the site with a place to note any potential barriers or concerns that emerged during the conversation and space for any general notes. The implementation team should discuss each step together and complete all columns. It is recommended that sites add or remove items as relevant to their specific context and needs. Thus, they will produce an individualized, documented plan for implementation, including specific steps, action items, timeframes, responsible stakeholders, and general notes.

In the implementation process, tension may arise between maintaining fidelity to a predetermined model and individualization of the model to suit a local context (Castro, Barrera, & Martinez, 2004). Adaptation, if any, should be done thoughtfully, and ideally within the context of continuous quality improvement, such as an evidence-informed change process like Plan-Do-Study-Act (PDSA) cycles (Langley et al., 2009). Such processes allow for the careful consideration of how an adaptation affects the outcome of an innovation. Implementation science recognizes that without such adaptations, the innovation is less likely to experience high degrees of uptake and even less likely to be sustained (e.g., Ghate, 2016). At the same time, it is necessary to ensure that any adaptations made to address local implementation contexts do not result in changes that would decrease the fidelity to the empirically supported innovation and, therefore, the desired outcomes. These opposing needs remain true for the implementation of MBC. The process of MBC must be adapted to meet the needs of each clinical location, while maintaining fidelity to the use of standardized assessment processes. Thus, it is important to identify which areas can be flexible and determined by the local recipients, and which are critical elements that cannot be altered. Each organization, and even each clinic within an organization, will need to develop a local system to implement MBC that is consistent with their organizational culture, values, resources, and goals.

Monitoring Implementation and Ensuring Sustainability

We want to highlight two important implementation constructs that generally receive less attention in system wide initiatives: monitoring the implementation process and focusing on sustainability. Ongoing monitoring of implementation progress helps to ensure that implementation is going as planned, and when it is not, understanding these times as opportunities for adjustment. One of the critical elements of this process is described in Step 11, which is having the implementation team define how they know if they are successful and quantify success through measurable outcomes. All stakeholders should be aware at the outset that the initial plan rarely is the final plan; that it will be adapted and modified over time as they learn from their initial efforts. Finally, the implementation team should consider sustainability from the very beginning of implementation (Step 12). Key indicators of sustainability include maintenance, or the ability to continue to deliver the benefits of the innovation past the initial implementation phase, institutionalization, and capacity-building activities that will create infrastructure and availability of long-term resources to support continued delivery of the innovation (Chambers et al., 2013). The implementation team may wish to create a separate Sustainability Action Plan (SAP; Scheirer & Dearing, 2011), that includes activities to ensure the changes are maintained (e.g., monitoring, incorporation into reward systems, ongoing training). A well-designed SAP can create a structure to ensure that changes associated with implementation remain, while minimizing drift or return to previous provider behaviors (Scheirer & Dearing, 2011).

Limitations

The process we used to develop the MBC Implementation Planning Guide included interviews with early adopters to learn from their experience and create a quality improvement tool to serve as a guide for other locations. The steps were placed in sequential order, and overarching themes were integrated with the i-PARIHS framework. The Implementation Planning Guide incorporates feedback and lessons learned from those with experience implementing MBC and subject matter expertise. Despite this strong development process, there may be further challenges or potential barriers that teams may face, which were not identified by our interviews. Our interviews were conducted with eight early adopters within VHA, and thematic saturation was reached within this specific population. However, it is unclear if the guidance developed based on early adopter experiences will remain for sites that are either mid or late adopters in diverse clinical contexts. Interviews were conducted with sites that implemented MBC before national initiatives or mandates; and, the needs of locations now implementing because of mandates may be distinct from those of early adopters. Therefore, as noted above, we expect that the MBC Implementation Planning Guide will be adapted as it is applied in diverse settings and contexts. Further, to our knowledge, the MBC Implementation Planning Guide has only been used within VHA, and it has not been used in controlled research trials. As with most implementation support strategies, there is an inher-

ent challenge in developing resources that are both specific enough to be meaningful and relevant, while at the same time being useful or generalizable across settings. There are likely additional site specific contextual and recipient factors that did not emerge through our interviews that may influence implementation of MBC, (e.g., size, staffing, and geography). Therefore, flexible strategies that can be tailored to the local context are required (Lewis et al., 2018). Our MBC Implementation Planning Guide is intended to be adapted for local use and should be modified on a location by location basis to meet site specific needs. Thus, although we believe from our experience that the planning guide provides a relatively universal and helpful implementation framework, this assumption remains untested. Research to better understand the guide's use in implementation is needed.

Conclusions

Although the barriers to implementation of MBC are complex (e.g., Van Der Wees et al., 2014) and not yet fully understood, use of a MBC Implementation Planning Guide, as part of a quality improvement process, is likely to enhance implementation and stakeholder buy-in through a straightforward, linear sequence of activities. This implementation tool has broad applicability to support implementation of MBC, ultimately improving the quality of mental health services. Just as implementation of MBC should reflect a continuous quality-improvement (QI) process, once implemented, MBC will not only improve care at the individual patient level, but also has the potential to improve care by informing ongoing QI processes at the panel, clinic, and health care system level. The planning guide is an important implementation tool with the potential to serve as a resource for multiple locations across diverse mental health treatment settings.

References

Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for *DSM–5* (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress, 28,* 489–498. http://dx.doi.org/10.1002/jts.22059

Cacciola, J. S., Alterman, A. I., Dephilippis, D., Drapkin, M. L., Valadez, C., Jr., Fala, N. C., . . . McKay, J. R. (2013). Development and initial evaluation of the Brief Addiction Monitor (BAM). *Journal of Substance Abuse Treatment, 44,* 256–263. http://dx.doi.org/10.1016/j.jsat.2012.07.013

Castro, F. G., Barrera, M., Jr., & Martinez, C. R. (2004). The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. *Prevention Science, 5,* 41–45.

Chambers, D. A., Glasgow, R. E., & Stange, K. C. (2013). The dynamic sustainability framework: Addressing the paradox of sustainment amid ongoing change. *Implementation Science, 8,* 117.

Dowrick, C., Leydon, G. M., McBride, A., Howe, A., Burgess, H., Clarke, P., . . . Kendrick, T. (2009). Patients' and doctors' views on depression severity questionnaires incentivised in U. K. quality and outcomes framework: Qualitative study. *British Medical Journal, 338,* b663. [Advance online publication.] http://dx.doi.org/10.1136/bmj.b663

Eisen, S. V., Dickey, B., & Sederer, L. I. (2000). A self-report symptom and problem rating scale to increase inpatients' involvement in treatment. *Psychiatric Services, 51,* 349–353. http://dx.doi.org/10.1176/appi.ps.51.3.349

Fortney, J. C., Pyne, J. M., Smith, J. L., Curran, G. M., Otero, J. M., Enderle, M. A., & McDougall, S. (2009). Steps for implementing collaborative care programs for depression. *Population Health Management, 12,* 69–79. http://dx.doi.org/10.1089/pop.2008.0023

Fortney, J. C., Unützer, J., Wrenn, G., Pyne, J. M., Smith, G. R., Schoenbaum, M., & Harbin, H. T. (2017). A tipping point for measurement-based care. *Psychiatric Services, 68,* 179–188. http://dx.doi.org/10.1176/appi.ps.201500439

Ghate, D. (2016). From programs to systems: Deploying implementation science and practice for sustained real world effectiveness in services for children and families. *Journal of Clinical Child and Adolescent Psychology, 45,* 812–826. http://dx.doi.org/10.1080/15374416.2015.1077449

Harvey, G., & Kitson, A. (2016). PARIHS revisited: From heuristic to integrated framework for the successful implementation of knowledge into practice. *Implementation Science, 11,* 33. http://dx.doi.org/10.1186/s13012-016-0398-2

Hatfield, D., McCullough, L., Frantz, S. H. B., & Krieger, K. (2010). Do we know when our clients get worse? an investigation of therapists' ability to detect negative client change. *Clinical Psychology & Psychotherapy, 17,* 25–32.

Hatfield, D. R., & Ogles, B. M. (2007). Why some clinicians use outcome measures and others do not. *Administration and Policy in Mental Health and Mental Health, 34,* 283–291. http://dx.doi.org/10.1007/s10488-006-0110-y

Hawkins, E. J., Baer, J. S., & Kivlahan, D. R. (2008). Concurrent monitoring of psychological distress and satisfaction measures as predictors of addiction treatment retention. *Journal of Substance Abuse Treatment, 35,* 207–216. http://dx.doi.org/10.1016/j.jsat.2007.10.001

Hawkins, E. J., Lambert, M. J., Vermeersch, D. A., Slade, K. L., & Tuttle, K. C. (2004). The therapeutic effects of providing patient progress information to therapists and patients. *Psychotherapy Research, 14,* 308–327. http://dx.doi.org/10.1093/ptr/kph027

Howard, K. I., Moras, K., Brill, P. L., Martinovich, Z., & Lutz, W. (1996). Evaluation of psychotherapy. Efficacy, effectiveness, and patient progress. *American Psychologist, 51,* 1059–1064. http://dx.doi.org/10.1037/0003-066X.51.10.1059

Institute of Medicine. (2006). *Improving the quality of health care for mental and substance use conditions: Quality chasm series*. Washington, DC: The National Academies Press.

Kearney, L. K., Schaefer, J. A., Dollar, K. M., Iwamasa, G. Y., Katz, I., Schmitz, T., . . . Resnick, S. G. (2018). Envisioning transformation in VA mental health services through collaborative site visits. *Psychiatric Services, 69,* 744–747. [Advance online publication.] http://dx.doi.org/10.1176/appi.ps.201700534

Kitson, A. L., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K., & Titchen, A. (2008). Evaluating the successful implementation of evidence into practice using the PARiHS framework: Theoretical and practical challenges. *Implementation Science, 3,* 1. http://dx.doi.org/10.1186/1748-5908-3-1

Knaup, C., Koesters, M., Schoefer, D., Becker, T., & Puschner, B. (2009). Effect of feedback of treatment outcome in specialist mental healthcare: Meta-analysis. *The British Journal of Psychiatry, 195,* 15–22. http://dx.doi.org/10.1192/bjp.bp.108.053967

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16,* 606–613. http://dx.doi.org/10.1046/j.1525-1497.2001.016009606.x

Lambert, M. J. (2017). Maximizing psychotherapy outcome beyond evidence-based medicine. *Psychotherapy and Psychosomatics, 86,* 80–89. http://dx.doi.org/10.1159/000455170

Lambert, M. J., Harmon, C., Slade, K., Whipple, J. L., & Hawkins, E. J. (2005). Providing feedback to psychotherapists on their patients' progress: Clinical results and practice suggestions. *Journal of Clinical Psychology, 61,* 165–174. http://dx.doi.org/10.1002/jclp.20113

Landes, S., McGee-Vincent, P., Liu, N., Walser, R., Runnals, J., Shaw, K., . . . Calhoun, P. (September 2015). *Establishment of a national practice-based implementation network to accelerate adoption of evidence-based and best practices*. Panel presentation at the 3rd Biennial Society for Implementation Research Collaboration, Seattle, WA.

Langley, G. L., Moen, R., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: A practical approach to enhancing organizational performance* (2nd ed.). San Francisco, CA: Jossey-Bass.

Lewis, C. C., Boyd, M., Puspitasari, A., Navarro, E., Howard, J., Kassab, H., . . . Kroenke, K. (2018). Implementing measurement-based care in behavioral health: A review. *Journal of the American Medical Association Psychiatry*. [Advance online publication.] http://dx.doi.org/10.1001/jamapsychiatry.2018.3329

Leykum, L. K., Pugh, J., Lawrence, V., Parchman, M., Noel, P. H., Cornell, J., & McDaniel, R. R. (2007). Organizational interventions employing principles of complexity science have improved outcomes for patients with type II diabetes. *Implementation Science, 2*(28). http://dx.doi.org/10.1186/1748-5908-2-28

McGee-Vincent, P., Landes, S. J., Rosen, C., Calhoun, P., Zimmerman, L. E., McGraw, K., . . . Ruzek, J. (2015, November). *Increasing implementation of outcomes monitoring in PTSD treatment: The PTSD practice-based implementation network*. Presented at the annual meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Norcross, J. C., & Wampold, B. E. (2011). Evidence-based therapy relationships: Research conclusions and clinical practices. *Psychotherapy, 48,* 98–102. http://dx.doi.org/10.1037/a0022161

Pinner, D. H., & Kivlighan, D. M. (2018). The ethical implications and utility of routine outcome monitoring in determining boundaries of competence in practice. *Professional Psychology: Research and Practice, 49,* 247–254. http://dx.doi.org/10.1037/pro0000203

Poston, J. M., & Hanson, W. E. (2010). Meta-analysis of psychological assessment as a therapeutic intervention. *Psychological Assessment, 22,* 203–212. http://dx.doi.org/10.1037/a0018679

Ritchie, M. J., Dollar, K. M., Kearney, L. K., & Kirchner, J. E. (2014). Research and services partnerships: Responding to needs of clinical operations partners: Transferring implementation facilitation knowledge and skills. *Psychiatric Services, 65,* 141–143. http://dx.doi.org/10.1176/appi.ps.201300468

Ritchie, M. J., Dollar, K. M., Miller, C. J., Oliver, K. A., Smith, J. L., Lindsay, J. A., & Kirchner, J. E. (2017). *Using implementation facilitation to improve care in the Veterans Health Administration* (Version 2). Veterans Health Administration, Quality Enhancement Research Initiative (QUERI) for Team-Based Behavioral Health, 2017. Retrieved from https://www.queri.research.va.gov/tools/implementation/Facilitation-Manual.pdf

Scheirer, M. A., & Dearing, J. W. (2011). An agenda for research on the sustainability of public health programs. *American Journal of Public Health, 101,* 2059–2067. http://dx.doi.org/10.2105/AJPH.2011.300193

Schell, S. F., Luke, D. A., Schooley, M. W., Elliott, M. B., Herbers, S. H., Mueller, N. B., & Bunger, A. C. (2013). Public Health program capacity for sustainability: A new framework. *Implementation Science, 8,* 15. http://dx.doi.org/10.1186/1748-5908-8-15

Scott, K., & Lewis, C. C. (2015). Using measurement-based care to enhance any treatment. *Cognitive and Behavioral Practice, 22,* 49–59. http://dx.doi.org/10.1016/j.cbpra.2014.01.010

Sederer, L. I., Hermann, R., & Dickey, B. (1995). The imperative of outcome assessment in psychiatry. *American Journal of Medical Quality, 10,* 127–132. http://dx.doi.org/10.1177/0885713X9501000303

Smith, G. R. (1996). State of the science of mental health and substance abuse patient outcomes assessment. *New Directions for Mental Health Services, 1996,* 59–67. http://dx.doi.org/10.1002/yd.23319960307

Spitzer, R. L., Kroenke, K., Williams, J. B., & Lowe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097.

The Joint Commission. (2017). APPROVED: Revisions to behavioral health care outcome measures standard. *Joint Commission Perspectives, 37,* 10–11.

The Kennedy Forum. (2015). Fixing behavioral health care: A national call for measurement-based care in the delivery of behavioral health services. *Issue Brief*. Retrieved from https://www.thekennedyforum.org/a-national-call-for-measurement-based-care/

Van Der Wees, P. J., Nijhuis-Van Der Sanden, M. W. G., Ayanian, J. Z., Black, N., Westert, G. P., & Schneider, E. C. (2014). Integrating the use of patient-reported outcomes for both clinical practice and performance measurement: Views of experts from 3 countries. *Milbank Quarterly, 92,* 754–775. http://dx.doi.org/10.1111/1468-0009.12091

Veterans Health Administration. (December 2017). *VHA memo: Measurement based care in mental health initiative: Fiscal year 2018 requirements*. Washington, DC: Department of Veterans Affairs.

Vinson, D. C., Turner, B. J., Manning, B. K., & Galliher, J. M. (2013). Clinician suspicion of an alcohol problem: An observational study from the AAFP National Research Network. *Annals of Family Medicine, 11,* 53–59. http://dx.doi.org/10.1370/afm.1464

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