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ORIGINAL ARTICLE

# Managing and Adapting Practice: Provider Perceptions of an Evidence-Informed Framework for Delivering Mental Health Services

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## Abstract

This study examined providers' reflections on delivering managing and adapting practice (MAP), an evidence-informed framework that guides decision-making from scientific and client data. Consensual qualitative research methods were used to analyze the reflections of 201 youth mental health providers. Results indicated that providers approached MAP according to their own preferences and particular cases. While most appeared to approach MAP from a practice management standpoint, when faced with challenging cases, providers used coordination and outcomes management resources. Regardless of approach, most providers came to appreciate the full framework through reflective practice. Their diverse approaches offer lessons for evidence-based practice implementation and sustainment.

**Keywords** Evidence-based service delivery · Reflective practice · Implementation · Community mental health

Mental health delivery systems have grappled with how to implement, scale-up, and sustain the delivery of evidence-informed interventions in diverse settings (McHugh and Barlow 2010). Although a rich body of research on implementation and sustainment exists, it remains largely restricted to sole interventions in singular contexts (Rodriguez et al. 2018).

In 2009, the Los Angeles County (LAC) Department of Mental Health (DMH) spurred an ambitious initiative of mental health services, what they referred to as the 'EBP transformation', by preparing their workforce to implement more than 50 evidence-based treatments (EBTs). They sought to rapidly scale up implementation of common intervention approaches in children's mental health care by training providers in five EBTs—Cognitive Behavioral Interventions for Trauma in Schools (CBITS), Child-Parent Psychotherapy (CPP), Seeking Safety, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Triple P Positive Parenting Program (Triple P)—and in an evidence-informed system for selecting, designing, and implementing treatments for individual clients, Managing and Adapting Practice (MAP). LAC DMH operated or contracted with 98 agencies to deliver at least one of these programs, and reimbursed agencies for using them. In an evaluation of these efforts with 59 agencies, Rodriguez et al. (2018) found that implementation of these programs varied, from 25.4% (CBITS) to 96.6% (TF-CBT). Moreover, their sustainment varied, from 46.7% (CBITS) to 100% (MAP). In this paper, we examine providers' experiences in the most

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widely delivered intervention approach, MAP, in one of the largest multi-practice implementation efforts in children's mental health.

MAP builds on strengths of the evidence-based treatment and individualized care paradigms by integrating evidence from the scientific literature and local context, such as the client, agency, and system (Burchard et al. 2002; Chorpita and Daleiden 2014). By explicitly supporting the use of this best available knowledge, MAP aims to enhance providers' abilities to reflect on clinical decisions, critically evaluate those decisions, and adjust when necessary to manage the complexities of service delivery. As an evidence-informed framework, MAP may be conceptualized as a treatment-building toolkit, with resources to inform, structure, and coordinate service delivery, and evaluate progress. Providers can search MAP's structured *database* (i.e., PracticeWise Evidence Based Services Database: PWEBS) of more than 1000 randomized controlled trials (RCTs) based on their client's demographic and clinical features to synthesize the evidence base for a particular case. *Process guides* detail the logic of treatment planning and decision-making; for example, providers can use a treatment planner to guide their selection of a therapeutic focus and organization of practices into phases of care, a session planner to sequence each session, and an embracing diversity guide to support their consideration of adaptations based on a client's intersectional characteristics. Providers can also access MAP's library of *practice guides* for step-by-step guidance in implementing more than 55 discrete clinical practices, such as psychoeducation, exposure, and problem-solving. Finally, providers can use MAP's tailorable *clinical dashboard* to assemble and plot data from multiple sources about multiple constructs, such as a client's symptoms, parents' and teachers' reports of a client's functioning, and the practices used in treatment to support their reflection about relations between progress and practice to inform clinical decisions (Chorpita et al. 2008). By facilitating providers' interactions with and reflections upon diverse knowledge sources, MAP strives to support responsive, evidence-informed treatment. Please see Chorpita et al. (2014) for a case illustration.

MAP implementation in LAC began with a multi-faceted training strategy that included regularly-scheduled 5-day direct service trainings in MAP and follow-up phone consultation, a 'trainer the trainer' model so agencies could develop internal MAP trainers and supervisors, and an annual one-day MAP symposium and workshop to encourage MAP's sustainability (see Southam-Gerow et al. 2014 for details). More than 1700 providers were trained between April 2010 and December 2012 (51 providers per month, on average). Approximately 71% were trained by MAP professional trainers; the remaining were trained by local agency supervisors qualified to deliver MAP curriculum. In 2012, MAP was the most commonly used intervention approach in LAC, provided to 28% of youth receiving services. Analysis of outcome data for more than 1100 youth treated with MAP demonstrated significant improvement over time, as indicated by large effect sizes (e.g., $d = .76$; Southam-Gerow et al. 2014).

MAP was favorably received at the beginning of the LAC EBP transformation due to its scalability, its compatibility with DMH's emphasis on outcome measurement, and its ability to broaden the array of services to DMH clients who would not otherwise have a relevant intervention available to them (Southam-Gerow et al. 2014). Approximately two years into the transformation, providers who had used MAP rated its appeal and limitations favorably compared to the five EBTs introduced during the transformation (only CPP was rated more favorably on appeal and limitations; Reding et al. 2014). Moreover, the more appealing providers viewed MAP, the more they reported using it (Reding et al. 2014). All LAC agencies who implemented MAP reported sustained implementation five years into the transformation (Rodriguez et al. 2018). Given its scalability, graduate training programs have formally integrated MAP into their curriculum over the past several years (Mennen et al. 2018).

Efforts to promote implementation and sustainment of MAP are built into its resources and training through reflective practice, which are intended to foster a perspective of quality assurance/quality improvement (QA/QI) and a commitment to continual professional development. Reflective practice is a meta-cognitive approach whereby providers periodically step outside their work and critically attend to their actions (Ferreira et al. 2017; Nguyen et al. 2014; Schön 1983). In the direct service aspects of the model, MAP's core concepts, decision flows, and knowledge resources similarly support a reflective posture toward the multitude of clinical decisions that providers commonly encounter but for which there is often not a straightforward answer (e.g., What treatment should I use? What do I do if there is not a treatment that fits this client's case? Is this client making progress? What do I do if something unexpected disrupts services?). Rather than mandating action (e.g., use Treatment A for all clients who have anxiety) or knowledge resources (e.g., only rely on evidence from RCTs) to answer such questions, MAP facilitates a recursive process of (a) prioritizing knowledge resources that fit a particular decision, (b) engaging in goal-directed action, and (c) measuring the observed outcome against an expected value to inform additional self-correction. Given the complex and dynamic features of clinical work, MAP was intentionally designed to empower providers (and their professional supports) as treatment builders who engage strategically with the multiple relevant evidence bases.

In addition to engaging providers in ongoing QA/QI, MAP has many other QA/QI features (Edmunds 1997; Wandersman et al. 2012), including training for providers

in service delivery, training for supervisors in supervision strategies, and expert consultation. Additional elements include review of training feedback, knowledge test data, and provider portfolios that feature case applications to highlight training needs. Given that MAP's direct service model represents a treatment-building toolkit that presents ideas, not prescriptions, for service delivery, initial implementation challenges might have been expected. Consequently, it is imperative to understand mental health professionals' experiences using MAP in order to gain insight into how MAP was successfully introduced and sustained.

## Current Study

MAP implementation is a dynamic process that involves interactions between developers, users, and the innovation itself. Therefore, we sought to learn whether MAP users found MAP useful for its intended purposes, whether other features were desirable, and what challenges MAP users faced that elicited their uncertainty using MAP. We were also interested in whether MAP's resources varied in their utility and appeal to its users. To best address the goals of our study (i.e., to *explore* these MAP users' experiences and perceptions of MAP implementation in their applied settings) we adopted a qualitative research design. Specifically, we used consensual qualitative research methods (Hill et al. 1997) to analyze the written reflections of community mental health professionals who were trained in MAP during the rapid scale-up implementation of evidence-informed practice in children's mental health care in LAC.

## Methods[1]

### Participants

A purposive sampling strategy was utilized in order to understand the experiences of a broad set of providers who used MAP during the LAC EBP transformations. Participants were recruited from an annual eight-hour MAP symposium attended by providers, supervisors, and agency administrators who worked at 75 organizations providing services to youth and receiving funding from LAC. This event took place in February 2013, almost three years after the initial cohort of mental health professionals had been trained in MAP. Of the 457 people who attended the event, 201 provided researchers with their responses to the study's measure (44% response rate). No participant demographic data were collected, as this information was beyond the scope of the activity's design and goals.

### Measure

Data were collected via a structured, written measure that was designed to promote individual reflection. Through a series of open-ended questions and prompts, participants were asked to reflect on their experiences with MAP and provide their perceptions of MAP in writing. Specifically, participants were prompted to, *Tell us about your best MAP moment with a case* and then to name the practice guide(s) involved in treating that case. Participants were also asked to, *Tell us about a time you got stuck or felt challenged with MAP* and to name practice guide(s) they used, describe their response(s) to the challenge, and explain the impact of their response(s). Finally, participants were asked to describe what feature of MAP was most helpful when they felt challenged with a case and why, what feature they would change about MAP, and what MAP feature they would not want changed. These broad, neutral, open-ended questions were designed to facilitate thoughtful, comprehensive, and honest reflection to enhance the trustworthiness of the data collected (Marshall and Rossman 2016).

### Procedure

LAC DMH encouraged symposium attendance by offering the event free of charge, making six continuing education credits available to psychologists, licensed clinical social workers, and marriage & family therapists (as was standard in the county to promote participation in workforce development opportunities), and communicating to agencies that participation was desired as an update and booster opportunity for providers and supervisors.

Attendees of the symposium were greeted at a morning plenary session led by the developers of MAP. The plenary speakers highlighted new developments within the MAP system and showcased MAP implementation progress in LAC with regard to workforce development and youth served. Throughout the day, participants attended four breakout sessions from sixteen possible options focused on the following areas: service (e.g., new resources for engaging youth and families, advanced interventions to treat anxiety), coordination (e.g., clinical applications of measurement, MAP outcomes in LAC, and research findings related to MAP), and growth (e.g., MAP agency supervisor targeted topics and curriculum updates). Breakout sessions included didactics, discussion, and rehearsal exercises. At the end of the day, attendees gathered for a final plenary session that included an open forum for comments and questions and awards for agency efforts with MAP.

[1] The University of South Carolina's Institutional Review Board determined that this study was exempt from review.

A MAP developer introduced the reflection exercise during the morning plenary session as an opportunity for MAP users to provide feedback to developers on how they used MAP, what challenges they experienced, what they liked best, and what could be improved. In addition to the MAP-specific questions, a separate page included four additional reflection questions: (1) *Given what you wrote [about your cases], what is one thing you can do to make your more challenging moments look more like your best ones?* (2) *Could someone else help you with your plan? How?* (3) *How soon can you try it?* and (4) *What if it does not work as well as you hoped?* Responses to these four questions were not collected, as they were designed to be a concrete, 'take-home' reminder to put the product of their reflections into action. Attendees were encouraged by the MAP developer to reflect throughout the day and complete the measure by the event's end to be entered into a raffle for prizes (e.g., lunch, gift cards, Amazon Kindle; value range $5–$100). Participants submitted their written responses to the measure to a table outside the lecture hall in exchange for a raffle ticket prior to the final plenary session. Reminders were provided throughout the day and prizes were raffled off at lunch (to incentivize participants to return their responses to the measure early) and again at the conclusion of the symposium.

### Data Analysis

Data were analyzed through a consensual qualitative research method (CQR; see Hill et al. 1997 for full analytic protocol details). CQR balances objectivity with retaining the inherently constructive nature of qualitative data analysis because it involves: (a) a research team conducting inductive analyses of the data; (b) researchers independently coding the data, comparing coding, and making final coding decisions by consensus, (c) auditors checking the analytic process, and (d) researchers verifying results by systematically checking them against the data. Participants' written responses were transcribed verbatim into a Microsoft Excel spreadsheet. Columns contained each question or prompt and each row contained each participant's responses. Domains (i.e., categories used to cluster data) were identified by incorporating extant literature (e.g., technology acceptance model, Davis 1989; Venkatesh and Davis 1996; treatment engagement, Becker et al. 2015) and MAP content with researchers' initial impressions from independent reviews of the data. A codebook was developed through careful review of the data by the authors in addition to consensus meetings between the full research team (i.e., SLB, KDB, MR) and program developers (i.e., ELD, BFC). Domains identified were: MAP content, case type, fit, treatment progress, treatment engagement, MAP design, and implementation (see Table 1).

The full research team then reviewed the data to extract relevant core ideas (i.e., codes) within each domain (e.g., MAP resources for the 'MAP Content' domain; see Table 1). The research team also identified additional ways to further specify each of these codes by adding 'positive' and 'negative' to certain codes to reflect providers' opinion or experiences of the core idea (see Table 1). To enhance credibility and confirmability, two research team members who brought divergent perspectives to the data analysis (i.e., a relative 'insider' who had extensive experience with MAP and a relative 'outsider' who had limited experience with MAP) used the final coding structure to code all of the data independently (Thomas et al. 2000). The coders were prompted to verify which code(s) within each of the seven domains fit each data segment: (a) best MAP case, (b) challenging MAP case, (c) most helpful MAP feature for challenging cases, (d) what MAP feature they want changed, (e) what MAP feature they do not want changed. The coders compared their coding after every 50 participants and checked their coding reliability using Microsoft Access ($k = .97$). The researchers discussed divergent coding to arrive at consensus, and remaining discrepancies were discussed by the full team and resolved by an auditor not involved in the coding process. The first author inspected the core ideas across participants and questions to derive themes, checked resulting themes for their representativeness across participants and questions, and examined cases that diverged from the primary themes. The first author wrote a summary of the themes and their representativeness and presented the summary with the coding to all authors for iterative discussion and analysis in the development of this manuscript (Hill et al. 1997; Thomas et al. 2000).

## Results

Participants described using MAP in diverse ways. Although participants reported that all MAP resources had utility, MAP-related and independent challenges affected implementation.

### Characteristics of Successful and Challenging Cases

#### Successful Cases

When describing their 'best MAP moment,' providers overwhelmingly reported cases in which the client presented with a single treatment target (84.9%, $n = 141/166$[2]). Treatment engagement was reported as high (85.6%, 83/97), and

[2] Not all providers described each domain in their case examples and their perceptions of MAP. Consequently, all percentages reflect the percent of participants who indicated a response (numerator) out of all people who gave a response relevant for the domain (denominator).

**Table 1** Coding content domains

| Domain | Code | Definition |
|---|---|---|
| MAP content | Process guides[a] | Resources that detail the logic of treatment planning and decision-making, such as 'the MAP' for informing clinical reasoning, and treatment and session planners |
| | PWEBS[a] | PracticeWise Evidence Based Services Database, a searchable database of RCTs that synthesizes the evidence base for treatment based on a client's clinical and demographic features |
| | Practice guides[a] | Resources that outline steps for implementing specific therapeutic techniques with the client, caregiver, and family, such as relaxation, attending, time out, self-monitoring, and social skills |
| | Measurement[a] | Assessment of a client's/caregiver's symptoms, distress, functioning, engagement, and/or progress obtained via one or more methods (e.g., questionnaires, observations) from one or more informants |
| | Dashboards[a] | A tool for assembling and plotting information from multiple evidence sources and parties related to client outcomes and therapeutic practices |
| | MAP consistent decision | Meta-cognitive clinical judgment that is rooted in MAP's framework of reflective practice (i.e.., identify decision, prioritize relevant knowledge resources, engage in goal-directed action, evaluate outcomes to inform further self-correction) |
| | General practices[a] | Therapeutic techniques or approaches for which the respondent did not reference a specific practice guide, such as cognitive behavioral therapy |
| | Lack of MAP content | A treatment strategy that does not involve any MAP content or is a suggestion to change MAP in ways that are incongruent with its evidence-informed framework |
| Case type | Standard case | The case involves one treatment target that can be treated by a particular evidence-based treatment and is not complicated by engagement issues, comorbidity, or emergent life events |
| | Engagement issues | The case involves difficulties engaging the client, caregiver, and/or family in treatment for at least one reason, such as having unrealistic expectations about treatment, denying the problem, or attributing the problem to an incorrect and problematic cause |
| | Comorbidity | The case involves multiple diagnoses, presenting problems, and/or targets of treatment |
| | Emergent life events | The case is complicated by emergent and unexpected life events and crises that are not the sole focus of treatment, such as caregiver divorce or death |
| Therapist and context fit | Standard fit | The use of MAP appears to fit the client, provider, and the context in which services are provided. No issues are raised in regard to fit |
| | Provider fit issues | The use of MAP appears to conflict with the provider's characteristics, such as the provider believing that they are too experienced to benefit from MAP |
| | Supervisor fit issues | The use of MAP appears to conflict with the supervisor's characteristics, such as the supervisor not supporting MAP or helping with the implementation of MAP content |
| | Context fit issues | The use of MAP appears to conflict with the agency's characteristics, such as the agency not supporting MAP or providing needed resources for its use |
| | Client fit issues | The use of MAP conflicts with the client's characteristics, such as a diagnosis MAP was not developed to address in this implementation (e.g., autism), low level of intellectual functioning, stage of development (e.g., client is over age 18), or language |
| Treatment progress | Completion | The client has fully achieved treatment goals and maintained them well enough for positive discharge |
| | Lack of progress | The client is not making progress in treatment |
| | Positive progress | The client shows positive progress, but has not achieved all goals |
| | Negative progress | The client has consistently deteriorated over the course of treatment |
| | Variables progress | The client has multiple positive trends and setbacks during treatment |
| | Crisis | The client experiences a major challenge or setback during treatment |
| | Drop-out | The client discharged from treatment prematurely |
| Treatment engagement | High engagement | The client's treatment engagement is strong, as evidenced by good attendance, participation, and/or adherence to the treatment plan |
| | Low engagement | The client's treatment engagement is poor, as evidenced by poor attendance, participation, and/or adherence to the treatment plan |
| | Variable engagement | The client's level of treatment engagement has fluctuated over time, as evidenced by inconsistent attendance, participation, and/or adherence to the treatment plan |

**Table 1** (continued)

| Domain | Code | Definition |
|---|---|---|
| MAP design | Structured approach[a] | The provider references the structure and organization of MAP |
| | Individualized care[a] | The provider references the flexibility of MAP to individualize treatment for a particular client |
| | Balanced design[a] | The provider references both the structure and flexibility of MAP in the same case |
| Implementation | Utility[a] | The provider's view of the helpfulness of MAP resources |
| | Ease of use[a] | The provider's view of the extent to which MAP is 'free from effort' |
| | Training[a] | The provider references a meeting led by a MAP trainer in the use of MAP at a specific time |
| | Consultation[a] | The provider references asking a MAP trainer specific questions about MAP |
| | Supervision[a] | The provider references a regular supervisor who provides guidance on the provider's use of MAP |

[a]Core idea or 'code' could be further specified as 'positive' to indicate a strategy that was viewed as working well or was liked or specified as 'negative' to indicate a strategy that was viewed as not working well or was disliked

all cases were making positive treatment progress (85.6%, 125/146) or had successfully completed treatment (10.3%, 15/146). A provider detailed her 'best MAP moment': *I had a client (17-year-old Hispanic female) who was severely depressed and struggled with utilizing coping skills at home. When I introduced relaxation, my client was really excited and ended up using the skill regularly. It continues to help client.* When sharing their successful cases, few providers described cases with co-morbid diagnoses and/or multiple treatment targets (7.8%, 13/166), emergent life events (6.6%, 11/166), or engagement issues (1.8%, 3/166).

### Challenging Cases

In contrast, challenging cases were more often described as having engagement issues (39.3%, $n = 70/178$), co-morbid diagnoses and/or multiple treatment targets (16.3%, 29/178), and/or emergent life events or crises (7.3%, 13/178). Providers were less likely to describe clients presenting with a single treatment target not complicated by other issues (39.9%, 71/178) than in successful cases. Most providers did not comment on progress in challenging cases (52.7%, 106/201), instead focusing on engagement. A provider highlighted the complexities of one particular case:

> [The client] was a 12-year-old Hispanic female with high level of anxiety related to multiple traumas in home environment and current instability in placement. The client displayed high level of resistance (no showing, oppositional during sessions, high risk behaviors) [and] would refuse to attend school due to fear of leaving family and being removed. It was difficult to work with her feelings with the concern being present.

Nevertheless, 76.2% of cases that could be determined (125/164) appeared to fit well with MAP, as the use of MAP appeared to fit the client, provider, and context in which the services were provided. Cases that did not seem to fit involved targets/diagnoses not funded for treatment in this implementation of MAP (e.g., developmental disabilities), and provider and agency barriers to utilizing MAP resources (e.g., lack of time, absence of needed technology).

## Application of MAP Resources

Practice guides were the resource most commonly referred to in case descriptions.[3] Most providers labeled at least one practice guide they used to facilitate delivery of therapeutic services for successful (74.4%, $n = 128/172$) and challenging cases (67.2%, 129/192). One provider's description of using MAP practice guides was typical:

> An 8-year-old girl couldn't sleep. Woke up every night screaming, crying, hiding under blankets, and nightmares. … I did relaxation [practice guide] with her – imagery and deep breathing. When she wakes up at night now, she imagines her favorite activity – licking a giant ice cream cone. She also counts down from 10 as she belly breathes. No more nighttime tantrums!

Others frequently named therapeutic practices consistent with MAP, but not a particular practice guide [19.8% (34/172) in successful cases, 27.1% (52/192) in challenging cases]. A provider shared their 'best MAP moment': *Having a client complete all her CBT homework for monitoring automatic thoughts related to school anxiety and that leading to a discussion of thought-switching. Focused on*

[3] Participants were asked which practice guide(s) they used, if any, when describing their successful and challenging cases. No inquiries were made into other MAP resources. Consequently, participants may have been primed to describe these resources more than other resources.

*how [the client] was already doing this on her own through self-reflection about her thoughts.*

Some providers used measurement (in 11.6%, 20/172 of successful cases; 12.0%, 23/192 of challenging cases) and dashboards [in 10.5% (18/172) of successful cases, 6.3% (12/192) of challenging cases] with clients. One provider explained how these worked hand-in-hand: *When my client was feeling down about her progress, I was able to show her the dashboard and explain the bumps in the road and all the progress she had made thus far. Helped her keep motivated with measures.* Another demonstrated the utility of sharing evaluations with families in challenging cases: *Caregiver unwilling to participate in treatment. Without caregiver participation, client was not making progress. … Utilized dashboard/computer on weekly basis to show caregiver lack of progress; encouraged her participation … Caregiver started to participate/encourage client.*

Providers frequently commented on the utility of the PWEBS database, but only two described using PWEBS in case examples (0.6%, 1/172 in successful cases; 0.5%, 1/192 in challenging cases): *I searched on PWEBS common/most effective practice elements for trauma, anxiety, and disruptive and I cross-referenced which practice elements are common/effective in all 3 categories.*

Similarly, relatively few providers described using process guides in case examples. They more often described using guides to orient treatment in challenging cases (7.8%, 15/192) than in successful ones (2.3%, 4/172) to guide clinical decisions:

> Cultural differences presented an obstacle to implementing practice elements with a depressed 15-year-old boy. Mother from El Salvador, stepfather from US and military trained. Mother didn't allow child to do anything and father attempted to prepare him for everything. … Identified the differences in values [using the embracing diversity process guide] that may stem from cultural diversity and frame implementation as requiring mother and father to co-create family culture. … Mother relaxed. Client increased activity selection and depression dropped.

When faced with challenging cases, in particular, many participants demonstrated their understanding of MAP as a treatment system, using resources in a process of reflection, adjustment, and evaluation:

> [I had a] 16-year-old Hispanic male with trauma, anxiety, anger, depression, and disruptive symptoms. I did not know where to start, what's the focus, interference, and what practice elements to use. … [MAP] helped a lot because when I did cognitive, goal setting, and problem solving I felt I was working on all 3 focus and interference areas.

This process could correct the course of treatment:

> [I] was stuck using exposure – using it over and over without success. Looked back at the data and realized I needed to go back and use some additional psychoed[ucation] [with] parent [for] depression and trauma … The parent was better able to support the child and this positively impacted client treatment by decreasing anxiety and allowing client to move forward in treatment.

Many providers used the full MAP system to address clients' unique circumstances over the course of treatment. This strategy, which we labeled a 'MAP consistent decision', consisted of: (1) identifying the decision at hand, (2) prioritizing relevant knowledge sources, (3) generating potential solutions and selecting one to implement, and (4) evaluating the outcome in a recursive cycle that supports additional self-correction. In all, 42.7% (82/192) of providers described taking this reflective approach in challenging cases:

> A mother [wanted] client to be 'cured' in a matter of weeks and kept getting upset that client was not improving with his acting out and depressive symptoms.… I utilized parent coping and psychoeducation to help mother feel supported, heard, and acknowledged. I normalized her frustration. I psychoeducated to help her understand what client was going through. … She became more understanding/supportive of client.

> I … was using depression as focus, but failed to identify trauma as interference later. … Redid outcome measures, redid focus to trauma. … helped with trauma symptoms.

However, seven participants [3.6%, 7/192] reported opting out of MAP when faced with challenges: *With a male 10-year-old with multiple traumas and cognitive declines. Trauma tools seemed limiting. Client responded well to art interventions. … Moved client out of MAP and used a different treatment protocol = sandtray, play therapy, art intervention.*

## Utility of MAP Resources

Aligned with their case reflections, when asked about what one MAP component developers should not change, 50.0% ($n = 47/94$) indicated practice guides should remain part of the system. Practice guides *give me a good reminder of interventions, rationale, and varied approaches.* Moreover, 40.8% (71/174) shared that guides were the most helpful resource when they felt challenged *because they are to the point and easy to understand.* Participants recognized the utility of a continuously updated system: *Don't stop adding*

*practitioner guides and developing worksheets to support them.*

A smaller set of participants found particular utility in measurement (2.1%, 2/94) and dashboards (13.8%, 13/94), indicating that they should not change. A participant shared that it was helpful to *review the dashboard to have a better overview and re-review of where the case is.* Moreover, 4.6% (8/174) and 9.8% (17/174) of participants indicated that measurement and dashboards, respectively, were the most helpful resources for challenging cases. A provider described treatment planning: *Reflection on dashboard and trends in attendance. Skills introduced and pre/post outcome measures.*

Almost one-third of participants (31.9%, 30/94) identified the PWEBS database as the feature they did not wish changed: *The PWEB searches help guide the treatment & provide effective techniques.* Many (28.2%, 49/174) remarked about its value in challenging cases: *PWEBS helps me explore other elements that I might have neglected.* They appreciated the *ability to redo PWEBS search with change of diagnosis on focus area.*

Process guides were named by 9.6% (9/94) of providers as the feature of MAP they did not want changed. One provider appreciated *the session planner, because I have a tendency to lose focus and this helps me to keep the session faithful …* Another reported, *The connect-cultivate-consolidate [process guide] is a pretty helpful tool in guiding/reminding me about my goals and how to reach those goals.* Moreover, 21.8% (38/174) of participants indicated that process guides were particularly useful when they felt challenged. For example, a provider used the *treatment pathway/MAP [process guide] to figure out why I may be stuck*.

Many understood MAP as a system, using multiple resources to guide treatment:

> [The] PWEBS [database] gives me more ideas to work with my client and dashboards to see progress or lack thereof.
>
> I go back to the MAP [process guide] to assess where the case is stuck, then I use practice guides that help address the problem/interference.
>
> Trifecta of PPMT [dashboard], PWEBS [database] and CARE process [process guide] because it gives information about what is happening in therapy and what to do about it.

Indeed, based on their responses across the measure, approximately three quarters ($n = 148$) of participants appeared to have come to use and value at least two types of MAP resources.

Nearly a quarter of the sample ($n = 49$), valued and cited use of all types of resources across the system, appearing to approach MAP as a full integrated system at the time of the study.

> I got stuck with a 17-year old client who presented [with] extreme depressive [symptoms] but ran away from home each time she showed improvement in treatment. Although I wanted to treat depression, she began to present with trauma [symptoms], but I had to keep interrupting my plan with crisis intervention. … [I used the] depression–cognitive and activity scheduling [practice guides]. [I used] everything I could think [of]. I completed the focus-interference framework and clinical event structures [process guides]. I also evaluated her progress through reviewing her PPMT [dashboard] and returning to the MAP [process guide]. It helped each step of the way to figure out the next step instead of trying to figure it out each session.

## Implementation Challenges

Critiques of MAP centered around perceptions of burden. Participants felt stretched for time, not able or willing to put in the effort needed for documentation: *[Change] how much documentation and preparation is needed to do MAP* and *[I] need to constantly update the clinical dashboard. … It creates quite a bit of work for the clinician.* Participants sometimes described the technology that was used by some agencies in this implementation of MAP as cumbersome and challenging. *Stop using Excel spreadsheets so they can't get corrupted and cause start over when formulas fail. This is the #1 complaint and barriers to therapists trying to use MAP that don't know Excel and there are many!* Of those who offered suggestions, 65.6% (42/64) made recommendations for improving MAP's ease of use.

Participants also reported challenges using MAP resources in certain cases, such as difficulty adapting practice guides to clients who were very young, more cognitively advanced, or who were from diverse backgrounds. In the few cases where clients' functioning deteriorated over the course of treatment, MAP alone could not fit clients' immediate needs and they were referred to more intensive services:

> Implementing MAP interventions proved to be difficult when a 10-[year-old] depressed [client] started to report psychotic features/hallucinations. … [The client] was referred to agency psychiatrist to commence meds. … Once [client] was stabilized on meds, [therapy] could resume and [the client] was able to comprehend interventions and apply skills outside of sessions.

There was evidence of implementation challenges based on MAP's fit with certain mental health professionals. For some, MAP was seen as restrictive or too structured, a useful program for more 'junior' providers or those who were

not 'creative' in their treatment approach: *For me it's too detailed because I've been practicing many of these models/interventions and know how they work. For new therapists, this is better.* Generally, these providers reported desiring to step out of the system to provide services within the individualized care paradigm. In this way, a few providers seemed to view MAP as a set of practices—rather than a framework—which appeared to limit their use of MAP. A few struggled to utilize the full system because they did not find utility in all components and/or they lacked needed technical background. A supervisor shared that her biggest challenge was *trying to persuade 'computer challenged' supervisees to do their clinical dashboards.* A provider admitted, *I fall behind on dashboards, sometimes misplace my clients' self-monitoring scales.* Provider fit appeared to encompass understanding MAP as a framework, valuing decision-making based on progress monitoring, and being adept with technology and willing to complete needed documentation.

Setting features also influenced implementation. Providers who felt adept with MAP described having training, consultation, and/or supervisor support for both MAP content and its technical aspects: *[A challenge was] deciding whether to change idiographic measures to reflect something else and how to capture this in dashboard … [I] brought [this] up in group supervision, asked for client and parent input on other targeted behaviors [they] want to measure. … [It helped] a lot. I was able to change the idiographic measures.* When providers grasped the 'spirit' and framework of MAP, they could make decisions to find appropriate solutions to challenges in their settings and with complex clients. A provider illustrated:

> Working in a residential setting, many of our clients do not have family involvement or it is often sporadic using MAP in isolation, without family participation, can be challenging. It can be extremely frustrating. … I really turned my focus to working with the group home staff. In many ways, they are surrogate parents for our kids. I was able to go through practice elements with the staff during portions of our team [meetings]. … It seemed to be helpful. It helped the staff to look at interventions differently. They were definitely more in tune to using praise, which my client was deeply yearning for.

## Discussion

In this study, we aimed to learn more about mental health professionals' experiences with the most widely delivered and sustained children's mental health intervention approach in LAC. Providers approached MAP in diverse ways to provide responsive, evidence-informed services, and acted as 'evidence-based providers' by engaging in reflective practice to critically evaluate their services and adjust practice as needed. Nevertheless, these mental health professionals noted challenges to using MAP that can inform continued QA/QI efforts.

Case complexity emerged as a theme in MAP experiences. Providers generally described successful MAP experiences with clients who had straightforward clinical presentations, and described more complex cases (e.g., with co-morbidity, emerging issues, low engagement) when recounting challenging experiences. A few described the same case for their 'best' and 'challenging' MAP moments, a sign that providers can feel challenged and still have success. Providers appeared to select MAP resources according to case complexity, and seemed to more often engage in reflective practice when they encountered complex cases. We interpreted this as evidence that many providers view MAP as a framework for planning, evaluating, and adapting services, rather than a collection of practices, although a small minority held that latter view.

Although their resource use varied depending on the case, providers appeared to approach MAP in varying ways, accessing MAP resources accordingly: (a) practice guides for how to deliver clinical procedures, (b) treatment planning and implementation resources, or (c) treatment progress evaluation resources. Anecdotally, we have observed similar clustering in our previous MAP implementation experiences; providers seem to gravitate towards one of three common starting points when learning MAP. These 'three doors to MAP' are practice management, coordination/integrative reasoning, and outcomes management. Each of these 'doors' leads to the same 'room' (i.e., the fully coordinated MAP system), and supporting providers to engage with their preferred resource set may help them 'build an appetite' for and connect with other resources as their expertise builds. Some participants in our sample represented these three distinct approaches, while many had come to appreciate multiple types of MAP resources, suggesting that they had arrived in the same 'room' of the full MAP system.

The practice management door refers to an affinity for building expertise in skills featured in MAP. Providers who value or perceive a need to increase their competence in concrete therapeutic skill performance may gravitate to discrete step-by-step resources. Providers who enter through this door gain foundational skills that facilitate their understanding of MAP's framework as they gain more service delivery experience. However, it may take time to understand the broader framework and how to maximize all resources to use MAP in diverse contexts, systems, and populations. Most participants in our sample valued and used resources (e.g., practice guides) consistent with this approach, and more often than not used them in conjunction with other resources from the full MAP system.

The coordination/integrative reasoning door refers to an affinity for building expertise in advanced problem-solving and service wisdom. Providers who enjoy or perceive a need to increase their integrative or meta-cognitive proficiency may gravitate to conceptual models, problem-solving and decision-making frameworks, and formalizations of abstract processes. Providers who enter through this door may first seek to understand how MAP resources fit together and evaluate MAP's ability to organize their practice and frame their thinking. Once credibility is built, providers may further engage in learning other MAP resources. Anecdotally, providers who enter through this door seem to be seasoned and confident in their technical competence yet appreciate how the conceptual framework explicitly organizes thinking and enhances decision making. This perspective was most evident in a sizable minority of providers who seemed to take a reflective approach to challenging cases, stated that they found process guides the most useful feature when challenged, and/or indicated understanding of MAP as a treatment system by using multiple resources across their case examples.

The outcomes management door refers to an affinity for using concrete information resources to enhance performance. Providers proficient in information management or who perceive opportunities to increase productivity may gravitate to resources that enhance information availability and organization, such as measurement, dashboards, and the PWEBS database. For example, conducting a PWEBS search organizes the literature on what works for a particular case, thereby helping a provider think through what treatment might entail. The dashboard organizes data to help a provider visualize the reciprocal relationship between practice and progress. A material minority reflected this perspective exclusively, while over half of the participants reported valuing and/or using these resources in conjunction with other MAP content.

The three doors metaphor highlights the notion of service systems as collaborations of diverse stakeholders pursuing a shared vision of better lives for youth and families. Stakeholders pursue this vision through different pathways, so each may be thought of as having a 'market share.' A coordinated system, such as MAP, must aspire to serve the entire market but must contain tailored resources to support providers at each step through these different points of entry, while creating a centripetal force toward the shared vision; as noted above, all doors lead to the same room. A modular collection of resources targeted to each market share yet coordinated to operate as an organized whole is thus one of MAP's principal design strategies. However, this design can be a double-edged sword. For example, representatives of the outcomes management segment frequently reported valuing technological aspects of MAP, whereas other segments struggled with the technology and found some resources, such as the dashboard, particularly effortful. Similarly, representatives of the practice management segment frequently reported valuing the practice element skills, whereas other segments found them too detailed or below their expertise.

Although the three doors metaphor might help us understand the various affinities for the MAP curriculum, we expect that a preference for one resource should nevertheless serve as a gateway to others and that, ultimately, providers will see value in how the resources work together and will develop the capacity to select resources based on their relevance and value to the decision or action at hand, rather than on preference or comfort. In this study, providers' responses indicated that they shared MAP's vision, moving fluidly within the system and selecting appropriate resources accordingly. In this way, most demonstrated that they were indeed acting as 'evidence-based providers', engaging in reflective practice to manage and adapt treatment in response to new information. Particularly in their most challenging cases, providers revealed how they used the full system to provide individualized, evidence-informed treatment. This integrative response was so common among participants that, early on during our coding procedures, in addition to common MAP content codes, we added a code for 'MAP consistent decisions', which was ultimately coded in 42.7% of challenging cases. Although providers appeared to manage practice easily for more straightforward cases through the use of discrete clinical practices, they needed to adapt practice to better support their complex or challenging cases through continual outcome monitoring and/or thoughtful coordination.

## Applying Knowledge to Improve Quality

Challenges internal and external to the system emerged from our coding as impediments to this implementation of MAP. The technology acceptance model (Davis 1989; Venkatesh and Davis 1996) posits that decisions about how and when to use a technology are affected by its perceived usefulness and ease of use. Participants offered little critique of MAP's usefulness overall and only seven providers (3.5%) chose to discontinue MAP when they faced challenging cases. Providers more regularly critiqued the effort required to utilize certain MAP resources. Some resources were viewed as 'effort free' (e.g., practice guides) whereas others required more effort (e.g., dashboards, measurement tools), at least for this 'market share' of participants. Although this effort seemed to impede certain resource use, some providers did use resources perceived as more effortful, and their comments suggest that they perceived outcomes to be worth the effort. Consistent with the broader research on outcome monitoring and feedback (Shimokawa et al. 2010), providers who used these resources viewed them as useful and effective.

These observations suggest a multi-pronged strategy for improving MAP resources and supports to enhance ease of use and utility, some of which have been rolled out in the time since this study occurred. For example, there has been a focus on enhancing the ease of use of MAP resources by focusing on their semiformality and tailorability (Malone et al. 2001), whereby the resources' complexity can increase as providers develop competence in their use. Specifically, in response to provider requests for more numerous and varied data fields, an 'advanced' dashboard has been created. There is also a library of dashboards created by MAP training professionals as well as those submitted by the practice community at large that can serve as templates (to reduce the burden of creating one from scratch) or models for standard cases as well as for cases that exhibit complexity (e.g., clinical comorbidity, physical health concerns, use of a manualized EBT, interventions involving multiple providers). Practice guides now feature more tips about how to use the clinical procedures in complex or special circumstances and more practice guides have been developed to directly target challenges (e.g., low engagement) reported by participants in this study. In the future, making low-burden assessments readily available and integrating measurement and dashboard systems within health record systems may also enhance their ease of use.

Consistent with its overall QI culture, training supports for MAP have evolved further based on the findings from this study, with content more explicitly conceptualized and organized according to concepts of provider development and the three doors of MAP. For example, there now exists a library of instructional videos for the various MAP resources. These videos are tailored to the developmental level of the audience, such that there are entry-level videos for each resource intended to increase a viewer's basic knowledge, and then a progression of videos with increasingly advanced content to support a deeper understanding and skillful application of the resource. MAP supervisors may use these videos in the context of advanced trainings that illustrate the use of MAP with cases with comorbidities, low engagement, and emergent issues complicating treatment, and use experiential learning to support providers' understanding of how to engage in reflective practice that prompts goal-directed action for these cases.

In addition, MAP training professionals now demonstrate greater sensitivity to audience comfort levels and the amount of support needed when structuring the pace and ordering of practice, outcomes management, and coordination material. For example, graduate students tend to be quite skilled at outcomes management; thus, more time and support might be spent on practices and coordination. The three doors approach informed the *Instructor Model* curriculum, whereby faculty or professional instructors can tailor the sequencing and content of MAP training curriculum based on the knowledge and skills of themselves and their students (Mennen et al. 2018). Similarly, the three doors approach is frequently used during consultation with mental health systems as we consider how to fit the curriculum to their diverse set of learners.

It is possible there is variability in the supports for MAP that mental health professionals in LAC have received within their agencies. This study suggests that continued implementation efforts might directly target and reinforce providers to invest effort to master these known challenges. Such efforts could include: providing adequate training, mentorship, and practice; measuring and rewarding skilled performance; building a culture that values use of evidence; and increasing the visibility about positive outcomes obtained from skilled performance.

## Limitations and Future Directions

Given the unique context of Los Angeles and its decade-long initiative to increase the use of evidence-based practices, the results of this study may not fully generalize. In locations with less exposure to and fewer resources to support evidence-based practice, perceptions of MAP as a services framework may differ. It is possible that responses were skewed toward a certain subset of providers, as data are from mental health professionals who chose to attend an optional full-day symposium focused exclusively on learning more about MAP nearly three years after the initial cohort had been trained in MAP, and only 44% of event attendees participated in the study. As such, participants may have been particularly engaged and invested in MAP. Moreover, given that descriptive characteristics were not collected, our ability to make inferences based on participant characteristics was limited. Future research in other settings, coupled with participant and contextual characteristics data, would strengthen our understanding of when, why, and how providers come to understand and apply MAP as a coordinated system for treatment.

Participants' responses may have been shaped by the wording of the reflection items, such that they were likely drawn to most often comment on practice guides. Nonetheless, we feel confident in the quality of the data, as providers offered honest reflections on both successes and struggles with MAP and offered both praise and critique of the framework. Additionally, the researchers' backgrounds may have influenced data analysis. We mitigated this potential limitation by selecting a coder from outside of the data collection context (aside from training in its framework and resources) while the other had extensive training and experience in the model (Thomas et al. 2000). The use of an iterative coding framework, codebook, and meetings to come to consensus

along with a high degree of agreement have bolstered the study's trustworthiness (Hill et al. 1997).

Finally, the study focused on providers' reflections on the implementation of MAP in an applied setting and causal inferences cannot be made. Because our data represent the experiences and opinions of mental health professionals at a given point in time and we do not know their length of time using MAP, it is not possible to know how providers have developed in their approaches to MAP. Future research that follows participants' opinions of and experiences using MAP over time is needed to extend these initial findings.

## Conclusions

Our findings demonstrate that mental health professionals were able understand and utilize a system to manage and adapt their practice effectively for clients with diverse characteristics. Being trained to engage in reflective practice appeared to sustain the implementation of MAP. Future research should systematically explore the most effective ways of introducing systems such as MAP to mental health professionals and the influence of this initial introduction on their eventual understanding and application of the complete framework. Moreover, future research that continues to define and understand market segments (e.g., provider and setting characteristics) and the 'fit' between market and implementation processes may be helpful in optimizing desired outcomes. In this way, we may be able to tailor training and ongoing support experiences to better meet mental health professionals' needs, in turn helping them to better comprehend and effectively apply treatment systems moving forward.

## Compliance with Ethical Standards

**Conflicts of interest** Bruce F. Chorpita is President and Eric L. Daleiden is Chief Operating Officer of PracticeWise, LLC, a private behavioral health consulting corporation. Kimberly D. Becker is a consultant to PracticeWise, LLC.

**Ethical Approval** The University of South Carolina's Institutional Review Board determined that this study was exempt from review.

**Informed Consent** This study was conducted on already available data for which formal consent was not needed due to the nature of data collected.

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