

# Pursuing an Evidence-Based Culture Through Contextualized Feedback: Aligning Youth Outcomes and Practices

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How can contextualized feedback on therapy practices and youth outcomes promote an evidence-based culture for adolescent mental health? Relative to other quality improvement tools, feedback and progress monitoring systems are generally underutilized. This article describes a feedback system collaboratively developed by the Hawai'i Department of Health Child and Adolescent Mental Health Division and private agency staff contracted to provide mental health services to youth. Feedback reports allow providers to monitor progress of their youth clients, compare their progress with youth receiving similar services, examine the extent they are using practices derived from evidence-based protocols, and compare these practice profiles to what other youth are receiving. Providers gather to discuss reports, share success stories, and offer suggestions to improve practices and outcomes based on data from the reports. The provider feedback system in Hawai'i has emphasized youth outcomes and has promoted an "evidence-based culture." This article encourages direct providers and supervisors to consider how such a system might fit in their current practice and whether contextualized feedback might be one way to enhance services and outcomes for youth with mental health needs.

*Keywords:* evidence-based practice, feedback, progress monitoring, adolescents, children

As a clinician, supervisor, or provider agency, how do you try to improve youth mental health outcomes? Service systems, government agencies with oversight, and health management organizations are all moving towards increased accountability for implementing evidence-based practice and monitoring effectiveness of treatment (President's New Freedom Commission, 2003). Furthermore, given the consistent finding that services as usual demonstrate less than favorable outcomes when compared to evidence-based practices (EBPs; Weisz, Jensen-Doss, & Hawley, 2006), there is a pressing need to identify

ways to enhance services in community settings. Along with other tools (e.g., enhanced interventions, training, supervision, organizational development), monitoring and feedback may be two additional tools in a larger toolkit for establishing continuous quality improvement that are underutilized relative to their potential to impact quality of care. Indeed a survey of agency directors of adult and child mental health services found that most states do not routinely collect and analyze data to generate information related to the ongoing effectiveness of practices (NASMHPD, 2005).

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### Using Feedback To Enhance Practice

Providing feedback on treatment processes and client outcomes is one approach to monitoring EBPs and facilitating effective practice in community settings (e.g., Bickman, Riemer, Breda, & Kelley, 2006; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Hodges & Wotring, 2004; Lambert, Harmon, Slade, Whipple, & Hawkins, 2005). In Tennessee, Bickman and colleagues (2006) have implemented a practical application of the Contextualized Feedback Intervention Theory (CFIT), a model of guided clinician behavior change to enhance effective practice. Their intervention has four major components: (a) organizational assessment, (b) treatment progress measurement, (c) feedback, and (d) training (Bickman et al., 2006). The treatment progress measurement includes (a) assessment of therapy process (e.g., therapeutic alliance, treatment motivation) and (b) assessment of clinical outcomes (i.e., life satisfaction, hope, symptoms, and functioning). Feedback reports summarize treatment measurement information and provide comparisons through data aggregated across clinicians, provider organizations, or types of treatment, and the reports provide suggestions for interventions and training. Using this data, CFIT offers clinical trainings that emphasize a common factors approach (i.e., client characteristics, therapist qualities, therapeutic relationship, etc.). While CFIT is compatible with EBPs, as it provides the infrastructure to know whether a treatment is being implemented with fidelity and whether outcomes are being achieved, feedback and trainings do not focus on any specific EBPs. Instead, CFIT is used for professional development and continuous quality improvement and “enables provider organizations to make data-based decisions and transform themselves into learning organizations” (Bickman et al., 2006, p. 86).

In Michigan, another group of researchers have examined feedback with child serving agencies (Hodges & Wotring, 2004; Wotring, Hodges, Xue, & Forgatch, 2005). Clinical supervisors of children’s services at community mental health service agencies are provided monthly feedback on treatment outcomes for youth in their service. Data on characteristics and diagnoses of youth served, services provided, and youth outcomes are provided at the child level and aggregated at the provider agency level and statewide. In addition to receiving written feedback reports, providers are invited to “data parties” where statewide averages are discussed and outstanding programs are recognized (Hodges, Wotring, & Xue, 2007). According to Hodges et al. (2007), partnering with providers and highlighting their successes has enhanced provider ownership of the data and has facilitated an empirically-based culture. Data feedback has fostered continuous quality improvement and has been utilized to develop new programs, determine training needs, and identify poor outcomes during treatment (Hodges et al., 2007).

These innovations in Tennessee and Michigan demonstrate how feedback can be used to facilitate youth outcomes in community settings. Both systems provide feedback on outcomes and can be aggregated across clinicians and provider organizations. However, neither system includes feedback on the types of practices that clinicians report using, nor do they allow the ability to compare practices to EBPs. Building on the feedback systems of Tennessee and Michigan, the state of Hawai‘i added the ability to compare usual care practices to the evidence-based literature.

### Setting the Context: The Hawai‘i EBP Model

In the mid-1990s, the child mental health system in the state of Hawai‘i went through a system reform in response to the settlement of a class action lawsuit (i.e., Felix Consent Decree). The early years of the reform focused on increasing access to services. As a result of this focus, an evaluation reported increased access to service but highlighted concerns about the quality of services being provided (Daleiden, Chorpita, Donkervoet, Arensdorf, & Brogan, 2006). As a result of this evaluation, system leaders committed to various quality improvement strategies including quarterly quantitative child assessments and partnering with researchers at the University of Hawai‘i to build an evidence-based system-of-care (Chorpita et al., 2002; Chorpita & Mueller, 2008). Through these efforts, the state of Hawai‘i has been recognized as a model for system implementation of EBPs (McHugh & Barlow, 2010). Since then, the Child and Adolescent Mental Health Division (CAMHD) in the Hawai‘i Department of Health, a government agency charged with providing services to children through a system-of care (Chorpita & Donkervoet, 2005), has been committed to organizing data capture and providing feedback to stakeholders. Over the last 10 years, numerous reporting systems have been implemented in the state to encourage continuous quality improvement using both clinical and administrative indicators (Daleiden & Chorpita, 2005; Daleiden et al., 2006). Most recently, CAMHD embarked on the development of a provider-specific feedback system. Employing features of each of the feedback systems described above, CAMHD developed its own method that fit the context of its system-of care, emphasizing collaboration with partner providers and monitoring youth outcomes and implementation of EBPs.

The definition and monitoring of EBPs in the state of Hawai‘i differs somewhat from mainstream practices. Although clinicians generally report being interested in improving their practices through knowledge gained in research, some have concerns about the inflexibility of treatment manuals and the relevance of treatments studied in randomized controlled trials (RCTs) to clients in the “real world” who often present with complex diagnostic and systems issues and may come from diverse cultural backgrounds (e.g., Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009; Borntrager, Chorpita, Higa-McMillan, & Weisz, 2009; Kendall & Beidas, 2007). Partly in response to such concerns, two separate research teams have worked to identify common practice elements across EBPs (Chorpita, Daleiden, & Weisz, 2005; Garland, Hawley, Brookman-Frazee, & Hurlburt, 2008). The methodology described by Chorpita and colleagues (2005) uses frequency patterns in practice techniques (e.g., exposure) to guide the empirical construction of a decision-tree that organizes the selected literature. Thus, rather than organizing the EBP literature by theoretical background (e.g., Cognitive-Behavioral Therapy) or by manuals (e.g., Coping Cat for Child Anxiety), this approach describes the EBP literature in terms of common practice elements found within empirically supported treatments. CAMHD employs four evidence-bases that are used to guide treatment selection and outcome monitoring: (1) services research, (2) case-specific historical evidence, (3) local aggregate evidence, and (4) causal mechanisms evidence (for a complete description see Daleiden & Chorpita, 2005). The provider-specific feedback system developed by CAMHD employs the common practice elements approach as

well as variations of these evidence-bases. This article describes the development and implementation of the feedback system and data parties in CAMHD.

## The Hawai'i Provider Feedback System

### Collaborative Development Process

Similar to the developmental process of the feedback system in Michigan and in an effort to enhance provider ownership, CAMHD partnered with providers in the development of its feedback system. Meetings began in fall 2007 with provider agencies and staff at CAMHD where content, structure, and format of the feedback system was discussed. Potential data presentation formats were discussed and sample visual data displays were developed. At a statewide meeting in fall 2007, providers played a key role in defining what data would be included and how reports would be structured. In spring 2008, an alpha version of the report with data was presented at another provider meeting. A second round of revisions ensued in response to suggestions. In summer 2008, the first beta version of the report was distributed to providers. Very minor edits have been made to the reports since 2008, and over the last year, the focus has shifted towards helping providers become knowledgeable consumers of the data.

### Agencies, Services, and Clinicians

There are currently 17 provider agencies in Hawai'i that are contracted to provide mental health services to youth enrolled in CAMHD. There are numerous levels of care in the state with services ranging from outpatient services to inpatient hospital-based residential services. Some agencies provide multiple levels of care (e.g., community residential services, therapeutic foster care), while some deliver only one level of care. Each agency receives a report for each of their levels of care. Customized reports are provided when feasible (e.g., separating data by geographic region). Thus data are presented at the agency level by level of care, with over 50 reports being created during each report period.

A majority of clinicians who provide services at these provider agencies have a master's degree (88.7%), 9.6% have a doctoral degree, and 1.7% have a nursing or bachelor's degree. Approximately 23% hold a professional license to practice and clinicians' professional specialty includes Social Work (29.9%), Counseling (20.3%), Psychology (17.7%), Marriage and Family Therapy (17.3%), and Other (11.7%) (Orimoto, Higa-McMillan, Mueller, & Tolman, 2009).

### Youth Clients

In fiscal year 2008, there were 1,555 youth who received services from contracted provider agencies in CAMHD (Higa-McMillan, Daleiden, & Kimhan, 2009). Sixty-six percent of youth were males and average age was 14.6 ( $SD = 3.2$ ). The majority of youth were multiracial ( $n = 825$ ) followed by White ( $n = 192$ ), Native Hawaiian or Pacific Islander ( $n = 150$ ), Asian ( $n = 113$ ), Black ( $n = 25$ ), Other ( $n = 17$ ), and American Indian ( $n = 9$ ). Race data was not available for 224 (14%) of youth. The most common primary Axis I diagnoses were as follows: Disruptive

Behavior Disorders (34%), Mood Disorders (21%), Attention Disorders (17%), and Anxiety Disorders (10%). Most youth (76%) had more than one diagnosis (Higa-McMillan et al., 2009).

### Provider Feedback Reports

Provider Feedback Reports are produced on a semi-annual basis for each program within each community provider agency. Reports are generated using data from the Child Adolescent Mental Health Management Information System (CAMHMIS). Monthly practice information is submitted by agencies to CAMHD via a HIPAA-compliant server. Outcome data are collected on two measures; the Child and Adolescent Functional Assessment Scale and the Monthly Treatment and Progress Summary. Data are aggregated and organized in four broad categories: (1) client information (youth age, gender, primary diagnosis, and comorbidity rates), (2) service characteristics (e.g., length of service episode), (3) practice characteristics (specific treatment techniques), and (4) youth outcomes. Of the four domains displayed on reports, we describe youth outcomes and practices in detail within this article.

**Measures.** There are two measures of treatment outcome used in the feedback reports. The first, the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1998), is a 200-item scale that measures a youth's level of functional impairment. Based on their experience with the child, case managers review behavioral descriptions ordered by level of impairment within eight domains of functioning. The subscales of School Role Performance, Home Role Performance, Community Role Performance, Behavior Toward Others, Mood/Emotions, Mood/Self-Harmful Behavior, Substance Use, and Thinking are calculated by scoring the highest level of impairment (i.e., severe = 30, moderate = 20, mild = 10, no/minimal = 0) that describes the youth within the respective domain of items. A total score is calculated by summing across the eight subscales. The CAFAS has been found to have acceptable internal consistency across items, inter-rater reliability, stability across time, and concurrent validity (Hodges & Gust, 1995; Hodges & Wong, 1996).

The second measure is the Monthly Treatment and Progress Summary (MTPS; CAMHD, 2008). The MTPS is a locally constructed clinician report form designed to measure treatment targets, clinical progress, and intervention practice elements on a monthly basis. Clinicians are asked to indicate up to 10 target competencies or concerns which were the focus of treatment during the reporting month. Treatment targets are selected from a list of 53 predefined treatment foci. Clinicians then provide a rating for each target identified as the focus of treatment that describes the degree of progress achieved between the child's baseline level of functioning and the goal specified for that target. Progress ratings are provided on a 7-point scale (Deterioration < 0%, No Significant Changes 0–10%, Minimal Improvement 11–30%, Some Improvement 31–50%, Moderate Improvement 51–70%, Significant Improvement 71–90%, Complete Improvement 91–100%). Clinicians are also asked to indicate all of the specific practice elements that were used with the child and family during the month. The MTPS records 63 predefined intervention practice elements (e.g., activity scheduling, assertiveness training, biofeedback). Statewide training is provided on the definitions of various targets and practice elements. The MTPS has demonstrated one-month stability for treatment targets and practice elements, con-

vergent and discriminant validity of treatment targets when compared to youth diagnoses, and convergent validity between treatment target progress ratings and CAFAS scores (Daleiden, Lee & Tolman, 2004; Nakamura, Daleiden, & Mueller, 2007).

**Graphs.** There are two types of graphical presentations of the data in the provider feedback reports. The first displays youth outcomes with eight calendar quarters on the x-axis and percent of youth improved since the start of their service episode on the y-axis (see Figure 1). On the MTPS, a youth is considered improved if the average change in their progress ratings across all treatment targets reveals an increase (more progress) during their current service episode. Conversely, on the CAFAS, a youth is considered improved if the average change in their CAFAS 8-scale Total Scores indicates a decrease (less functional impairment) during their current service episode. The percent of youth showing improvement is calculated by taking the total number of youth showing improvement on either measure divided by the total number of youth receiving that service during the report period. For example, in Figure 1, 98% of youth receiving residential treatment at the sample agency demonstrated improvement on the MTPS and 93% demonstrated improvement on the CAFAS in the third quarter of 2008. Further, according to the CAFAS, youth outcomes have improved over the last four quarters.

In addition to displaying agency-specific data over time, a local norm group is provided to allow agencies to benchmark their youth outcomes compared to statewide averages for all agencies providing the same level of care. Data from youth across the state within the same level of care (e.g., all youth who received community residential services across all agencies) are combined to establish a state average percent of youth who improved. In Figure 1, a greater percentage of youth at this sample agency demonstrated improvement on the MTPS during the entire report period relative to all youth receiving similar services across the state.

Each outcome's graph displays the number of youth included within each sample (i.e., youth with at least two progress or

impairment measures). These numbers aid in interpreting the improvement percentage. For instance, an agency serving two clients with 50% of their clients ( $n = 1$ ) showing improvement over the previous quarter may interpret their graph differently than an agency serving 44 clients with 50% of their youth ( $n = 22$ ) showing improvement.

Use of both the MTPS (completed by therapists) and the CAFAS (completed by case managers) provides the advantage of multiple perspectives on assessing outcomes. Overall, MTPS progress ratings and change in CAFAS scores have been shown to be correlated but are not completely overlapping (Nakamura et al., 2007). At the individual program level, convergence or divergence of data from these two measures can prove helpful. For instance, highly discrepant reports may suggest lack of communication between clinicians and case managers. Alternatively, such differences might reflect a bias toward inflated therapist improvement reports, a risk that can be magnified as agency personnel are provided feedback as described here. Convergent patterns provide for more confidence in the results. Regardless of the patterns of outcomes across the two measures, providers are trained to consider such patterns and their possible implications.

In addition to providing feedback on youth outcomes, the reports also give feedback on the therapeutic practices that clinicians report using with their clients. Because practice elements on the MTPS were derived from the EBP literature and there are now multiple reviews of the literature using this metric (Chorpita & Daleiden, 2007; Chorpita & Daleiden, 2009), practices reported by clinicians can be readily compared to practices found in the EBP literature. A "practice profile" of each of the 63 intervention practice elements is presented on the reports with data corresponding to (1) the frequency of occurrence in the evidence-based treatment literature, (2) the statewide average use of each practice element at a specific level of care, and (3) the agency's use of each practice element for a specified level of care (see Figure 2). These data allow provider agencies to examine how often their clinicians report using each of the practice elements and to

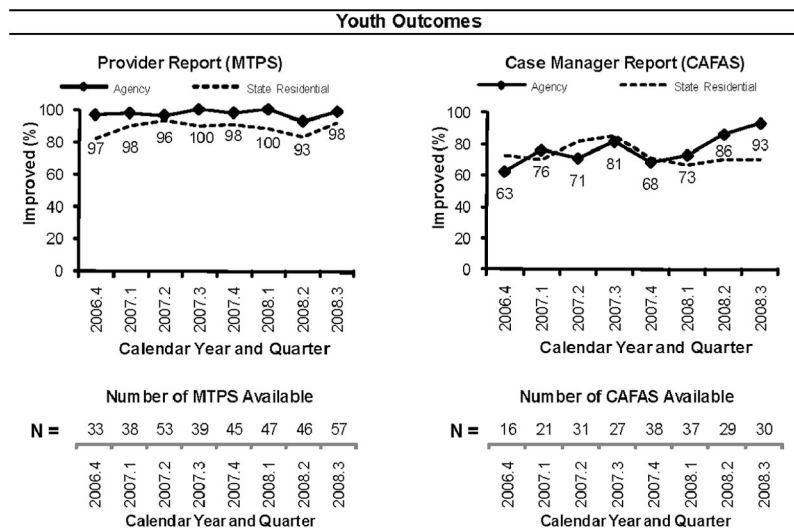


Figure 1. Example Provider Feedback Report of Youth Outcomes for an Agency Providing Community Residential Services. Note. MTPS = Monthly Treatment and Progress Summary; CAFAS = Child and Adolescent Functional Assessment Scale.

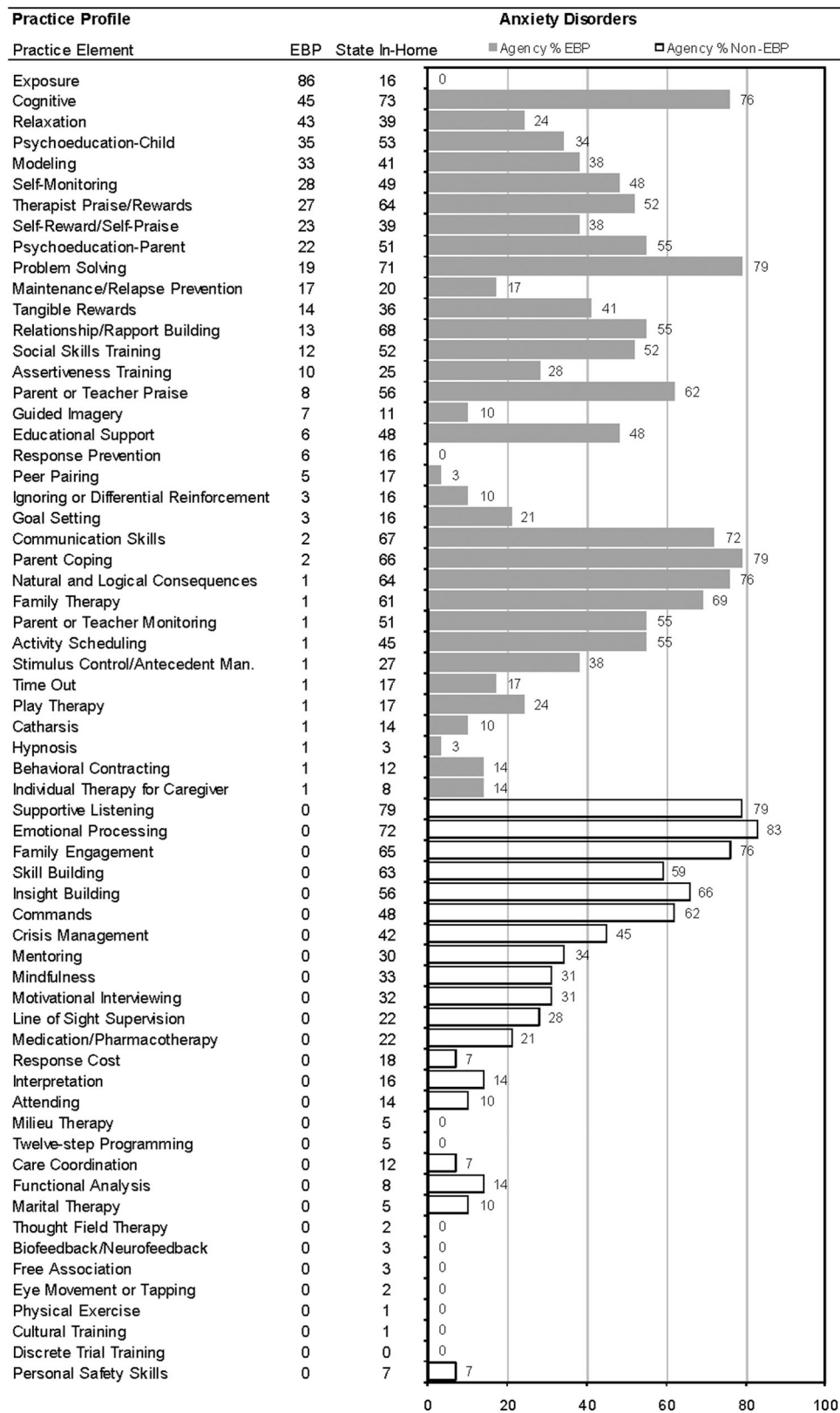


Figure 2. Example Provider Feedback Report of Provider Practices for an Agency Providing In-Home Therapy Services.

compare this with practices found in the EBP literature as well as statewide local practice. Practice profiles are provided on each report corresponding to primary diagnoses in four categories: (1) anxiety disorders (i.e., Generalized Anxiety, Obsessive-Compulsive, Separation Anxiety, Social Phobia, Specific Phobia, Panic/Agoraphobia, Acute or Post-traumatic Stress, and/or Anxiety NOS), (2) attentional disorders (i.e., any Attention Deficit-Hyperactivity Disorder), (3) disruptive behavior disorders (Conduct Disorder, Oppositional Defiant, or Disruptive Behavior NOS), and (4) mood disorders (Bipolar, Cyclothymia, Dysthymia, Major Depressive, or Mood NOS).

The first column of data to the right of the list of practice elements illustrates how often each practice element appeared in efficacious treatment protocols (titled "EBP"). Specifically, this indicator reflects the percent of treatment groups classified as "Good Support or Better" (Level 2; corresponds to the APA Task Force's 1995 definition of "Probably Efficacious" or "Well-Established" interventions) that used each practice element based on a recent coding of the evidenced-based literature (Chorpita & Daleiden, 2007). For instance, the practice element "Exposure" was coded as occurring in 86% of Level 2 treatment protocols for anxiety disorders in children and adolescents. Practice elements on the practice profiles are arranged in descending order based on how frequently each specific practice element is present in Level 2 treatment protocols. Practice elements that are not present in Level 2 treatment protocols for a given disorder are indicated by a "0" in the EBP column (e.g., Supportive Listening, Emotional Processing for anxiety).

The column to the right of the EBP column shows how often each practice element was used across all agencies in the state for the target diagnostic category at the specified level of care. In particular, this indicator presents the percent of all service episodes at the specified level of care that used the specific practice element at some time during the service episode. For example, as can be seen in Figure 2, only 16% of all in-home service episodes for youth with a primary diagnosis of an anxiety disorder included exposure once or more during the service episode. This column of data provides the agency with a local benchmark or comparison group.

The horizontal bar graph to the right of the EBP and Local columns presents the agency practice data. Each bar graph indicates the percent of service episodes for youth with the target diagnosis during which the corresponding practice element was reported once or more by the provider agency. Shaded bars represent practice elements used by the provider agency that are *present* in at least one Level 2 EBP for the target diagnostic category. Clear bars represent practice elements used by the provider agency that, to date, are *not present* in Level 2 EBPs for the target diagnostic category. For instance, in Figure 2, clinicians in the sample agency reported no use of exposure during any of the service episodes for youth with primary diagnoses of anxiety. On the other hand, providers reported using emotional processing in 83% of the service episodes despite the fact that this practice element is not present in any Level 2 EBPs for anxiety.

### Provider Feedback Data Parties

Data Parties are the second active component of the provider feedback system and were established to facilitate a collaborative spirit regarding feedback, help clinicians and administrators understand and make use of the reports, and nurture an evidence-based culture. On a semi-annual basis, provider agencies from

around the state are invited to gather at the central offices of the CAMHD. There has been historically good attendance at the data parties, with 88% of provider agencies attending the parties. Reports are distributed at the parties.

Time spent at the data parties has evolved since the inception of the feedback system. The first data party focused on introducing the reports, describing definitions and procedures used to capture the data, and a beginning level of data interpretation. The second party focused on identifying and praising successes such as better than average outcomes improving over time and greater use of practices derived from the EBP literature than the local average. Most recently, the provider feedback system has attempted to apply principles of diffusion of innovation such as using homophilious communication strategies (Rogers, 2003). For example, at a recent data party the director from one provider agency presented key findings from her agency's data to the larger group. This presentation served as a model for others and facilitated sharing findings and interpretations by others. Given the complexities of understanding data and change in agency personnel, opportunities are taken at every party to clarify the meaning and interpretation of observed patterns. To increase active participation, participants are asked to meet in small groups. Here, providers discuss their data reports, identify agency strengths and areas for improvement, and help each other develop action plans for improved service. For example, practice data for the sample agency in Figure 2 illustrates a strength in cognitive techniques for anxiety but a weakness in exposure. This agency might develop an action plan to seek training for their clinicians in exposure for anxiety.

While the feedback system is still in its infancy (when compared to similar systems in other states), initial reactions have been very positive. Recent evaluation data suggest that the provider feedback system has been successful in enhancing collaboration between CAMHD and the provider agencies, and that the reports and parties are informative, useful, and enjoyable. For example, providers have reported that they like the reports because they "provide feedback data for (their) staff on what training (they) need for improvement" and they allow them "to benchmark against other providers statewide, gauge treatment progress from the standpoint of (their) clinicians and (case managers), and utilize data in an ongoing QA (quality assurance) process." Increasingly, program directors report using their agency's data to make better organizational and clinical decisions, including discussing EBPs with staff and incorporating these data into clinician training and supervision and ongoing quality review of their programs.

### Putting the Pieces Together

As a clinical supervisor or training director of a mental health agency, a feedback system such as the one implemented in the CAMHD in Hawai'i may be one way to enhance clinical practice. The ability to continuously monitor client outcomes and benchmark one's practice against the EBP literature and local norms highlights agency strengths as well as areas for improvement. Using the sample practice profile presented above, a supervisor might seek out training for clinicians in exposure therapy as well as address possible barriers to using exposure in therapy with adolescent clients (e.g., clinician concerns about iatrogenic effects of exposure). Further, a supervisor might address with their clinicians the considerable use of practices that are not currently

present in EBPs for youth. Practices such as supportive listening and family engagement, while not present in EBP protocols, are common treatment factors that are probably useful for many different problems. On the other hand, the extensive use of specific practices not found in EBP protocols—such as emotional processing and insight building—could potentially dilute treatment effectiveness of practices that are found in EBPs.

Participating in provider data parties may be another way to enhance clinical practice. By learning how to interpret data and make data-based clinical decisions, clinical supervisors and administrators can move their clinicians and agencies towards a more evidence-based culture. Wotring and colleagues (2005) suggest that supervisors in their feedback project “needed time to develop an appetite for data and to learn to use the data with their staff in a positive way” (p. 155). CAMHD has also observed this in the data parties where agency staff initially struggled with understanding the reports and learning how to use the data to enhance their programs and practices. However, over time, as agencies learned how to interpret their reports and put them into action, they have come to appreciate the reports and the parties. The success of this initiative may be in part due to the conscious effort to highlight program successes as well as to maintain a safe learning environment where providers can share areas for potential growth. Consistent with Wotring and colleagues, CAMHD has determined that using data in a positive and supportive way promotes genuine continuous quality improvement activities.

### Current Limitations of the Provider Feedback System

While the CAMHD provider feedback system offers an innovative way to track therapeutic practices and compare it to the EBP literature, there are a few drawbacks. First, reports are delayed. During project development, providers were queried about whether they would prefer reports be based on service authorizations (i.e., service authorized by a case manager but not yet verified by a bill from the provider) or accepted billing records (i.e., final adjudicated record). The former is refreshed and available on a daily basis whereas the latter is not considered final until 90 days after the service has been completed. Providers opted to have reports based on accepted billing records because they preferred the accuracy this afforded the reports knowing that this meant their reports would be delayed by at least three months. Although CAMHD recognized the problem of delayed feedback, we listened to provider preferences to maintain a collaborative spirit and to make the system provider-driven. As the system develops and matures, providers may start to see how more timely feedback could be useful.

An additional drawback to the feedback system is that reports do not include youth, parent, teacher, or school input. Although youth and parent report are tracked in CAMHD, poor system-wide completion rates do not allow for comprehensive monitoring of youth outcomes. However, there are pockets of successful implementation, and the data is productive when available. The CAMHD is addressing this problem by looking into potential barriers to completion of measures.

The final drawback of the system is that reports are aggregated at the program/agency level and not at the clinician or consumer level. As mentioned above, there were numerous feedback systems in place in CAMHD before the current provider initiative began.

One such feedback system is a clinical “dashboard” where individual client data (e.g., outcome data, therapeutic practices, level of care, etc.) as well as clinician caseload data is graphically displayed and case managers and mental health supervisors within CAMHD have access to the reports to guide coordinated service and mental health treatment planning (Daleiden & Chorpita, 2005). Under recent new leadership, CAMHD is currently moving toward replacing this dashboard with an electronic health record, which will have the potential to integrate multiple feedback tools, including the provider feedback system, in a more effective manner than in the past.

### Future Directions

The provider feedback system continues to evolve with numerous possibilities. First, CAMHD would like to monitor change in practices and outcomes across time, with the hope that there will be greater use of practices found in EBPs and a higher percent of youth showing improvement. CAMHD would also like to investigate the link between the use of practices found in EBPs and youth improvement (Mueller, Daleiden, Chorpita, Tolman, & Higa-McMillan, 2009). Finally, CAMHD hopes to pilot test a feedback intervention with an individual agency. This intervention would include giving the agency their reports, then meeting with and working with them on increasing their use of practices derived from the evidence base in a manner that is tailored specifically to their needs.

### Take Home Points

There is an ongoing need for creative and effective ways to lessen the science-practice gap in mental health services. Embedded in a continuous quality improvement system, aggregated local data on services and outcomes helps to close this gap. In addition to providing continued professional development and supportive supervision, a feedback system such as the one described emphasizes the importance of implementing EBPs, utilizing rational decision-making, and demonstrating progress toward treatment goals. Ongoing feedback utilizing data provides direction for individually focused improvement strategies. With increased emphasis on accountability, evidence-based research combined with ongoing case and local aggregate data guides providers in delivering more effective care, ultimately resulting in positive outcomes for youth.

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