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Evaluating the Effectiveness of Supervision on Trauma Training Outcomes for Assertive
Community Treatment Teams

by

Sacha Zilkha

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the
requirement for the degree of Doctor of Philosophy The City University of New York

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This manuscript has been read and accepted for the Graduate Faculty in English in satisfaction of
the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

Evaluating the Effectiveness of Supervision on Trauma Training Outcomes for Assertive Community Treatment Teams

by

Sacha Zilkha

Adviser: Denise Hien, Ph.D.

Most individuals receiving mental health care do not have access to evidence-based psychological treatments, regardless of psychological disorder. Despite the development of effective evidence based treatments and available clinical training, clinician uptake and adherence to such treatments has been low. In this study, the effectiveness of a trauma treatment training model was evaluated through a quasi-experimental design to better inform and address the gap between the existence of evidence based care and lack of evidence based treatment options available in the community. Specifically, data from 23 Assertive Community Treatment Teams in New York City that underwent a 1-day ICBT training along with 12-month data collection with optional added supervision was analyzed to determine the benefits of added supervision. Of the 23 teams, 12 opted for added supervision (i.e., Master Training). Results indicate a potential benefit of supervisory calls on increasing the number of ICBT sessions provided. However, teams that had added supervision did not have better clinical outcomes on average when compared to teams that did not have the added supervision. *Keywords: cognitive behavior therapy; posttraumatic stress disorder; implementation; dissemination; Assertive Community Treatment*

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Chapter 1: Introduction to the Study

Background

Despite the availability of evidence-based psychological treatment modalities, most individuals receiving mental health care in the public sector do not have access to evidence-based psychological care, regardless of psychological disorder. (Barlow, Bullis, Comer, & Ametaj, 2013; Drake and Essock, 2009; Herschell, Kolko, Baumann, & Davis, 2010). For therapists who work with individuals with complex co-occurring needs, such as co-occurring Serious Mental Illness (SMI), Post-Traumatic Stress Disorder (PTSD) and Substance Use Disorder (SUD), targeted interventions are particularly important because individuals with co-occurring needs have worse outcomes than individuals with singular disorders and have been historically underserved (Fuller, 2010; McGovern et al., 2011; Mueser, Noordsy, Drake, & Fox, 2003). At the same time, many therapists in community-based settings don't feel equipped to treat individuals with such complex needs because of inadequate training and experience (McGovern, Lambert-Harris, Alterman, Xie, & Meier, 2011). To better prepare clinicians in public mental health settings who often see individuals with complex co-occurring needs, it seems that more focused training and workforce development needs to take place in order to help community-based clinicians learn how to effectively apply evidence-based psychological interventions.

One way to help clinicians learn new and efficacious practices is through training and workforce development. However, research indicates that training in Evidence-Based Practices (EBPs) alone does not lead to the actual implementation of the practices taught (Beidas, Edmunds, Marcus & Kendall, 2012; Herschell et al., 2010; Kolko et al., 2012; Proctor, et al., 2009). Rather, multi-pronged approaches that incorporate on-going learning have been shown to

be more effective than training alone (Beidas et al., 2012). For example, supervision is one critically important component that has started to show promise in terms of increasing treatment adherence and competence among clinicians. However, research in this area is limited and the use of supervision as part of community based training models needs to be further researched.

The following study was designed to evaluate the effectiveness of supervision on training outcomes for Assertive Community Treatment (ACT) Teams. Specifically ACT Teams were trained to use a specific type of Cognitive Behavioral Therapy (CBT) for individuals with Serious Mental Illness (SMI), and co-occurring PTSD and SUD. This treatment, Integrated CBT for PTSD and SUD has been found to be effective based on the research literature and the following study aimed to evaluate the role of supervision and other variables on the frequency with which ACT Teams used ICBT post-training and with supervisory supports. As such, this study explored issues pertaining to sustainable training and supervision of evidence based treatment implementation including workforce development and related clinical outcomes within a special population to create increased access to EBPs in the community. Specifically, a plan was developed that evaluated supervision as a predictor of treatment implementation among community based mental health providers trained in ICBT.

Chapter 2: Literature Review

Research to Practice Gap

Over the past fifteen years, increased attention has been given to what is commonly referred to as the research to practice gap in the behavioral health field; the existence of efficacious mental health practices in the literature compared to the use of unstandardized psychosocial treatments offered in community settings (Hogan, 2003). Though there is growing evidence that certain psychosocial treatments are efficacious and effective at treating certain disorders, most individuals are not receiving evidence-based care in community mental health settings (Barlow et al., 2013). While this is an issue for the behavioral health field, it is not unique to human services. Motivating and initiating change within any context brings challenges (Rogers, 2003). While there has been an abundance of evidence-based treatments developed over the years, the research to practice gap has become more and more evident in the behavioral health sector.

Successfully bringing “human service technologies” (e.g., Evidence Based Practices [EBPs]) into standard practice is more complex than other types of technologies (Aarons, et al., 2010). In the healthcare sector, original research may take up to seventeen years to yield patient benefits (Balas, 2000). For example, in some outpatient settings, research has found that less than ten percent of individuals with schizophrenia receive evidence based psychosocial treatments despite the existence of such treatments (Torrey et al., 2001). Another example of the research to practice gap is seen in the treatment of individuals with Co-Occurring Mental Health and Substance Use Disorders (COD). Despite over fifteen years of research showing that individuals with COD benefit most from treatment that simultaneously addresses their mental health and substance use needs, in 2008, only seven percent of individuals with COD received treatment

that addressed both disorders (Substance Abuse and Mental Health Administration [SAMHSA], 2008 & 2009). Again, this has been seen very recently in the availability for evidence based services for individuals with first episode psychoses. While early intervention is a key approach and EBPs exist to improve prognosis, there is much smaller availability of early psychosis programs offering EBPs than the problem demands (Csillag et al., 2015).

While one may imagine that clinicians would want to provide the best treatments available to those they serve, there are many reasons why there is such a large research practice gap. One of the biggest challenges to closing the gap is that clinical research does not always match clinical practice. Nonetheless evidence based practice research has moved swiftly over the last ten years. SAMHSA's National Registry for Evidence-based Programs and Practices (NREPP) lists 330 interventions for a variety of mental health and substance use disorders (SAMHSA, 2014). Despite the large array of treatments to choose from however, they do not necessarily match the needs of the community. While clinicians tend to be inclined to want to match treatments to individual patients based on an amalgamation of needs, most evidence based treatments are symptom specific and have taken place in laboratory settings, often leaving out patients who have multiply occurring needs (Kazdin, 2008). This disconnect, thus, leaves clinicians feeling skeptical as their patients differ from those being treated in the lab. And with the hundreds of treatments to choose from in the context of an overworked and often underpaid workforce, it is no wonder that clinicians have little motivation to seek out evidence-based treatments for the individuals they serve.

Despite healthy skepticism that emerges from singular clinical trials that may not always reflect the clinical populations served by practitioners, skepticism also abounds when research is less insular, which is the case for EBPs. EBPs, unlike Empirically Supported Treatments (ESTs)

bring together the best research and practice evidence in the field to inform clinical approaches to care. EBPs in effect provide approaches to clinical work that includes research, clinical expertise and client preferences (Lilienfeld et al., 2013). Thus EBPs are less insular, are based on various studies and include clinical expertise and client preferences in a comprehensive and meaningful way. ESTs on the other hand, are treatments that have shown themselves to be efficacious based on two research studies where they must outperform a pill or other treatment (Chambless & Hollon, 1998). As such, EBPs are more generalizable and better suited to the more complex clinical needs that better represent individuals in treatment. Yet, practitioners are still hesitant to support such practices or treatments that have been shown to be effective across varying patient populations (Lilienfeld et al., 2013). Specifically, clinicians seem to conflate EBPs with ESTs and cite reasons against ESTs when explaining resistance toward EBPs generally (Lilienfeld, et al., 2013).

Since many EBPs have been manualized and in turn become a sort of EBP-based EST, clinicians often report concerns providing treatments that seem overly mechanized, and fear that such treatments will detract from building a healthy therapeutic alliance (Freuh, Gurbaugh, Cusak & Elhai, 2010). These concerns, while valid, lead to resistance in learning new therapeutic techniques. While the “dodo bird” effect has shown that when ESTs or EBPs are pitted against each other, for the most part, no significant differences arise (Luborsky et al., 2002). For mental health clinicians with master’s and bachelor’s levels of education these treatments that have a research base are extremely important in bolstering clinical acumen and provide a way for non-doctoral level clinicians to practice effective forms of treatment.

Despite continuous psychotherapy research and innovations in the field, most clinicians place a higher premium on clinical interactions with patients and learning from colleagues than

scientific evidence in part due to unfounded fears related to EBPs (Stewart & Chambless, 2007). In addition to the confusion between EBPs and ESTs clinicians often rely on naïve realism, or the idea that what they perceive is in fact reality. In this way, clinicians stick strongly to the belief that what they do works (Lilienfeld, et al., 2013). However, solely relying on individual perceptions of patient progress is not an effective means by which to evaluate treatment effectiveness. For example, it is a common misconception among treatment providers who provide clinical services to individuals with SMI that the individuals they see are too sick or uneducated to benefit from a manualized approach, while research shows otherwise (Gaag, 2014). At the same time, research shows that clinicians cannot effectively determine patient progress or predict patient decline as well as the kinds of objective evidence used in treatment outcome studies (Lambert et al., 2002). In fact clinicians tend to rate themselves more highly in their patients' clinical outcomes than is the case based on objective outcome measures (Lambert et al., 2002).

Translational Science

To address the many barriers to bringing research into practice, researchers have begun to focus on translation; ways of translating clinical research into clinical practice. While the basic concept of translation has been around for at least forty years (Wolf, 1974), it is only now becoming a major focus in the health sciences (Drolet & Lorenzi, 2011). In the mental health sector, translational science aims to speed up the time lag between research and practice by breaking research down into easily understood clinical practices. Translational science is biphasic. The first phase involves testing basic science (e.g., an EST) in community applicable ways such as through the use of effectiveness studies that include community mental health patients and practitioners. The second phase involves researching the best ways to bring EBPs

into the community (Brekke, Ell, & Palinkas, 2007). Together, these phases ensure that clinical research can be brought into the community in the most effective ways possible, leading to the greatest patient gains. However, despite, these efforts, clinicians continue to provide treatment that is based on clinical acumen and what is familiar over scientific evidence (Lilienfeld et al., 2013).

While phase one efforts have effectively translated basic science into clinical practice and easy to use interventions, less attention has been paid to phase two efforts directed at implementing these practice among community practitioners (Drolet & Lorenzi, 2011). For example, phase two efforts typically only receive one percent of the funding that phase one efforts receive despite their necessity (Tetroe et al., 2008). Phase two efforts are essential because they take the burden of translating science into practice off clinicians who are already skeptical, overwhelmed and unlikely to be motivated to implement a new practice without seeing how it would work with their patients. Thus, without effective phase two efforts clinicians have limited motivation to adopt EBPs while patient groups and families don't have access to the evidence-based care that they need (Eccles et al., 2009).

Intervention Model

According to the National Institute of Health ([NIH] 2014), a stage-based model of clinical intervention development is thought to best develop and bring research into practice (Onken, Carroll, Shoham, Cuthbert & Riddle, 2014). The model put forth by NIH starts with "Stage 0," which includes an understanding of the "basic science" needed behind the development of any potentially meaningful intervention. The next stage, "Stage 1" includes the development of the intervention or refinement of a standing intervention to prepare it for "Stage 2," which includes testing the efficacy of the intervention via a clinical trial. Once the intervention has passed the

“efficacy” test, it needs to move on to “Stage 3” before it can be brought to the public. “Stage 3” involves testing the efficacy of the intervention in the community via a well-controlled study in a community clinic. This stage is followed by “Stage 4,” which includes testing the intervention for effectiveness in the community in ways that emulate reality (i.e., without the strict controls of an efficacy study). Once effectiveness is established, “Stage 5” involves finding ways to implements and disseminate the practice into community settings.

NIH’s model cautions researchers and practitioners about skipping stages so as to ensure the intervention will best be taken up and understood in the community. Specifically, the model warns against moving from efficacy studies to dissemination and implementation before the research is adequately translated into community practice and found to be effective. NIH posits that “the work is not complete until an intervention reaches its highest level of potency and is implementable with the maximum number of people in the population for which it was developed” (Onken, et al., 2014 p. 27). Thus, highlighting the importance of translational research in addition to the actual dissemination and implementation of an intervention into community-based settings.

Dissemination and Implementation Research

While efforts to bring research into practice through dissemination and implementation have received less attention than efforts to translate research into clinical practices, finding effective ways to bring and maintain empirically supported interventions into community settings has been gaining traction over the last ten years (e.g., Beidas et al; Proctor et al., 2009; Proctor et al., 2011; Torrey et al., 2012). Efforts to effectively bring a new intervention to a community involves the dissemination and implementation of a that intervention, with dissemination and implementation often being talked about as one in the same. However,

dissemination specifically refers to the communication of a new practice while implementation involves the methods by which health care innovations most effectively take place and can be sustained over time at policy, organizational and clinical levels (Proctor, Powell, & McMillen, 2013).

The term “implementation science,” which implies that it is the study of implementation, typically also involves a dissemination component and is sometimes also referred to as “dissemination & implementation (D&I) research” (Tabak, Khoong, Chambers & Brownson, 2012). Together, dissemination and implementation theories provide guidance to public health advocates and government entities that wish to increase the use of EBPs among community mental health providers through clinician adoption and implementation of these practices over time. This area of research has become so important that some have proposed a ten year stop to efficacy research in favor of determining the most effective and fastest ways to bring research to practice (Kessler & Glasgow, 2011).

Dissemination and Implementation Theory

While early research on EBP implementation neglected theory in the selection of dissemination and/or implementation strategies (Davies, Walker & Grimshaw, 2010; Eccles et al., 2005; French et al., 2012; Michie et al.; 2005; Stelk, 2006; etc.), more recent studies have both used and outlined some of the more basic theories behind EBP dissemination and implementation (Dingfelder & Mandell, 2012; May, 2013; Tabak et al., 2012). Among implementation scientists, efforts are being made to better incorporate and test organizational and psychological theories that can help researchers select and test implementation strategies (French et al., 2012). Theories behind D&I research help frame and bring context to

dissemination and implementation strategies improving their likelihood to succeed (Tabak et al., 2012).

Everett Rogers' (2003) Diffusion of Innovations theory is one of the more popular theories that is drawn upon in D&I research (Dingfelder & Mandell, 2012; Gotham, 2004; Stelk 2006; Rohrbach et al., 1993). According to Rogers (2003), diffusion or dissemination is the process used to communicate an innovative practice within a community over time. This process involves "the innovation, communication channels, time and the social system" (Rogers, 2005 p. 33). In terms of EBP implementation, the social system would encompass a group or groups of behavioral health providers, the EBP would be the innovation or new technology introduced to providers, the communication channels would be the means by which and the individuals involved in informing and educating those mental health providers of a selected EBP, and the time involved and the rate at which an innovation is adopted would be measured by the number of providers who adopt an EBP in a selected time period.

Building upon Rogers' theory, Rohrbach (1993) and Dingfelder and Mandell (2012) suggest that that the process of diffusion is continuous and typically includes four main stages: dissemination, adoption, implementation and maintenance (Dingfelder & Mandell, 2012). The dissemination stage involves the strategies needed to increase potential adopters' awareness of the innovation and obtain their buy in. The adoption stage is the point at which the system commits to trying out the innovation. The implementation stage marks the time during which individuals in the social system begin to use the innovation. And the maintenance stage begins once the innovation moves from something new that is being tested out to becoming part of community's standard practice.

Each stage in the diffusion process is impacted by a variety of factors. The perception of

the innovation accounts for the greatest variance in terms of whether an innovation will become part of the system and stay a part of the system overtime (Rogers, 2003). Thus, the way in which an innovation is packaged and sold is very important. According to Rogers (2003), and those who have tested his theory, three attributes are of particular importance when trying to introduce an innovation. These include the innovations' complexity, compatibility and relative advantage (Dingfelder & Mandell, 2012). Thus, the easier an innovation appears to be, its capacity to easily fold into already existing practices and its benefits to the individual or community greatly determine whether the innovation will be adopted.

While Rogers laid out his theory of diffusion over forty years ago, only recently have we developed a better understanding of this and other theories as they relate to EBP implementation (Proctor et al., 2009). As D&I research studies have gained traction so has our knowledge of what is and isn't effective in terms of changing clinician behaviors. For many years individuals had little to go on beyond anecdotal information, case reports or controlled experiments with little external validity (Glasgow et al. 2006). Yet, despite the lack of knowledge and the many challenges that exist bringing EBPs into community mental health settings, federal, state and local health departments have made EBP dissemination a priority. Despite evidence demonstrating the importance of implementation science, federal and local efforts have primarily focused on dissemination and the development of specialty training initiatives as opposed to ensuring the implementation of evidence-based practices in community mental health settings (Herschell et al., 2010; Barlow et al., 2013). While the desire to increase the use of EBPs through direct training programs is understandable, focus on training alone may have been premature.

Clinical Training

Research now shows that training alone is not an effective means by which behavioral change takes place (Beidas, et al. 2012; Brunette et al., 2008; Joyce & Showers, 2002; Whitley, Gingerich, Lutz, & Mueser, 2009). Despite well-intentioned efforts, these findings may help explain why many clinicians still do not provide evidence-based support. Although training can increase clinicians' knowledge about an evidence-based practice, it has not been shown to lead to clinicians incorporating what they have learned into their day-to-day work (e.g., Beidas et al., 2012; Davis et al. 1999; Walters et al. 2005). In a study by Davis et al. (1999), that evaluated continuing medical education, Davis and colleagues found that didactic education sessions did not lead to behavior change and limited knowledge transfer, while interactive training, provided greater knowledge transfer but with limited overall gains. This trend is also true for behavioral health settings, even when training is coupled with a contractual mandate to provide EBPs, clinician behavior doesn't change (Lopez, Osterberg, Jensen-Doss, & Rae, 2011).

Most D&I researchers agree that implementation of an evidence based practice requires a variety of components (Torrey, Tepper and Greenwold et al., 2011; Sylvian & Lamothe, 2013). Some factors that have been shown to increase the likelihood that an evidence based practice will be implemented include strong "change" leaders who can manage and oversee implementation efforts at the program level; staff motivation and interest in the treatment modality; staff perception that change is needed; financial and administrative support; oversight that requires providers to track and report organizational and client level outcomes; continuous workforce development, which includes but is not limited to staff training in conjunction with strong clinical supervision and expert consultation; favorable attitudes toward EBPs; and management of staff turnover (Aarons et al., 2012; McGovern, Lambert-Harris, McHugo, Giard & Mangrum,

2010; Torrey et al., 2011; Sylvain & Lamothe, 2013). Thus, training efforts alone can no longer be used to ensure an EBP will become part of one's clinical practice.

Expert Consultation/Supervision and Implementation Research

While efforts have been made to include many of the aforementioned implementation variables within single studies – some of these variables are easier to control than others. For an outside entity (e.g., government) mandating training or beginning to introduce an EBP, expert consultation and funding may be easier variables to control than staff motivation, internal supervision or internal oversight because expert consultation and funding can be controlled externally. Expert consultation is particularly easy for those implementing training to include in training plans granted funding is accessible. Expert consultation is typically provided by the individual or affiliated individuals conducting a training and can be sold as part of the full training package. In particular, if expert consultation involves clinical supervisors it has the benefit of helping to ensure clinical supervision on the training material is built into a program's internal structure.

Since clinical supervision is commonly assumed to be part of standard practice, one may assume that in-house clinical supervision would take place post-training to promote the use of the training modality taught. However, post-training supervision has traditionally been unstandardized and left to mid-level managers who themselves are not experts and at times have not been trained on the EBP that was taught. As such, most clinicians do not have access to regular internal post-training supervision of what they have learned (Milne, 2010). Expert supervision or consultation provided by trainers or treatment developers, on the other hand, is usually standardized and ensures someone familiar with the specific treatment modality provides the supervision. This familiarity combined with structured supervision increases the likelihood

that supervision will lead to treatment implementation or ensure that clinical supervisors are equipped to supervise their staff (Bearman et al., 2013; Beidas et al., 2012; Milne, 2010).

Despite growing evidence that expert consultation and clinical supervision lead to increased treatment implementation, little research has been done pertaining to this type of supervision outside of highly controlled clinical studies with volunteer subjects or involving clinicians providing treatment as part of a separate evidence based treatment models (Sholomskas et al., 2005) and results have even been mixed. In a recent study by Torrey, Bond, McHugo and Swain (2012), an inverse relationship between supervision and implementation was found. Furthermore, research on implementation factors among evidence-based treatments for special populations is even less prevalent and little research has been done to determine the effects of training and supervision on clinical outcomes among individuals with complex co-occurring disorders (Barlow et al., 2013; Proctor et al., 2011; Torrey et al., 2012). Millions of dollars are spent every year to train new staff and increase competence and therefore determining ways to support and sustain these initiatives is needed to avoid wasting money and to ensure that individuals in the community receive the care they need.

Proctor and colleagues (2011) suggested that more research is needed in this area to determine the extent to which supervision and other implementation supports benefit clinical practice. Specifically, few studies have measured client level outcomes as they relate to supervision within treatment implementation studies (Schoenwald, Mehta, Frazier & Shernoff, 2013). Research does show supervision is particularly meaningful within the context of agency buy-in and workflow changes (Brunette et al., 2008; Rapp, Goscha, & Carlson, 2010). And it seems as though the key component by which supervision works is how it encourages increased clinical practice in the treatment modality taught. Thus, it is the increased attention paid to staff

and continued focus on the learned treatments by agency leadership and supervisors themselves that promotes the implementation of a model after training (Whitely et al., 2009).

Supervision provided by trainers or other experts is relatively easy for agencies funding trainings to provide and has been shown to increase the likelihood a treatment will be implemented post-training (Beidas et al., 2012; Beidas & Kendall, 2010; & Sholomskas et al., 2005; Miller et al., 2004). One way that such supervision is provided involves the use of consultation calls, and research looking at this method of consultation has found promising results (Bearman et al., 2013; Beidas et al., 2012). However, these tools have primarily been evaluated among youth treatment providers and have not been evaluated among ACT Teams, which are constantly on the go and already work within an evidence based frame.

SMI, PTSD, SUD and the rationale for Evidence-Based Practices

While there are many challenges and much is still unknown in terms of implementing evidence based practices in the community, for individuals with complex co-occurring needs, evidence-based care is extremely important (e.g., Fuller, 2010; McGovern et al., 2011; Mueser, Noordsy, Drake, & Fox, 2003; Mueser, et al., 2008). For individuals with SMI, who have co-occurring PTSD, and SUD this is especially true because rates of trauma exposure among individuals with SMI are up to twelve times higher than the general population, PTSD is under diagnosed among people with SMI, clinicians rarely provide PTSD treatment or integrated SUD treatment to individuals with SMI and most importantly, untreated PTSD and SUD increase the burden of illness among individuals with SMI, (Fuller, 2010; Mueser et al., 2008; Mueser et al., 2002; Mueser et al., 1998; Read, Hammersley, & Rudegeair, 2007; Switzer et al., 1999; Subica, Claypoole & Wylie, 2012; & O'Hare, Shen, & Sherrer, 2012).

Rates of trauma exposure and PTSD are much higher among individuals with SMI than in the general population (Mueser et al., 2008; O'Hare, Shen, & Sherrer, 2012). Being exposed to trauma in childhood nearly triples one's chance of developing a psychotic disorder (Varese et al., 2012). Yet, PTSD and trauma screening does not routinely take place in community mental health settings, where most individuals with SMI receive treatment, despite the availability of reliable and valid PTSD screening and assessment tools for individuals with SMI (Grubaugh, Elhai, Cusack, Well & Frueh, 2007). In one study conducted by Mueser and colleagues (1998) where forty-three percent of individuals with SMI receiving community mental health services met criteria for PTSD, only two percent of individuals had a PTSD diagnosis documented in their charts.

For individuals with SMI, many of whom may display psychotic symptoms or have major life stressors (e.g., homelessness, recurrent hospitalizations, medical needs, etc.), clinicians often feel the need to address those more obvious needs first and throughout (Frueh et al., 2010). Thus, clinicians become blinded to the possibility of a PTSD diagnosis and ignore the need for PTSD treatment. This is further complicated by the fact that most clinicians in community mental health setting have not been trained to recognize, or detect trauma (Frueh et al., 2001). This is unfortunate, considering that many of the overt symptoms and life stressors that clinicians observe are likely related to untreated PTSD symptoms, which could be easily detected with the use of a simple screening tool (Cusack, Frueh & Brady, 2004; & Mueser, Rosenberg, Goodman & Trumbetta, 2002).

Even if routine trauma screening and assessments take place, the behavioral health workforce is not equipped to provide evidence based trauma treatments due to lack of training and misconceptions about treating trauma among individuals with SMI (Frueh 2001; Frueh et al.,

2010). Trauma treatments are not readily available in community mental health settings in part because of under diagnoses but also due to genuine fears that treating PTSD among individuals with SMI will lead to increased psychiatric symptoms despite evidence that proves otherwise (Mueser et al., 2008). This is further complicated and substantiated since most community mental health clinicians are trained to provide case management and respond to the core disorders associated with SMI (e.g., major depression, bipolar disorder, schizophrenia, etc.) and not trauma (Frueh 2001; Frueh et al., 2010). Many of these providers have traditionally seen their patients as fragile and prefer to provide medication management services to address overt symptoms over psychotherapy (Cusack, et al., 2007). Similarly, clinicians have not and still do not always think it makes sense or feel comfortable providing treatment to individuals with substance use needs for similar reasons despite evidence that individuals with COD respond best to treatments that integrate mental health and substance use needs (Mueser et al., 2003).

Despite concerns of clinicians and inadequate training, lack of PTSD treatment is an issue because untreated PTSD among individuals with SMI leads to increased substance use, psychiatric symptoms, physical health problems, difficulty functioning; and psychiatric hospitalizations (Mueser et al., 2002; Mueser et al., 2004; Switzer et al., 1999; & Subica, Claypoole & Wylie, 2012). Individuals with trauma histories not only are prone to increased psychiatric symptoms and hospitalizations, but are more likely to have hypertension, obesity, and cardiovascular disease (McFarlane, 2010). Thus, exacerbating the individual and societal burden of illness. Trauma exposure, and PTSD, in particular, is associated with some of the greatest amounts of healthcare use and costs when compared to the general population (Greenberg et al., 1999; Hidalgo & Davidson, 2000; Kessler, 2000). Thus, leaving PTSD

untreated not only negatively impacts care and the individual receiving treatment but the health care system at large (Freuh et al., 2010).

Evidence Based Treatment for PTSD

Despite a lack of PTSD treatment available in the community, several treatment approaches have been shown to effectively treat PTSD. The American Psychiatric Association identifies exposure-based therapies, cognitive behavioral and cognitive restructuring therapies, Eye Movement Desensitization and Reprocessing (EMDR) and medication in their treatment guidelines for PTSD (APA, 2004). Of these treatments, exposure-based therapies, which gradually re-introduce the individual to his or her past trauma in a safe environment, have the strongest research base (Bomyea & Lang, 2012; Rothbaum, Meadows, Resick & Foy, 2000). However, despite, stronger evidence for treatments with exposure components, exposure therapies have not traditionally been accepted among clinicians or tested rigorously for certain patient groups, including individuals with psychosis, extreme emotions, co-occurring conditions and/or active substance use disorders (van Minnen, A., Harned, Zoellner, & Mills, 2012; & Foa, 2007).

While the research base is strongest for exposure based treatments and recent studies have started to show promise using exposure-based treatments for individuals with psychosis (Freuh et al., 2009; van den Berg & van der Gaag, 2012; de Bont, van Minnen & de Jongh, 2013), at the time of this study there had been no controlled studies for this population to show whether or not it is safe and/or effective (Mabey & Servellen, 2014). Furthermore, for individuals with psychosis and/or other serious mental health conditions, facing feared situations or memories has been thought to be too stressful for both clinicians and patients due to symptom exacerbation (Mueser et al. 2008). However, since this study took place, one study has found

prolonged exposure therapy safe and effective for this population (van den Berg et al., 2015). Nonetheless, despite these promising findings, clinicians are hesitant to treat trauma among individuals with SMI in general, exposure based treatments may be extremely difficult to sell clinicians to practice. Similarly, for individuals with substance use disorders there have been concerns about the use of exposure based treatments for this population in increasing substance use (Hien et al., 2004; McGovern et al., 2009; Foa 2007; etc) and evidence of high dropout rates (Brady, Dansky, Back, Foa & Carroll, 2001). A few pilot studies and one controlled trial have shown promising results in terms of demonstrating patient safety, but treatment outcomes have not consistently demonstrated patient benefits across studies (Brady, Dansky, Back, Foa, & Carroll, 2001; Foa et al., 2013; Najavits, & Johnson, 2014; Mills et al., 2012).

While exposure based therapies have the strongest research base, implementing such treatments in community mental health settings is not yet indicated for individuals with SMI and/or SUD. There is, however, evidence that non-exposure based Cognitive Behavioral Therapy (CBT) is equally as effective as some exposure-based treatments (Monson, Rodriguez & Warner, 2005). Furthermore, CBT for PTSD developed by Mueser and colleagues (2008) was developed specifically for individuals with SMI and has been found to be safe, effective and better than treatment as usual for individuals with SMI and PTSD (Mueser et al., 2008; & Mueser et al., 2015)). CBT for PTSD focuses on the here and now by directly targeting PTSD symptoms through relaxation skill training and cognitive restructuring techniques that teach patients how to evaluate their thoughts to change their feelings and corresponding reactions to situations.

Integrated CBT for PTSD and Addiction (ICBT)

ICBT (McGovern et al., 2011) uses the basic components that make up CBT for PTSD (Mueser et al., 2008) but differs in that it includes a component that addresses harmful substance

use. Like CBT for PTSD, ICBT is comprised by a variety of EBPs including motivational interviewing, mindful relaxation, psycho-education and cognitive restructuring. ICBT has found to be safe and effective among individuals in substance use treatment with a variety of severe co-occurring mental health needs and is easy for clinicians and patients to use (McGovern et al., 2011). Unlike the original CBT for PTSD, ICBT has the benefit of addressing harmful substance use, which is exacerbated by and extremely common among individuals with SMI and PTSD (Subica et al., 2012).

SMI, PTSD and SUD and Assertive Community Treatment (ACT)

ACT is a community treatment model made up of a team of social workers, psychiatrists, nurses, caseworkers and peers who provide treatment to patients in their homes on a two time weekly basis with a minimum of six visits per month for fifteen to forty five minutes at a time. The original ACT model was developed in the 1970s and originally called *Training in Community Living* (Stein & Test, 1980). In the original model and subsequently after being named ACT, the point of this form of treatment was to act as a hospital without walls, keeping individuals who were frequent users of psychiatric inpatient treatment in the community to reduce cost and promote community reintegration (Bond et al., 2001). ACT has an extensive evidence-base demonstrating that it helps individuals stay out of the hospital, leads to stable housing and reduces psychiatric symptoms and improves life quality (Bond et al., 2001).

ACT Teams are comprised by nurses, social workers, psychiatrists and peer counselors. Each team serves sixty-eight clients. Teams share caseloads, and as such all Team members treat all sixty-eight clients. ACT is indicated and available to individuals with SMI who have previously had difficulty adhering to traditional treatment. To meet ACT eligibility criteria, the individual seeking or referred to ACT services needs to have a SMI and demonstrate a history of

treatment non-adherence and recent psychiatric hospitalizations (New York State Office of Mental Health, 2013). As such, PTSD and substance use disorder rates are likely to be higher among ACT patients than for individuals in traditional community mental health programs since research indicates that outcomes and treatment adherence are typically worse for individuals with co-occurring PTSD and SUD (Fuller, 2010; McGovern et al., 2011; Mueser et al., 2008). However, prior to this study, ACT Teams had not previously received any type of trauma training.

Current Study

As part of a larger initiative focused on improving access to best practices for COD among recipients of New York City Department of Health and Mental Hygiene (DOHMH) contracted mental health programs, approximately 306 ACT Team workers across 43 ACT Teams were trained to use ICBT over a three-week period between April and May of 2013. To support the implementation of ICBT, follow-up supervision and consultation by experts was offered to all ACT Teams post-training. The initiative manipulated the amount of supervision and consultation received by teams in a quasi-experimental design. Specifically, Team supervisors were able to volunteer themselves or staff with supervisory capacity to participate in receiving on-going supervision and training support after the initial round of follow-up support and supervision was provided.

Hypotheses

Based on the literature, a framework for training and supervising clinicians post-training in an EBP was developed. As outlined above, trainings alone don't work and thus by including supervision and consultation into the training plan, provider implementation of ICBT was expected to be higher and patient outcomes were expected to be better when more supervision

was received. Specifically, it was hypothesized that ACT Teams that receive increased supervision and consultation would show greater use of ICBT and better patient outcomes than Teams with less supervision and consultation. It was hypothesized that ACT Teams that received additional support would be encouraged to provide ICBT more by being more comfortable providing it and as a result of their on-going exposure to it. Thus, those ACT Teams were expected to provide more adherent ICBT sessions than those Teams that received the standard training and supervision. With greater sessions that are more adherent, patient outcomes were also expected to be better in the group with more support.

Chapter 3: Research Method

Method

Participants

Forty-three New York City ACT Teams comprised by 350 clinical staff members were offered ICBT Training and post-training supervision as part of a DOHMH initiative to promote the use of trauma informed practices to individuals with SMI and CoD in NYC.

Of the 350 clinical staff members offered the training, 306 individuals across all forty-four teams accepted the training offer and were trained between April and May of 2013. The 306 clinical staff members included individuals from high school graduates to Doctoral level educational backgrounds. No data are available on the demographic makeup of these providers.

Approximately 157 clients across the 43 teams were identified with PTSD, SUD and SMI (See Figure 1 below for client characteristics from original ACT consumers screened). These 157 individuals were tracked between May 2013 and April 2014 on a monthly basis to determine the number of ICBT sessions received, substance use severity and hospitalization utilization. In order to keep consumer data confidential and to decrease the data collection burden, no demographic data was collected for the individuals receiving ICBT.

Study Design

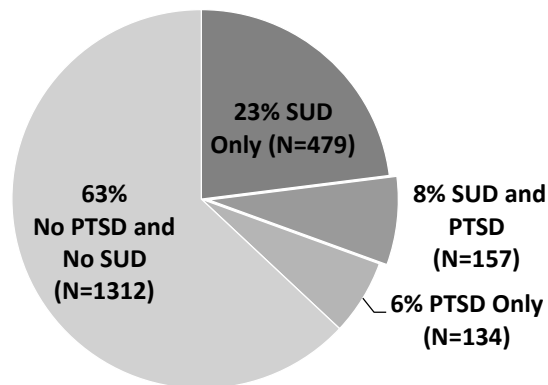
This was a quasi-experimental design consisting of two groups, one group that received a standard Integrative CBT (ICBT) Training for PTSD and addiction with supervision versus another group that received the same ICBT training plus additional supervision and consultation (i.e., the Master Level Training). The two groups were formed on a volunteer basis whereby teams that received the Master Level Training volunteered for this additional support once the Master Training was offered. Teams in both groups reported monthly data on treatment

implementation and clinical outcomes (substance use, PTSD, Stage of Change, and psychiatric emergencies). All data were collected and analyzed at baseline and 3month, 6-month, 9-month and 12-month follow-up intervals.

Design Specifics

Forty-three New York City ACT Team members were offered ICBT Training and post-training supervision as part of a DOHMH initiative to promote the use of trauma informed practices to individuals with SMI and COD. Prior to the training all Team supervisors (n=43) were instructed to collect data on all enrolled consumers (n=2,924). Team supervisors met monthly at DOHMH as part of a standard ongoing ACT Team meeting. Teams were informed of the data collection procedures one month prior to the first training date at one of their monthly meetings. Supervisors were sent a data collection form along with a PTSD (PC-PTSD) and a SUD (CAGE-AID) screening tool with instructions. Supervisors were instructed to have their clinical staff screen all consumers prior to the first day of training in order to identify clients with both PTSD and SUD for the ICBT treatment. Of the possible 2,924 ACT clients, 2,082 consumers were screened for PTSD and SUD (See Figure 1, for breakdown of client clinical characteristics).

Figure 1. Pre-Study PTSD and Substance Use Screening Results



Clinical staff members were trained with their ACT Teams in groups of twenty-five to forty-four participants across three 1-day intensive ICBT Trainings to review the ICBT manual and learn how to implement the model. Each Team received two manuals and was charged to implement the model across those clients who met the criteria for PTSD and SUD based on the initial screening data. Teams were instructed to collect monthly data on those consumers who screened positive for both PTSD and SUD. Teams were instructed to use their first ICBT visit to fully assess those clients who screened positive for PTSD and SUD for PTSD using the PCL as the baseline measure for PTSD symptoms. Teams were also instructed to assess their clients SUD severity using the AUS (Alcohol Use Scale) and DUS (Drug Use Scale) during the first ICBT visit. During the initial training, the DOHMH training coordinator thoroughly explained the monthly data collection procedures and forms, which included space to report AUS, DUS and PCL scores. In addition, providers were asked to report on their clients' Stage of Change and whether the client went to a psychiatric emergency room during the reporting month and whether the client was admitted to the hospital for psychiatric reasons that month. Finally, clinicians were asked to report the number of ICBT and non-ICBT sessions conducted for the reporting month to determine the degree to which providers were implementing ICBT. As part of the 1-day training, providers were trained on the use of the above mentioned outcome measures and assessment tools. Clinical outcome data and number of ICBT sessions were collected monthly in a data file created by the Training Coordinator, with the first data submission that was due June 7, 2013. The data collection forms were used to track client and implementation outcomes over a 12-month period.

Each team was contacted by the Training Coordinator to set-up 2 follow-up 90-minute supervisory phone calls as part of the standard ICBT training (i.e., what everyone receives). The

phone calls were provided individually to each team (i.e., there will be 86 phone calls across 43 teams) and led by either the trainer or the treatment developer. The phone calls reviewed ICBT cases with the teams and provided supervision and technical assistance to ACT Team members.

Once all providers participated in their first of two follow-up phone calls, the Training Coordinator offered ACT Team Supervisors and staff with supervisory roles the opportunity to participate in a “Master Training” on a volunteer basis. The Master Training involved three additional supervisory phone calls led by the ICBT trainer and treatment developer. The Master Training involved 15 ACT Teams, with one person from each team on the call. The phone calls discussed ways in which to further support staff needs in terms of implementing ICBT in addition to providing technical assistance related to specific ICBT cases. Supervisors were going to be the only Team members offered the training but due to low response from supervisors and high response from clinical staff a provision was made to allow any staff member to participate as long as they had the opportunity to provide some level of ICBT supervision to their fellow Team members. This was done in order to promote clinical ICBT supervision across Teams with Master Trainers.

Teams were required to collect and report on monthly client and implementation level data for 12-months. Teams were then compared on the outcome measures by training status (i.e., whether the Team had a supervisor receive the Master Training) at baseline, 3-month, 6-month, 9-month and the end of the 12-month intervals. The number of ICBT sessions in relation treatment outcomes was also be evaluated to determine if the number of ICBT sessions improved clinical outcomes.

Measures

For the initial PTSD screening, the **PC-PTSD (Primary Care PTSD Scale)** was used. The PC-PTSD is a 4-item scale originally developed for primary care sites and other medical settings. The screen asks 4 questions, which relate to the DSM-IV TR (APA, 2000) criteria of general distress, avoidance, hyper-arousal and re-experiencing symptoms of PTSD. Each questions is answered with a “yes” or a “no” and scores range from 0-4, with a score of 3 or above indicating probable PTSD. The PC-PTSD has excellent inter-rater reliability and good test retest reliability. In addition the measure has good diagnostic efficiency in primary care settings with a score of three yielding specificity of .87 and sensitivity of .78 and (Prins et al., 2003). Though this tool was meant to be used in a primary care setting, it was selected because of its ease of use and short length.

For the initial SUD screening, the **CAGE-AID (Cut down, Annoyed, Guilty, Eye opener – Adapted to include Drugs)** was used. The CAGE-AID was developed for the World Health Organization for substance use detection in medical settings. The original measure, the CAGE, only assessed for Alcohol but an adapted version of the tool, CAGE-AID, was created to include drugs. The CAGE-AID is a 4-item that asks questions, which relate to the DSM-IV TR (APA, 2000) criteria of Substance Abuse and Dependence. The CAGE-AID evaluates alcohol and/or drug use. Each questions is answered with a “yes” or a “no” and scores range from 0-4, with a score of 1 or above indicating possible SUD. The CAGE has good reliability and validity and has been validated in groups of individuals with SMI (Center for Substance Abuse Treatment, 2005). The CAGE-AID was selected because of its ease of use, short length and use among individuals with SMI.

For individuals who screened positive for PTSD and SUD, PTSD symptoms were then assessed and tracked using the **PCL (PTSD Check List)**. The PCL assess all seventeen PTSD symptoms listed in the DSM-IV TR using 17 corresponding self-report items. Each item is rated from 0-5 on symptom severity with “0” being “not at all” and “5” being “extremely.” Scores can range from 0 to 68. Scores 44 or higher indicate probable PTSD. The PCL has excellent test-retest reliability, high internal consistency and correlates highly with other measures of PTSD (Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL has been used reliably across groups with both SMI and SUD (McGovern et al., 2011). The PCL was selected because of its ease of use, relatively short length and use among individuals with SMI.

For individuals who screened positive for PTSD and SUD, substance use symptoms were assessed and tracked using the AUS (Alcohol Use Scale) and the DUS (Drug Use Scale). The AUS and DUS are very simple, yet reliable measures of substance use, which use a 5-point clinician rated scale (from “no problem” to “extremely severe”) an individual’s use of alcohol (i.e., on the AUS) and/or drug (i.e., on the DUS), which correspond to DSM-IV TR criteria for substance abuse and dependence. The AUS and DUS have high sensitivity and specificity, and good inter-rater and test re-test reliability within groups of individuals with and without SMI. (Drake et al., 1998). The AUS and DUS were selected because they are easy for clinicians to use and because they have previously been used in groups of individuals with SMI.

Interventions

Integrated Cognitive Behavioral Therapy (ICBT) is a manualized treatment for PTSD and SUD developed at Dartmouth by Mark McGovern, PhD and colleagues (2010). ICBT was developed as an adaption of CBT for PTSD for individuals with SMI developed by Kim Mueser and colleagues at Dartmouth (2008). ICBT was adapted to include addiction treatment within the

context of PTSD and SMI. McGovern and colleagues' (2010) ICBT manual outlines a skills-based approach to treating PTSD with CBT. This model explains CBT for PTSD in a step-by-step manner across 8 modules, to be conducted over 12-16 weekly sessions. The clinician manual includes a client workbook that provides the client with handouts and homework assignments to reinforce ICBT modules.

Module 1 (Introduction to Treatment) outlines the therapy approach, goals and mutual expectations. In Module 2 (Crisis & Relapse prevention plan), the clinician and patient review early warning signs, coping strategies and social supports to manage substance use and/or relapse. Module 3 (Breathing Retraining) teaches the patient an anxiety reduction skill. Module 4 (PTSD: Primary symptoms) introduces the three PTSD criterion symptoms (Re-experiencing, Avoidance, Hyper-arousal) and provides patient education and normalization. Module 5 (PTSD: Associated Symptoms) identifies common negative emotions and affects associated with PTSD (a. Fear and anxiety; b. Sadness and depression; c. Guilt and shame; and d. Anger) as well as the interpersonal consequences of PTSD. A significant portion of this module is devoted to examining the interplay between PTSD symptoms and substance use. The cognitive behavioral technique of cognitive restructuring is the focus of Module 6 (Cognitive Restructuring Part I) and Module 7 (Cognitive Restructuring Part II). Module 6 focuses on the basic framework of identifying stressful activating situations, beliefs/thoughts and consequences (emotional or behavioral). Module 7 builds upon this framework and skill development by including steps on disputing the belief (incorporating common styles of thinking

handouts) and generating alternative emotions or behaviors. The final module, Module 8 (Generalization training) is designed to bring closure to the therapy relationship, consolidate a plan for continued application of the skills, and consider further treatment options. (McGovern et al., 2011, p. 211-212).

Master ICBT Training (Increased Supervision) was used as the main intervention to determine between group differences on clinical outcomes and ICBT implementation. The Master Level training involved additional support and training provided to approximately 22 team supervisors via phone consultation by the treatment developer (Mark McGovern) and/or the ICBT trainer. During the Master phone calls, the consultation provided included discussions on the ways in which supervisors could further support staff needs in terms of implementing ICBT in addition to providing technical assistance related to specific ICBT cases.

Data Analysis

Of the 41 ACT Teams trained in ICBT, 28 agreed to participate in the study. However, due to unreliability of the data from four teams, these data sets were removed from the analysis. Therefore, we analyzed data from 12 Master and 11 Non-Master programs. 107 patients were represented across the 23 teams with 56 patients receiving services on Master Teams and 51 patients receiving services from Non-Master Teams.

Data were analyzed using SPSS (17) (SPSS, 2008). Due to the data being non-parametric and because our small sample size was too small to meet the necessary power for statistical tests of significance, only descriptive statistics and effect sizes were used to analyze the data. Descriptive statistics were analyzed to determine the average number of ICBT sessions provided by Teams with without Master Level Clinicians during each month of the project. Effect sizes

evaluated the strength of the differences between Master and Non-Master Team outcomes.

Furthermore, we used SPSS to generate treatment outcome data for each of these groups, which included differences in AUS, DUS and PCL scores by number of ICBT sessions received.

Chapter 4: Results

Results

Initial Training Information

Each ACT Team participated in an initial ICBT training on 1 day between April and May of 2013. 9 out of 12 Master teams received their initial 1-day ICBT training at the end of April and 4 out of the 12 Master teams received their initial 1-day ICBT training early in May. For Non-Master Teams, 4 of the 11 teams received their training at the end of April and 7 of 11 teams received their training in early May. As a way to capture all participant data during the time the ACT Teams received their initial ICBT training, the first reporting period during which ACT Teams reported ICBT data spanned five weeks (April 24, 2013 to May 31, 2014). All other reporting periods were 1 month long. As such, the first data period carried a bias in favor of teams that participated in their one day training earlier in the reporting period since there was more time for teams trained earlier to use their ICBT skills.

During the first reporting period, 1 of the Master Teams received their initial ICBT supervisory call while none of the Non-Master Teams received an initial supervisory call. During the second reporting period, 4 Master and 3 Non-Master Teams received their initial ICBT calls. During the 3rd reporting period, 7 Master and 7 Non-Master Teams received their first supervisory call. During the fourth reporting period 3 Master Teams received their second supervisory call while 1 Non-Master Team took part in its first call. By the fifth reporting period, 4 Master and 4 Non-Master Teams took part in their second supervisory calls. During the 6th reporting period 4 Master and 6 Non-Master teams participated in their second supervisory call. During the 7th reporting period 1 Master and 1 Non-Master Team took part in their second supervisory call. By the 8th reporting period all teams had participated in their two supervisory

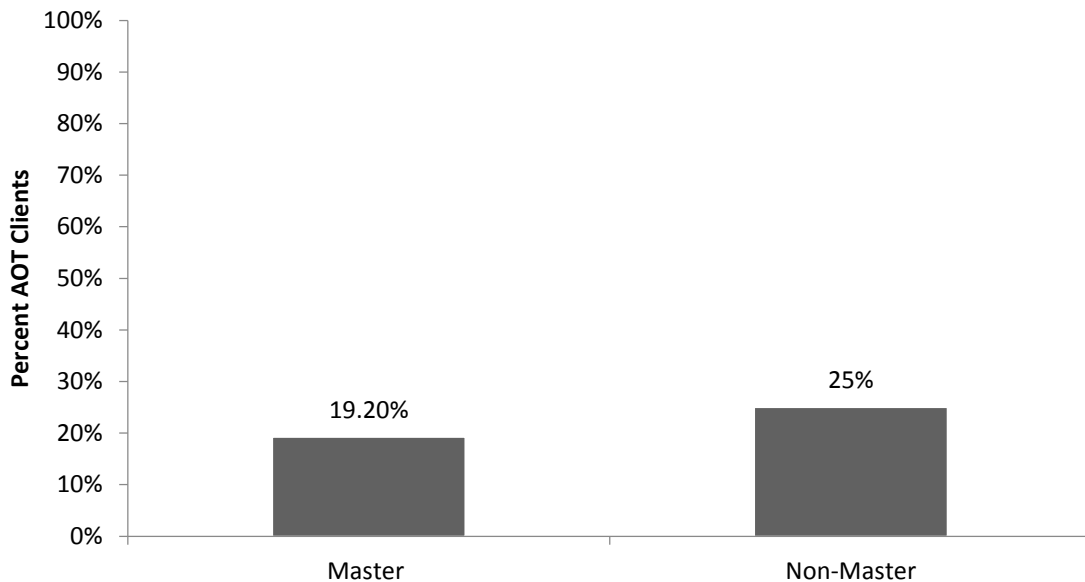
calls. During the 8th reporting period the first two sets of Master calls took place with all Master Teams attending at least one Master Call. See Figure 1 for visual representation of when supervisory calls took place. 20 Master Teams participated in the first 2 Master Calls with 8 teams participating in both calls, one team missing 2 calls and 2 teams missing 1 call. During period 9 the last Master call took place with 11 teams participating and 1 team missing the call.

ACT Team Characteristics

The composition of all ACT Teams across NYC is required to meet certain State requirements. This composition, thus ensures, similar levels of staff education and training across all teams. The main difference between ACT Teams and other outpatient clinical care services is that ACT Teams have a higher staff to consumer ratio, due to the severity of mental health symptoms required to receive ACT services. All ACT Teams are required to have at least 1 clinical staff member for every 9 consumers and each position on the team must meet specific education and experience requirements. Therefore, teams have very similar characteristics in terms of staff level of experience and education, in addition to the number of staff members on each team. Similarly, each team is comprised by 68 consumers, with only very rare occasions that a team is not at their full consumer capacity. Upon further analysis, there were no noticeable differences in staffing pattern between Master and Non-Master teams. Demographic data were requested from teams but due to a less than 50% response rate, this data have been excluded. However, when looking at Master Teams alone, and more specifically the individuals who participated in the calls, 9 of the 12 Master clinicians were early career clinicians while, 3 of the 12 clinicians were Team Leaders (individuals with more experience in leadership positions). Anecdotally, two of the most active ICBT Master clinicians, left their ACT Teams for better career opportunities toward the end of the study.

There was one main difference between Master and Non-Master Teams in terms of patient characteristics that we were able to find. Specifically, Master Teams had fewer Assisted Outpatient (AOT) consumers on their entire caseload compared to Non-Master Teams during the month prior to teams signing up for the Master training. AOT consumers are mandated to treatment by the court and ACT teams are thus responsible for providing those individuals with more in-depth care and submitting weekly reports to the City of New York – thus leading to an increased workload. Furthermore, individuals on AOT are thought to have more severe mental health and substance use needs, thus giving the appearance that they require more attention. For Master Teams, 19.2% (N=10) of all of the consumers in the data reported had an AOT court order, while 25% (N=13) of all Non-Master Team consumers reported in the data had an AOT court order (See Figure 2 below).

Figure 2. Percent AOT Clients on Master Versus Non-Master Status Teams



Initial Consumer Characteristics

Patient AUS, DUS and Stage of Change scores were collected each month by a team assigned ACT Team member. AUS and DUS scores ranged from 1 to 5 with 1=Abstinence; 2=Use without Impairment; 3= Abuse; 4= Dependence and 5 = Severe Dependence. Stage of Change Scores also ranged from 1 to 5 with 1= Pre-contemplation; 2 = Contemplation; 3 = Preparation; 4 = Action; and 5 = Maintenance. See Table 1 for a display of the following initial consumer characteristics.

Table 1 *Initial Consumer Characteristics by Master Team*

Master Status	Average AUS Score	Average DUS Score	Average Stage of Change	% with at least 1 ER Visit	% with at least 1 Admission
Master Teams (N=12)	1.9 (SD=.932)	2.51 (SD= 1.45)	2.59 (SD= 1.44)	11% (SD=.32)	11% (SD= .32)
Non-Master Teams (N=11)	2.4 (SD=1.27)	2.19 (SD= 1.31)	2.35 (SD=1.45)	20% (SD=.4)	15% (SD=.36)

The average AUS Score for consumers on Master Teams was 1.90 (SD=.932) during the first reporting period while the average AUS score for Non-Master Teams was 2.4 (SD= 1.27). The average DUS score for Master Teams was 2.51 (SD= 1.45) and for Non-Master teams the average DUS score was 2.19 (SD= 1.31). The average Stage of Change score was 2.59 (SD= 1.44) for Master Teams and 2.35 (SD=1.45) for Non-Master Teams.

During the first reporting period and throughout teams reported on whether or not consumers went to the ER or the hospital for psychiatric reasons during each reporting period. During the first reporting period, an average of .11 (SD= .32) consumers went to the hospital on at least one occasion from Master Teams and an average of .15 (SD=.36) consumers went to the hospital on at least one occasion on Non-Master Teams. For Master Teams an average of .11 (SD=.32) individuals went to the ER at least one time and an average of .2 (SD=.4) individuals went to the ER at least one time on Non-Master Teams during the first reporting period.

ICBT Session Data

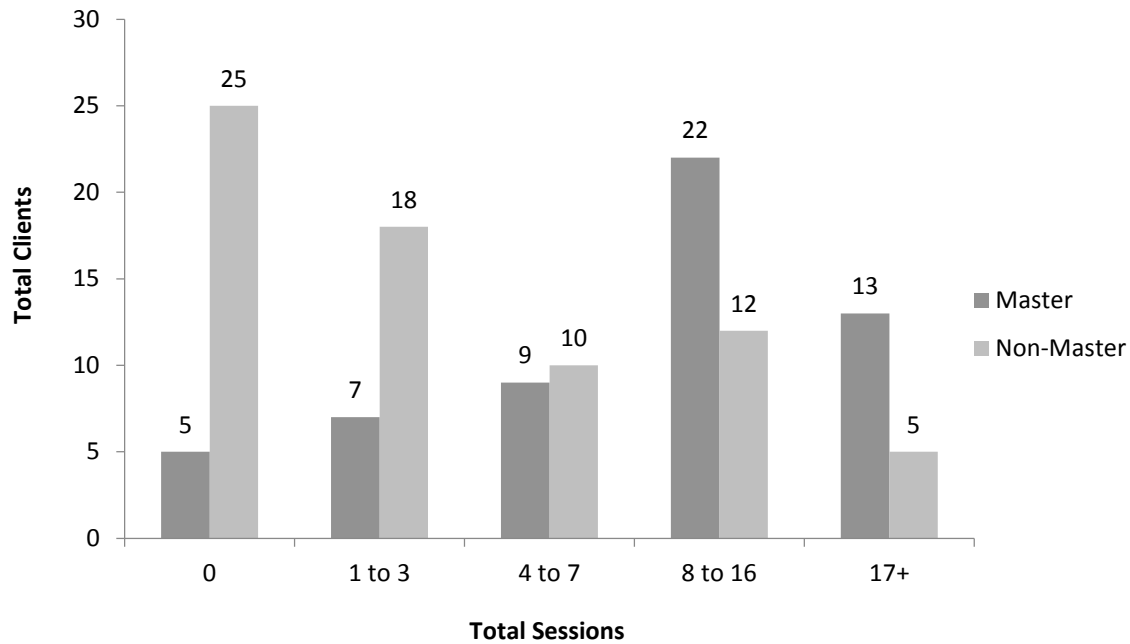
Overall, Master Teams provided an average of 55.58 ICBT sessions (SD=26.19) during the 12 months of the study while Non-Master Teams provided an average of 30.81 ICBT sessions (SD=17.59). A summary of the average number of ICBT sessions across each of the 12 months of the study for Master and Non-Master Teams is in Table 2 below and a breakdown comparing Master and Non-Master Teams on ICBT sessions provided is in Figure 3 below.

Table 2 *ICBT Session Data (standard deviation in parenthesis)*

Reporting Month	Avg ICBT Sessions Master Teams (SD)	Number of Mater Teams Participating in Supervisory Calls	Avg ICBT Sessions for Non-Master Teams (SD)	Number of Non-Master Teams Participating in Supervisory Calls	Avg Difference in ICBT Sessions
Month 1	3.00 (2.45)	1	1.36 (1.50)	0	1.64
Month 2	3.50 (2.15)	4	3.36 (2.69)	3	.14
Month 3	5.25 (2.67)	7	2.91 (2.34)	7	2.34
Month 4	4.33 (3.03)	3	2.27 (2.76)	1	2.06
Month 5	4.92 (1.73)	4	2.45 (2.34)	4	2.47
Month 6	5.58 (4.25)	4	3.18 (2.79)	6	2.4
Month 7	5.5 (4.76)	1	3.55 (3.21)	1	1.95
Month 8*	5.92 (4.99)	23	2.91 (3.27)	0	3.01
Month 9*	4.92 (3.55)	13	2.64 (2.66)	0	2.28
Month 10	4.67 (3.14)	0	2.27 (1.68)	0	2.4
Month 11	4.00 (3.02)	0	1.73(1.56)	0	2.27
Month 12	3.92 (2.68)	0	2.18 (1.88)	0	1.74
Total	55.58 (26.19)	---	30.18 (27.70)	---	24.7

*Months during which Master calls took place

Figure 3. Master vs. Non-Master Teams on ICBT Session Frequency



The mean difference between the average number of ICBT sessions provided by Master and Non-Master Teams was found to be large (Cohen’s $d=1.11$ $r=.49$). During the first reporting period, Master Teams provided an average of 3 ($SD=2.45$) ICBT sessions per team while Non-Master Teams provided an average of 1.36 ($SD=1.5$) ICBT sessions per team demonstrating a large effect size (Cohen’s $d=.81$; $r=.37$). During the first month, Master Teams provided almost double the average number of ICBT sessions ($M=3$) than non-Master Teams ($M= 1.5$). However this number must be interpreted with caution because 9 of the Master Teams received their initial ICBT Training in April and only 3 of the Master Teams received their initial training in May while, 4 of the Non-Master Teams received their initial training in April and 7 received their initial training in May. Thereby giving the Non-Master Teams more of an opportunity to practice ICBT during the first reporting month. By the second reporting month, the average number of ICBT sessions was much closer between Master ($M=3.5$, $SD=2.15$) and Non-Master Teams ($M=3.36$, $SD=2.69$) with a very small effect size (Cohen’s $d=.06$; $r=.03$). As time went by and

supervisory calls took place, Master Teams began to provide a greater average number of ICBT sessions than Non-Master Teams (See Table 1). During month 8, when 2 of the 3 Master calls took place, Master and Non-Master teams differed the most, with Master Teams providing an average of 5.92 (SD=4.99) ICBT sessions and Non-Master Teams providing an average of 2.91 (SD=3.27) ICBT sessions with a large effect size (Cohen’s $d=.71$; $r=.34$). The number of ICBT sessions individuals received differed between the Master and Non-Master programs. See Table 3 below.

Table 3. *Number of ICBT Sessions Received by Master Status*

Number of Sessions	Master Team Consumers	Non-Master Team Consumers
0	8.9% (N=5)	35.7% (N=25)
1-3	12.5% (N=7)	25.7% (N=18)
4-7	16.1% (N=9)	14.3% (N=10)
8-16	39.3% (N=22)	17.1% (N=12)
17 or More	23.2% (N=13)	7.1% (N=5)

For Master programs, 8.9% (N= 5) of the 56 individuals identified for the study had no ICBT sessions; 12.5% (N=7) of individuals had 1-3 ICBT session; 16.1% (N=9) had 4-7 sessions; 39.3% (N=22) had 8 to 16 sessions; 23.2% (N=13) had 17 or more sessions. For non-Master programs, 35.7% (N=25) of the 51 identified individuals had no ICBT; 25.7% (18) had 1-3 sessions; 14.3% (N=10) had 4-7 sessions; 17.1% (N=12) had 8-16 sessions; 7.1% (N=5) had 17 or more sessions. By the end of the project year, 62.5% of consumers (N= 35) on Master teams had the recommended number of ICBT sessions (i.e., 8 or more) ICBT sessions while 33.4% of consumers (N=17) on Non-Master Teams had 8 or more ICBT sessions. (See Chart 1.)

Treatment Outcomes by Master Team Status

Consumers on Master teams had an average AUS score decrease of .33 points (SD=.42), while Non-Master Teams had an average AUS score decrease of .59 (SD=.64) points from the first to last period each consumer was in the project. On the DUS, Master teams had an average DUS score decrease of .11(SD=.55) points and non-Master Teams also had an overall DUS score decrease of .11 points (SD=.56). For Master Teams there was an average PTSD score decrease of 1.64 (SD=10.44) points and for non-Master Teams there was an average PTSD score decrease of .36 points (SD=6.02). For Master Teams, there was an average increase in hospitalizations of 4% (SD=.25) and ER increase of 6% (SD=.24). For Non-Master Teams there was an average decrease in hospitalizations of 8% (SD=.39) and an ER decrease of 10% (SD=.4). See Table 4 below.

Table 4. *Average Change Scores by Master Status and Sessions by 8 or more and 7 or Less (standard deviation in parenthesis)*

Average Change Score	Master Teams	Non-Master Teams
AUS Score Change	-.33 (.42)	-.59 (-.64)
DUS Score Change	-.11 (.55)	-.11 (.56)
Hospital Change	+.04 (.25)	-.08 (.39)
ER Change	+.06 (.24)	-.1 (.4)
PCL Score Change	-1.64 (10.44)	-.36 (6.02)

Within the Master group, consumers who received an average of 8 or more ICBT sessions, the minimum recommended number of sessions, had an average AUS score decrease of .35 points (SD=.66) from the time consumers entered and left the project. Within the Non-Master group, consumers who received an average of 8 or more ICBT sessions had an average

AUS score decrease of .76 points (SD=.81). Within the Master group for consumers who received an average of 7 or fewer ICBT sessions, there was an average AUS score decrease of .23 points (SD=1.1). Within the Non-Master group for consumers who received an average of 7 or fewer ICBT sessions there was an average AUS score decrease of .59 points (SD=.91). See Table 5 below.

Table 5. *Average Change Scores in Points by Master Status and Sessions by 8 or More and 7 or Less (standard deviation in parenthesis)*

Average Change Score	Master 8 or more	Non-Master 8 or more ICBT	Master 7 or less	Non-Master 7 or less
AUS Score Change	-.35 (.66)	-.76 (.81)	-.23 (1.1)	-.59 (.91)
DUS Score Change	-.14 (.67)	.22 (1.3)	-.28 (1.45)	-.12 (.64)
Hospital Change	+.13 (.34)	-.1 (.32)	-.05 (.61)	.03 (.52)
ER Change	+.16 (.37)	0	-.05 (.61)	-.19 (.58)
PCL Score Change	+.47 (18.77)	+.35 (11.37)	+.21 (3.91)	-.24 (.57)

Within the Master group for consumers who received an average of 8 or more ICBT sessions, on average there was a .14 (SD=.67) decrease in DUS score from the time consumers entered and left the project. Within the Non-Master group for consumers who received an average of 8 or more ICBT sessions there was an average DUS score decrease of .22 points (SD=1.3). Within the Master group for consumers who received an average of 7 or fewer ICBT sessions, there was an average DUS score decrease of .28 points (SD=1.45). Within the Non-

Master group for consumers who received an average of 7 or fewer ICBT sessions there was an average DUS score decrease of .12 points (SD=.64). See Table 5 above.

For consumers within the master group who received an average of 8 or more ICBT sessions, there was an average PCL score increase of .47 points (SD=18.77) from the time consumers entered and left the project. Within the Non-Master group for consumers who received an average of 8 or more ICBT sessions there was an average PCL score increase of .35 points (SD=11.37). Within the Master group for consumers who received an average of 7 or fewer ICBT sessions, there was an average PCL score increase of .21 points (SD=3.91). Within the Non-Master group for consumers who received an average of 7 or fewer ICBT sessions there was an average PCL score decrease of .47 points (SD=.99). These scores must, however, be interpreted with caution as only a small percentage of consumers were administered the PCL consistently over time and there was some confusion in PCL administration across teams.

Within the Master group for consumers who received an average of 8 or more ICBT sessions, on average there was an average increase of 13% (SD=.34) in hospitalizations from the time consumers entered and left the project and an average increase of 16% in ER visits (SD=.37). Within the Non-Master group for consumers who received an average of 8 or more ICBT sessions there was a 10% (SD=.32) decrease in hospitalizations on average and no change in ER visits. Within the Master group for consumers who received an average of 7 or fewer ICBT sessions, on average there was a 5% (SD=.77) decrease in hospitalizations a 5% (SD=.61) decrease in ER visits from the time consumers entered and left the project. Within the Non-Master group for consumers who received an average of 7 or fewer ICBT sessions, there was a 19% (SD=.58) average decrease in hospitalizations and 24% (SD=.57) decrease in ER visits.

Out of the 107 individuals who initially screened positive for PTSD and SUD, 38 of those individuals had clinically significant alcohol use as determined by a score of “3” or higher on the Alcohol Use Scale among the Master and Non-Master teams. For those 38 individuals, 21 received 0 to 7 ICBT sessions and had an average decrease of 1 point (range = -3 to 0; SD=1.1) on the alcohol use scale. The remaining 17 individuals with an AUS score above a “3” received 8 or more ICBT sessions and had an average decrease of 1.35 points (range = -3 to 0; SD= 1) on the AUS. Thus demonstrating a larger decrease in AUS score for individuals receiving a greater amount of ICBT with a medium effect size (Cohen’s $d=.33$; $r=.16$). 18 of the 38 individuals with AUS scores 3 or higher were on Master Teams and of those 21 individuals 9 received 0 to 7 ICBT sessions and 12 received 8 or more ICBT sessions. Of those 9 who received 0 to 7 ICBT sessions, they had an average AUS score decrease of .56. Of the 9 individuals who took part in 8 or more ICBT sessions there was an average decrease of 1.22 (-3 to 0; SD=1.09) points.

Of the 20 individuals who were on Non- Master teams 9 received 0-7 ICBT sessions and had an average overall decrease in AUS score of 1.33 (range= -3 to 0; SD= 1.07). Of the 9 Non-Master Team consumers who received 8 or more ICBT sessions, there was an overall average decrease in AUS score of 1.55 points (-3 to 0 SD= .93). The mean AUS score difference between Non-Master consumers with AUS scores above 3 who received either 0-7 and 8 or more ICBT sessions showed a larger decrease in AUS scores for those individuals receiving 8 or more ICBT sessions with a small effect size (Cohen’s $d=.22$; $r=.11$). See Table 6 below.

Table 6. Average Change Scores by Master Status and Sessions by 8 or More and 7 or Less for Individuals with Clinically Significant Alcohol Use (standard deviation in parenthesis)

Average Change Score	All Teams 8 or more	All Teams 7 or less	Master Teams 8 or more	Non-Master Teams 8 or more	Master Teams 0-7	Non-Master Teams 0-7
AUS Score Change	-1.35 (1)	-1(1.1)	-1.22 (1.09)	-1.55 (.93)	-.56	-1.33(1.07)

Out of the 107 individuals who initially screened positive for PTSD and SUD, 46 of those individuals had clinically significant drug use as determined by a score of “3” or higher on the Drug Use Scale among the Master and Non-Master teams. For those 46 individuals, 24 participated in 0-7 ICBT sessions and 22 participated in 8 or more sessions. Of the 24 who participated in 0-7 sessions, there was an overall average score increase on the DUS of .5 points (range=-3 to 1; SD=1.59). Of the 22 who participated in 8 or more sessions, there was an overall DUS score increase of .77 points (range = -3 to 2; SD=1.41). For Master Teams, 11 were involved in 0-7 sessions, with an overall DUS score increase of .18 (range=-2 to 4 SD= 1.78) and 15 were involved in 8 or more visits with an overall DUS score increase of .6 (range=-2 to 3; SD=1.4). 13 Non- master team participants had 0-7 sessions, with DUS increase of .77 points (range = -1 to 4; SD=1.42). For Non-Master Teams 7 individuals participated in 8 or more ICBT sessions with a DUS point increase of 1.14 (range =-1 to 3; SD=1.46). See Table 7 below.

Table 7. Average Change Scores by Master Status and Sessions by 8 or More and 7 or Less for Individuals with Clinically Significant Drug Use (standard deviation in parenthesis)

Average Change Score	All Teams 8 or more	All Teams 7 or less	Master Teams 8 or more	Non-Master Teams 8 or more	Master Teams 0-7	Non-Master Teams 0-7
DUS Score Change	+ .77 (1.41)	+ .5 (1.59)	+ .6 (1.4)	+1.14(1.46)	+ .18 (1.78)	+ .77 (1.42)

Supervisory Calls & Fidelity

Differences in supervisory call participation and content between Master and Non-Master Teams were captured by evaluating the notes taken by the call facilitator from each supervisory call. During the calls, teams reported the number of clinicians providing ICBT and number of consumers receiving ICBT at the time the calls took place. In addition, teams were rated on their fidelity to the ICBT model on a scale from 1 to 7 with 1 being “not at all;” 4 being “somewhat;”

and 7 being “extensively.” Data for 9 of the 12 Master Teams was available for the first supervisory call and data for 11 of the 12 Master Teams was available for the second Master call. Data for 9 of the 11 Non-Master Teams was available for the first supervisory call and data for 11 of the 11 Non-Master Teams was available for the second supervisory call.

During the first set of supervisory calls, the average number of clinicians providing ICBT on each team was 1 (SD =.87) for Master clinicians and 2.33 (SD=2.29) for Non-Master Clinicians. During the second call, the number of clinicians providing ICBT on Master teams rose 2.18 points to 3.18 clinicians per team (SD=1.89). For non-Master Teams, the number of clinicians per team providing ICBT rose .21 points to 2.55 clinicians (SD=1.69).

During the first set of calls, the average number of consumers receiving ICBT on each of the Master Teams was 1.33 (SD=1.41) while the average number of consumers receiving ICBT on the Non-Master Teams was 2.33 (SD=2.24). By the time the second set of calls took place, the average number of consumers receiving ICBT on Master Teams rose by 1.49 consumers to 2.82 consumers (SD=.98). The average number of consumers receiving ICBT Non- Master Teams rose by .58 consumers to 2.91consumers (SD=1.64).

During the first set of supervisory calls, the average fidelity score for the Master Teams was 4.33 (r=1-7, SD=4.23) and the average fidelity score for non-Master Teams was 4 (r=1-7, SD=2.5). During the second set of supervisory calls the average fidelity score of Master teams decreased by .1 points to 4.23 (r=2-6, SD=1.29). During the second set of supervisory calls, average Non-Master Team fidelity rose by .36 points to 4.36 (r=1-7, SD=1.57).

Chapter 5: Discussion, Limitations, Study Implications

Discussion

Importance of Motivation

This study demonstrates the benefits and challenges inherent in developing an implementation protocol in a community based setting serving individuals with serious mental health and co-occurring substance use conditions. The combination of training, phone supervision and data collection appeared to create an environment for ACT Teams to try a new clinical tool. However, some teams were less eager to provide ICBT than others. Apparent in the data and based on observations, teams with motivated leaders and/or members more regularly provided ICBT and noted its clinical benefits. While teams who initially felt the ICBT training and data collection was a chore that would not benefit the people they serve, were less likely to provide ICBT.

Given the large role motivation appeared to play in the provision of ICBT, it is unfortunate that a more formal measure of motivation was not introduced into the study and makes interpreting the data quite complex given that those individuals who signed up for Master Training appeared more motivated than their counterparts that forwent the additional training hours. At the same time, there appears to have been an interactional effect that the Master Training plus motivation had on ICBT sessions provided. Specifically, even though Master teams were more likely to sign up for additional training, based on the data, it seems as though the training also impacted their likelihood of providing ICBT. Similarly, if teams had not been offered formal training in ICBT, motivated teams would likely not have started to provide ICBT on their own. Thus, pointing to the importance of future research focusing on increasing staff motivation in the context of targeted training efforts. Though, perhaps research is warranted in

the area of increasing staff motivation alone, to determine if increases in motivation would lead individuals or organizations to seek out training in EBPs.

While staff motivation has been largely discussed in the organizational psychology literature (Weiner, 2009), it is only just beginning to become integrated into the concept of EBP implementation in mental health settings (Williams et al., 2013). Though implementation researchers have addressed motivation in their work (Proctor et al., 2009), more attention to motivation and in particular employee values may be worth exploring more when implementing a new practice in a behavioral health setting. Specifically, research has shown that individuals are the most likely to change when the change aligns with their personal values (Sheldon & Kasser, 1998). Furthermore, change is also more likely to take place, when individuals feel autonomous and believe that the change behavior is coming from one's self (Deci & Ryan, 2000). All of these motivational and change predicting factors appeared relevant to the current study despite inclusion of motivation or values based measures.

In some ways, we did make efforts to determine if specific individual characteristics (e.g. age, level of education, years of experience, etc) were relevant to implementation/motivation, yet, teams were uncooperative in returning staff demographic questionnaires to us. It is unclear if this was due to these questionnaires asking about demographics or related to a more general ICBT burnout and ease with which teams could opt out of a voluntary task. Based on observation, motivation appeared highest in team members who were new to the field, and just starting out in their positions, followed by seasoned team leaders with interest in enhancing their teams clinical skills based on their own clinical interests. While it would be unreasonable to create a workforce comprised only of certain types of employees, it would be worth exploring

how and why some employees are more motivated than others to determine ways to increase motivation among individuals with less motivation.

While the internal staffing patterns of Master and Non-Master teams were similar as a result of their being a standard ACT staffing pattern, Master clinicians tended to fall in one of two groups. Specifically, Master clinicians tended to be frontline staff at the beginning of their careers or seasoned program directors. And in both of these groups, there was a very high level of energy and commitment to the individuals they served. This enthusiasm, however, was not seen across Non-Master Teams and was also not seen among some of the staff who worked on the Master Teams but were not Master clinicians. Thus it appeared that some type of internal drivers within the Master clinicians was driving the uptake of ICBT and desire to become Master teams. Furthermore, for teams that had enthusiastic leaders (i.e., program directors) the effects trickled down to the entire team, thereby allowing for additional ICBT sessions to take place.

Past data supports the notion that internal clinician characteristics and strong change leaders lead to increased treatment uptake (Torrey et al., 2001). In particular and as evidenced in this study, team members that believed ICBT would help their clients were more likely to sign up for Master training and provide more ICBT sessions. This was contrasted with clinicians and team leaders that believe their clients were “too sick” for CBT. Teams that thought they either new the CBT model, or didn’t believe the model would work for their clients provided less ICBT, were less likely to become Master clinicians and were more likely to submit data late or be non-responsive to data coordinator. As is consistent with other research, individuals are much more likely to want to learn and implement an evidence based practice if they see it as an area of improvement for themselves and as a benefit to their clients (Torrey et al., 2001).

The nature of ACT Team work in NYC is another variable that likely influenced motivation and commitment to the ICBT model. ACT team work is exceptionally difficult as evidenced by staff reports and a very high staff turnover rate. Often for staff who stay on the teams and are not promoted to program directors, a sense of bitterness may arise as a result of the daily challenges the work imposes with no reward. As a result of this, new staff are often the most motivated on ACT Teams. These new staff, tend to fall into three categories; those who leave after about one year for a more senior position in another social service sector, those who become promoted to a program director on the ACT Team, or those who stay on the team in their current role. Those who become promoted or move on, thus appear to be more enthusiastic about their work and helping individuals with SMI. In fact, on the Master Teams, two of the Master clinicians moved on to higher level positions in different social service sectors before the project year ended. These two clinicians, were anecdotally two of the most motivated, and dedicated to the ICBT model.

Another important factor separating Master and Non-Master Teams apart was the number of AOT consumers on their teams. Specifically, Master Teams had fewer AOT consumers than Non-Master Teams. Providing care to individuals on AOT proves very challenging as there are increased clinical and administrative demands. Clinically individuals on AOT court orders tend to be more challenging to engage as they often have AOT orders due to a history of treatment non-adherence. Thus, ACT Teams who work with these individuals need to work harder to engage these individuals and may feel less satisfied about their work with these individuals do to the slow progress and constant engagement techniques they need to employ to ensure these consumers see the ACT Teams. Furthermore, AOT court orders require ACT Teams to take specific measures to search for AOT consumers when they go missing, something that isn't rare.

These measures, while necessary, burden staff and require specific documentation that takes time to complete. Additionally, AOT consumers require additional paperwork overall, and ACT Teams often need to help these individuals attend their AOT court dates, which is very time consuming for ACT Team workers. For teams with additional AOT consumers, the burden of added work could make the task of learning and implement a new treatment daunting.

The additional work associated with AOT does not fall evenly across ACT Teams and may therefore contribute to overall staff bandwidth to do additional work. Staff on ACT Teams with additional AOT consumers may become stressed out more easily and feel less engaged in their work if they do not have the right support. Given the high intensity of ACT work, AOT consumers pose a clinical and administrative challenge for teams that are already overwhelmed. Therefore, teams with fewer individuals with AOT court orders are at an advantage in that they have less administrative responsibilities and are treating individuals who are less challenging clinically. This difference may allow for teams with fewer AOT consumers to feel less overwhelmed and motivated about their work, which may explain why teams with fewer AOT consumers would sign up for the Master Training.

While the majority of the data from this study do not isolate benefits of the Master training alone, it does highlight the importance of staff motivation and eagerness to gain added knowledge in the provision of a new treatment modality. Together, it appears that some combination of staff motivation, the Master calls and the earlier supervisory calls lent themselves to the provision of ICBT sessions. Staff motivation seems to explain the early differences between the Master and Non-Master Teams as well as the Master Teams volunteering for additional training. The initial supervisory calls also seem relevant in that ICBT sessions went up for both Master and Non-Master teams when ICBT calls took place and seemed to go down as

time passed from when the ICBT calls took place. The Master Calls also appear important because the data showed that the greatest difference in the number of ICBT sessions that were provided by Master and Non-Master Teams with Master Teams providing more sessions, occurred when the Master Calls took place. Thus, it seems these three elements (motivation, supervisory calls, and master calls) were important in enabling staff to provide ICBT sessions.

Much of the observations made in working with the ACT Teams was in line with past research independent of progress made by clients and the amount of ICBT provided.

Specifically, clinicians demonstrated great fears and concerns providing trauma treatments. While ICBT is not exposure based and even though clinicians attended ICBT training, many were hesitant to practice ICBT because they feared they would retrigger their clients trauma histories, which would lead to increased symptomology. Clinicians expressed fears that by merely mentioning trauma their clients would become unstable despite evidence discussed earlier that points to the contrary. Similarly, even though ICBT is not exposure therapy, because ICBT involves trauma, many clinicians did not understand that ICBT did not involve exposure despite numerous attempts at education on the supervisory calls and through individual and group contact with teams.

Other clinician fears included a sense that clients were “too sick” to receive ICBT. Many clinicians shared that they thought clients with psychosis could not grasp CBT concepts despite evidence that suggests otherwise. While the supervisory calls allayed some of these fears, for some teams the idea that ICBT was not appropriate for their clients was maintained throughout the entire project year despite continuous attempts to explain how ICBT works and its benefits. This continued fear or reluctance to use ICBT exemplifies some of the great and many barriers to implementing EBPs especially among clinicians who have very strong thoughts and opinions

regarding the individuals they serve. Thus, future studies may want to think about, explore and address preconceived notions about clients prior to implementing and disseminating and EBP.

In addition to exploring and addressing preconceived notions about clients upfront, evidence suggests that the way an EBP is packaged and sold is very important (Rogers, 2003). While attempts were made to package ICBT as user friendly and applicable to ACT clients, based on staff fears and concerns regarding ICBT uptake, more marketing could have been done early on. By better assessing staff competence and interest in ICBT on a trauma treatment in general, the package developed for the ACT Teams could have better sold ICBT. If resistance were predicted early on, initial training sessions could have been longer and taken place in smaller groups to leave time and space to discuss concerns about ICBT openly thereby assuaging fears and motivating staff to use ICBT.

Another approach to enhancing ACT Team use of ICBT could have been achieved by better demonstrating the ease with which ICBT could be implemented in ACT settings. The initial ICBT training was given by an ICBT expert with little ACT Team knowledge. While the initial training explained ICBT well it neglected to demonstrate the ease with which it could be used on ACT Teams. According to Rogers (2003), the easier an innovation appears to be, the more likely it will be used. An adapted version of the initial ICBT training was offered to new staff at several points during the study year and the new training was specifically tailored to ACT Teams. These trainings received more positive reviews of ICBT and several of the staff who attended these trainings went on to become Master clinicians. As a result of adapting the training by focusing specifically on ICBT for ACT and demonstrating its applicability and ease of use, there were more favorable results.

In addition to adapting the marketing and training for this study, it was apparent that strong change leaders were pivotal in the implementation of ICBT. As has been found in the research having change leaders who are interested and excited about an EBP strongly predicts implementation outcomes (Aarons et al., 2012; McGovern, Lambert-Harris, McHugo, Giard & Mangrum, 2010; Torrey et al., 2011; Sylvain & Lamothe, 2013). In this study, teams that had eager Team Leaders and involved management provided ICBT more regularly and were more likely to volunteer for the Master training. Unfortunately, however, in addition to strong change leaders financial support also often helps with EBP implementation – and none of our teams received additional financial support to implement ICBT.

Despite the lack of financial support or incentives, as expected teams did respond well to supervision, especially those teams that had strong change leaders and motivated staff. While this study did not include a measure of motivation, past research shows supervision is particularly meaningful within the context of agency buy-in and workflow changes (Brunette et al., 2008; Rapp, Goscha, & Carlson, 2010). The importance of this combination was apparent for our teams though difficult to reflect in the data. Based on observations of teams, it was clear that supervision was the most meaningful to motivated teams that were willing to change their workflow to incorporate ICBT. Again speaking to the importance of motivation in dissemination and implementation initiatives.

While it may be assumed that teams with greater fidelity to the ICBT model would be more motivated provide more ICBT sessions, this did not seem to be the case. Despite the greater number of ICBT sessions provided by Master Teams, initial fidelity to the ICBT model was similar for Master and Non-Master Teams. Fidelity was measured by the ICBT supervisory call facilitator who was the same across all calls. Based on her ratings, during the initial two

supervisory calls Master and Non-Master Teams demonstrated a similar fidelity to the model, thereby indicating that early on ICBT sessions quality was likely similar across the two groups. This shows that while, Master Teams provided more ICBT sessions it was not the result of better understanding the ICBT model, but again perhaps was the result of motivation to provide the actual sessions. Given the addition of the Master calls for Master Teams and added information learned, over time Master Teams may have increased fidelity to the ICBT model but because we did not track fidelity over time this information is unknown.

Fidelity to the model is an interesting concept to think about in this study as it seemed that fidelity was mostly based on past the training experiences teams had and not motivation or other factors. The initial training and supervisory calls did appear to be uniformly helpful across the Master and Non-Master Teams and past CBT experience seemed related to fidelity on supervisory calls. However, familiarity with CBT did not seem related to interest in Master training or implementation as is consistent with the notion that uptake of a treatment model is more likely to take place when clinicians see a need for a particular training (Torrey et al., 2001).

It's also perhaps true that as Master Teams learned the model in more and more depth, they became better at integrating ICBT into their usual practice and not documenting their work as strictly ICBT. This may explain why ICBT sessions began to decline after the three Master calls took place. However, it may also be true that on-going supervision is needed regularly and continuously for a treatment to be used consistently. While, there were some short-term benefits in the provision of ICBT sessions during period 8, when two ICBT Master Calls took place, they were not sustained overtime and other factors or ways to increase implementation need to be identified. Perhaps, one way to do this is to work with clinicians to show a continued need to practice and enhance learning around the specific therapy technique that one is looking to

implement. Again, this points to a need for a more nuanced understanding of motivation in implementation and dissemination research.

Successes and Failures of Master Training

Despite concerns regarding motivation, burnout and overall workload, ACT Teams provided a lot of ICBT and clinicians reported thinking about and approaching the individuals they serve differently. While there were some teams that provided very little ICBT, maintained a non-recovery stance (e.g., stating that individuals on ACT Teams were “too sick for CBT”) and lacked interest in the treatment, a considerable number of teams made real changes in the way they provided assessments and treatment. Individual clinicians shared success stories and were appreciative of learning this treatment, reporting that they had been improving their relationships with their clients through engaging them in a structured treatment. Interestingly, teams reported that even though at times, AUS, DUS, and Stage of Change scores weren’t changing, they observed clients becoming more open to treatment, more reflective of their situations, and better able to regulate emotions. While the study did not capture these outcomes, they are important considerations for ACT Teams in that engagement is reported as a large challenge facing these teams. Providing a treatment that allows clients to better relate and interact with staff not only helps them move toward recovery but makes clinicians like their jobs better.

In this study, Master Teams provided a greater number of ICBT sessions compared to Non-Master Teams overall and throughout the project year. Again, there is a clear element of motivation associated with the Master Teams’ performance, however, the Master calls themselves appeared to influence the amount of ICBT provided by the Master Teams. This was seen when looking at the data, which showed that during the months Master calls took place, more ICBT sessions were provided. In fact, on average Master Teams provided the most ICBT

sessions during the month that the first two Master calls took place. During this month, Master teams and Non-Master teams also had the greatest difference in terms of ICBT sessions provided, with Master Teams providing more ICBT sessions than Non-Master Teams. This large difference demonstrates the importance of ongoing support once a training has taken place in addition to highlighting how without regular ongoing support the effects of training are diminished. Despite, Master Teams continuing to provide more ICBT sessions on average than Non-Master Teams for the remainder of the project year, the amount of ICBT provided by them was the most when they had two support calls in one single month.

Given that Master Teams were self-selected, there is still question as to whether or not Master Teams were more likely to provide more ICBT sessions independent of the Master Training. At first glance Master Teams appeared to have an advantage from the start in that they provided a greater number of ICBT sessions on average during the first reporting period when compared to Non-Master Teams. While this data make it appear as though Master Teams had an advantage early on, differences in the provision of ICBT sessions may have been attributed to a greater number of Master than Non-Master Teams being introduced to ICBT during the first part of the reporting period.

Due to training and time constraints, not all Teams were trained the same day and by what appears to have been chance, most of the teams that later volunteered to be Master Teams were trained during the first training sections that took place two weeks before the second set of training sections. This difference in training dates gave those teams trained earlier more exposure to ICBT early on and a greater chance to provide ICBT during the first reporting period. This difference in training date may thus explain why during the second reporting period Master and

Non-Master Teams provided similar amounts of ICBT. And thus give added support to the idea that on going supervisory support aids in the provision of an EBP after training.

In some ways, it is interesting that Master Teams tended to receive their initial ICBT training early on and points to the importance of ensuring initial training sessions are equivalent in this type of work. For instance, during the early training dates there were more DOHMH staff present at the trainings, which might have influenced the atmosphere of the training. DOHMH staff may have led the trainer to perform better or for teams to pay more attention and in turn learn more about the treatment. If teams learned more about ICBT because the trainer did a better job or because they paid more attention, they may have been more interested in further education because they would have been better able to see the benefits ICBT would have on their work. Based on observation, it seems more likely that teams were more influenced by staff presence than the trainer, though the theory that the better teams understood ICBT the more they would want to further their understanding holds. Specifically, it seems likely that teams who were trained in the presence of DOHMH staff who oversaw their programs would have paid more attention in the training sessions.

Once all teams were trained, by the second reporting period, Master and Non-Master Teams seemed to be providing similar amounts of ICBT. Arguably, this time would be a better base from which Master and Non-Master Teams could be compared. As time went on, however, Master Teams began to provide a greater number of ICBT sessions on average – even prior to the start of the Master Training. The greater ICBT uptake seen by Master Teams again, was likely related to motivation and perhaps a greater openness to ICBT supervisory calls. The idea of their being an interactional effect wherein motivation combined with other factors such as the initial supervisory calls would lead to greater amounts of ICBT seemed apparent here.

Considering that Master Teams self-selected to receive additional training, it makes sense that they would be more responsive to ICBT supervisory calls and more interested in providing ICBT.

Master Teams may have started out more strongly than Non-Master Teams based on the initial training date, however, this does not explain the reason that Master Teams started to perform better in terms of ICBT sessions provided prior to the Master calls taking place. Perhaps, one possibility for the greater number of ICBT sessions provided by Master Teams after period two and prior to the Master calls may be that Master Teams responded better to the initial supervisory calls and thus were more likely to sign-up for the Master calls as a result. Similarly, another possibility is that Master Teams may have been more inclined to want to impress the trainers on their first set of supervisory calls, thereby providing more ICBT sessions as a result of the supervisory calls taking place. In this way, these teams who later selected themselves to become Master Teams may have not only been motivated to learn ICBT because of personal and/or professional interest but perhaps out of a sense of obligation or desire to perform well. Anecdotally, it is also true that the teams that volunteered to be Master Teams, were more likely to submit their data on time and were more responsive to the principal investigator generally. This seems inline with organizational psychology research, which points to agreeableness as a trait related to performance and uptake of a new practice or tool (Devaraj, Easley, & Crant, 2008 & Longwe, Lord & Carrillo, 2015).

Despite speculation that Master teams may have been more responsive to supervisory calls or particularly interested in impressing supervisory call facilitators, when looking at data from the calls themselves, Non-Master Teams actually appeared to report higher rates of ICBT fidelity and more clinicians providing ICBT than Master Teams. This finding is surprising in that

one would think teams that later became Master trained would be more eager and open to providing ICBT in an adherent way early on. It is possible that Non-Master teams were actually those that learned and understood the model better and were thus less interested in further ICBT training.

The most striking difference in ICBT sessions between Master and Non-Master Teams took place during the eighth reporting period when the first two Master calls took place. During period 8 on average Master Teams provided more ICBT sessions than Non-Master Teams. The increased difference in ICBT sessions provided by Master teams during period 8 seems to indicate that the 2 Master calls that took place during that reporting period may have led to an increase in ICBT sessions for Master Teams. Furthermore, it seems as though having scheduled two supervisory calls in close proximity to one and other was particularly helpful as indicated by a decrease in ICBT sessions for Master Teams during period 9 when only one Master call took place.

Even though ICBT sessions decreased on average during period 9 for Master Teams, ICBT sessions also decreased on average during period 9 for Non-Master Teams. ICBT sessions dropped again during period 10 when there were no longer any Master Calls taking place and as the project year was ending. The increase in ICBT sessions during period 8, thus indicates some benefit to having calls in close proximity to one and other. At the same time, having a Master call during period 9 may have been an added benefit in that Master Teams continued to provide more ICBT sessions on average than Non-Master Teams. An interesting finding, however, was seen during the last reporting period when the difference in average ICBT sessions provided by Master and Non-Master Teams decreased. During the last reporting period, average ICBT sessions decreased for Master Teams but increased for Non-Master Teams. Perhaps Non-Master

teams decided to try harder as the project year came to a close given that many of the Non-Master Teams did not provide ICBT on a regular basis. For Master Teams it is unclear why average ICBT sessions dropped, but the drop was so minimal that it likely indicated sessions were starting to plateau.

Disappointingly and an apparent failure of the Master Training, was seen in the clinical outcomes associated with Master Teams versus Non-Master Teams. Consumer drug, alcohol, stage of change, PTSD, ER and hospital outcomes for Master and Non-Master Teams varied between teams. For individuals with alcohol use above a score of 3 on the AUS at the start of their time in the project, Non-Master team consumers had greater decreases in alcohol use than Master Team consumers overall. This was also true of all consumers on average, not just those with scores of 3 or higher on the AUS.

For consumers on Master and Non-Master teams, individuals who received more ICBT sessions also had greater AUS score decrease. This finding was expected, but again, on average, Non-Master Teams performed better than Master Teams in terms of AUS score decreases when more sessions were provided, which was not expected. This finding suggests that there was perhaps some added benefit to the type of ICBT or other additional substance use treatment provided by Non-Master Teams. These findings put into question the value of the Master calls on the quality of the ICBT provided. While, greater numbers of ICBT sessions were associated with better AUS score outcomes, these associations favored Non-Master Teams. At the same time, because more sessions meant better outcomes, the value of the Master calls cannot be entirely negated based on this finding in that Master Teams did provide more ICBT sessions on average.

What is somewhat discrepant from the anticipated hypothesis is that AUS scores seemed to go down more for consumers on Non-Master Teams. While it was expected that Master

Teams would have better treatment outcomes, for alcohol use, this was not the case. It is possible that Non-Master teams were better versed in providing substance use treatment, which may explain why they did not volunteer for additional training. Or perhaps, because Master teams received more training, they may have been assessing for alcohol use more accurately. Another possibility is that is Master teams were focusing on trauma more than Non-Master teams, alcohol use, though part of ICBT may have received less attention than Non-Master Teams that may have focused primarily on substance use.

ICBT Impact

The data collected as it related to consumer outcomes was mixed, which may have been the result of the data we collected, the mechanisms by which we collected the data, the treatment itself or some combination. One standard observation made in the data was that greater decreases in alcohol use were seen for consumers with more significant AUS scores. This makes sense in that higher AUS scores likely led clinicians to focus more on alcohol use and given the higher scores there was more room for those scores to go down. For consumers with AUS scores of 1, or 2, AUS scores may not have needed to go down in that scores of 1 and 2 indicate no clinical problem with alcohol use. This is important to consider in that it points to perhaps a greater utility of ICBT use for individuals with more severe substance use needs.

Despite AUS score decreases for individuals on Master and Non-Master Teams, DUS score decreases were very slight from the start to end of the project year. Even more surprisingly, when looking at DUS scores, fewer ICBT sessions appeared to be associated with better DUS score outcomes. Outcomes looked best for consumers on Master Teams who received 7 or fewer ICBT sessions. This finding does not seem to make sense given that we expected both alcohol and drug use scores to go down. When only looking at individuals with clinically significant

DUS Scores (3 or higher), the picture becomes even more complicated. For individuals receiving 7 or fewer ICBT sessions or those receiving 8 or more, DUS scores increased. This was also true regardless of whether consumers were on Master or Non-Master Teams, with average DUS scores going up regardless of Master status.

DUS score changes overtime in the two groups was in contrast to what was expected to happen for individuals receiving ICBT or in the study in general. It was expected that DUS scores would go down overtime with AUS scores and as treatment progressed. Perhaps as individuals decreased alcohol use or addressed PTSD symptoms, increases in drug use followed to help individuals cope with increased anxiety. However, we do not have the necessary data to determine why these increases in DUS scores were found. Research does not suggest that as one substance decreases another arises and research has shown that as PTSD symptoms subside substance use will subsequently be reduced (Hien et al., 2009).

One challenge faced as part of this study was the lack of attention to PTSD symptom assessment by all teams. And therefore, this did not allow for their to be an exploration of whether the reduction of PTSD symptoms led to subsequent substance decreases or increases given how the data looked. While teams were regularly encouraged to administer the PCL, the length of the instrument appeared to impede teams from regularly assessing PTSD symptoms. Despite monthly prompting, most teams sporadically assessed for PTSD using the PCL, and therefore PTSD scores were not captured regularly. As such, the PTSD data collected appears to be somewhat unreliable.

It is unfortunately not surprising that ACT Teams did not regularly administer the PCL given that many teams did not want to be treating trauma and since the PCL requires more time than the AUS and DUS. If teams felt more comfortable with trauma treatment and also had more

time for assessment, the results here may have looked different. As a result of team's trepidation to talk about trauma, it is perhaps likely that trauma treatment was not at the forefront of teams' minds and perhaps led to such varied average substance use outcomes. If teams were more comfortable discussing trauma and implementing CBT techniques to reduce PTSD symptoms, drug use may have been impacted more positively. Anecdotally, for some teams, particularly some Master Teams, those that were more open to assessing and talking about trauma reported better consumer outcomes. Again, however, this was not captured in the summary data, which included both Master and Non-Master Teams that expressed reluctance to address trauma.

Hospital and ER data in this study were also difficult to analyze in that average changes in hospital and ER data were minuscule across time. The only group that demonstrated an average decrease in hospitalizations was for Non-Master Teams that provided 8 or more ICBT sessions. However, the decrease was very small and during that same period ER visits did not change for this group. One challenge to the way this data were collected was that I only asked teams to report whether or not a consumer went to the hospital or ER for psychiatric reasons each month. Despite wanting to capture multiple hospitalizations and ER visits in a month, DOHMH staff who oversee ACT Teams were concerned about not wanting to overburden ACT Team members and asked for me to capture the data in this way. At the same time, and a positive thing, it did not seem as though many ICBT consumers were going to the hospital, which demonstrates the benefits of the ACT Team work as a whole.

The uneven outcomes across Master and Non-Master Teams when assessed comparing teams that provided 8 or more or 7 or fewer ICBT sessions does not paint a clear picture of the benefits associated with ICBT. While individuals in the groups receiving 8 or more ICBT sessions seemed to make greater improvements across some domains, these benefits were not

uniform nor were there uniform differences between Master and Non-Master data. These findings point to the great difficulties inherent in bringing EBPs into real world settings. While teams seemed to receive sufficient training up front, fidelity was not captured over time nor were there standardized fidelity checks, which makes analyzing outcome data even more complicated in that there is no way to find out if what ACT Teams were reported as ICBT sessions were in fact true ICBT sessions.

EBP Limitations

As mentioned in the literature review, some clinicians lack confidence in EBPs as they are conflated with ESTs and clinicians question manualized treatments and the RCTs that support their efficacy and effectiveness. While ICBT is a manualized treatment made up of several EBPs, its effectiveness once removed from a controlled study is subject to critique. Anecdotally ICBT clinicians reported that ICBT helped consumers become more engaged and allowed for greater therapeutic work, however, the data here is not overwhelmingly supportive of the treatment as compared to treatment as usual. Thus, it is worth thinking about what it means to bring an EBP or EST into a non-controlled setting, arguments against EBP and EST language and the notions of common factors related to good therapeutic interventions.

It is reasonable to assume that the clinicians trained in this study did not receive the same extensive type of treatment or fidelity check as those who were in studies that gave credence to ICBT's effectiveness. While all ACT Team members received a one full day of training in ICBT, this training was not specifically created for ACT Teams and the work they do. Thus, attention was likely lost in these training settings, as was evidenced by one staff member who was actually observed going in and out of sleep. These trainings were also large and as such did not allow much time for personalization or checks to ensure staff understood the content. Furthermore,

apart from observational data related to fidelity on the supervisory calls, this study lacked adequate fidelity checks and as such the quality of the ICBT is to be questioned here. While these flaws may have led to an adulterated version of ICBT, they are important to consider in that this study likely emulates real world adoption of EBPs or ESTs and points to the difficulties inherent in implementing an EBP. No matter how good a treatment is, there is no guarantee outside of taped therapy sessions to ensure adherence to the model – something that would be very difficult for community providers to adopt across all clinicians in a community mental health setting.

Once an EBP is taken out of a controlled research setting, much can go awry and speaks to concerns that prominent psychologists have regarding the emphasis on EBPs and EBP/EST language (Wachtel, 2010). Requirements for treatments to be manualized and funding only being given to groups practicing EBPs, is thus flawed. Specifically, EBP language and rhetoric assumes that if one is using CBT, for example, they are practicing an ideal treatment, however, CBT means many things, and without proper supervision and adherence that which the clinician is practicing may as well be treatment as usually. Consider, on the other hand, a clinician not practicing an EBP per se, but a clinician with many years of experience and knowledge of many effective practices that he/she has learned from research, supervisors and individual cases – it is likely that this individual is providing care that is relevant, meaningful and leads to positive outcomes. However, because this individual isn't practicing an EBP or EST as we know of them (i.e., a specific treatment), their work may be subject to scrutiny by insurers and/or oversight entities if not documented correctly.

Another pitfall of EBPs that may have impacted this work is related to the “common factors” associated with beneficial psychotherapy. These factors include empathy, the alliance,

therapist positive regard and genuineness (Norcross, 2011). While these factors encompass the spirit of ICBT and these factors were discussed in our trainings, they weren't done so systematically and more focus and attention was placed on the treatment itself. While teaching common factors takes place in graduate schools and intensive psychotherapy training, they are not easy to teach in a time limited training even with supervision especially when the focus is on a specific treatment modality. Thus, in this way, the effects of ICBT may have been impeded somehow by the lack of focus on common factors. And since we did not control for these factors, we cannot determine their impact on the results.

Limitations

This study had a number of limitations. The greatest limitation was that the study did not control for any of the extraneous variables that set the Master and Non-Master Teams apart. While the basic composition of most teams was known, individual provider variables were not known or explored. Despite trying to survey Teams to better understand specific individual provider variables, most Teams did not respond to this request. This request was made at the end of the project year at which time most teams were tired of submitting data. This lack of responsiveness was another limitation to the study overall, as most of the ACT Teams are very busy and feel overworked thereby making requests for data or ability to engage in activities that are in addition to the ACT model very challenging. However, even if we had more specific details, past research shows that individual provider variable including work experience are not particularly relevant to EBP adoption (Lindholm, Koivukangas, Lassila & Kampman 2015).

Another limitation of this study was the variability across and within teams in terms of PCL administration. Early on some teams were identified as administering the PCL incorrectly, and while this was addressed – on average, most teams did not regularly administer the PCL.

Similarly, AUS and DUS scores were not reported by the same clinician necessarily each month, which brings into question the validity of these scores. It is possible that some clinicians would rate consumers differently based on their individual relationships with the consumers. With this, also comes the concern that Non-Master Teams may have been reporting consumer outcomes more positively than was the case to better represent themselves. While this is also possible for Master Teams, given that Master Teams appeared more conscientious and agreeable than Non-Master Teams, it is possible that Master Teams were more likely to report themselves accurately because of their proclivity to follow the rules.

The most glaring limitation of this study was that teams self-selected into the Master group. Thus, the impact of the Master calls could not be isolated due to this self-selection bias. Thus, it is unclear how much if at all the Master calls increased the use of ICBT or whether self-selected teams were innately more motivated to provide ICBT. Furthermore, factors such as staff motivation, sense of obligation or stage in one's career could have greater predictor's of self-selection and ICBT use. Individuals who participated in the Master training appeared more motivated and responsive to the project coordinator than clinicians who did not receive the Master training. At the same time there were large differences in the amount of ICBT provided by Master and Non-Master Teams that do not seem to have only been explained by motivation. Instead, it appears that staff motivation had some type of additive effect on ICBT sessions provided when paired with the additional training. However, since our groups were self-selected and motivation was not formally assessed, there is no way to determine if there was in fact an additive effect of combining training with motivation.

Study Implications and Significance

While the data from this study are limited in many ways, the study has indicated the importance of staff motivation on training outcomes and the role in which supervisory calls post-training can add to treatment implementation. Even though Master Teams received more training, their treatment implementation outcomes seem influenced by treatment team members motivation. However, it does seem as though the additional training did provide a booster to Master Teams. Furthermore, given that most implementation studies do not include client level data and this one did, the impact of training on client outcomes seems minimal while the provision of added ICBT seems somewhat beneficial for alcohol and PTSD score.

An additional finding of this study that may impact future work with ACT Teams is the evidence that teams who volunteered for advanced training had fewer AOT clients. This finding implies that there may be a benefit to ensuring AOT consumers are more equally distributed across teams and/or fewer consumers are served by teams with these consumers. AOT consumers pose a large administrative and clinical time addition to ACT Team therapists. This study, thus demonstrates how that time addition can decrease motivation for additional training. If teams have more administrative and clinical tasks, it may help the system to equally distribute ACT consumers across teams city-wide.

AOT appeared to be one element of this work that was ICBT prohibitive, however, more broadly, clinician uptake of ICBT really demonstrated the difficulties inherent in bringing EBPs to real world settings. While the study findings were mixed, teams regularly complained about providing ICBT, thought their consumers were too sick for ICBT and did not want to collect consumer level data despite benefits to patients. This reality demonstrates the ways in which patience and attention are extremely important in implementing EBPs in real world settings.

Even though the study results were mixed, in the end many clinicians and consumers were exposed to ICBT, which was the result of the training, on-going data collection and supervisory calls. This exposure to ICBT likely had greater impact on the clinicians and consumers than this study could demonstrate. However, it was clear in working with clinicians that continued support around data collection and reminders of supervisory calls was pivotal in helping teams provide ICBT.

Finally and perhaps most importantly, this work shows how difficult it is to successfully implement an EBP training protocol in a real world behavioral health setting. Future work needs to enlist support of teams and staff early on and before training to build motivation, understand values related to treatment and find ways to easily and seamlessly incorporate a new practice into an ongoing treatment setting. While, this study was able to accomplish getting a number of ACT Team members interested in and using ICBT, many staff members felt resentful about the implementation protocol and did not want to learn or provide ICBT. This study shows that while efforts were made to keep ACT Teams in mind and work with them in a supportive way, that motivation really needs to be better enhanced and understood to successfully implement EBPs.

Chapter 6: Study Summary

Study Summary

This study examined the impact of added supervision on trauma training outcomes among ACT Teams. While it was expected that teams receiving increased supervision would provide ICBT more frequently and have better consumer outcomes, the results were mixed. Overall, Master Teams did provide more ICBT sessions than Non-Master Teams however, consumer outcomes were not always better for Master Teams and the extent to which the supervisory calls impacted ICBT sessions provided is still unclear. What this study did seem to demonstrate was the importance of staff motivation on training participation and treatment implementation. In addition, the study hinted to the possible benefits of finding ways to increase staff motivation through training in conjunction with added supervision and ICBT training.

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