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By Jenna Lynn Godfrey

Entitled Re-Implementing Assertive Community Treatment: One Agency's Challenge of Meeting State Standards

For the degree of Doctor of Philosophy

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RE-IMPLEMENTING ASSERTIVE COMMUNITY TREATMENT: ONE AGENCY'S CHALLENGE OF MEETING STATE STANDARDS

A Dissertation

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of

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I dedicate this dissertation to my family and friends who have supported me and provided me with encouragement during this journey. Without all of you in my life, this would not have been possible. Especially for Buck and Grams—I miss you both dearly.

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ABSTRACT

Godfrey, Jenna Lynn. Ph.D., Purdue University, December 2010. Re-Implementing Assertive Community Treatment: One Agency's Challenge of Meeting State Standards. Major Professor: Gary Bond, Ph.D.

Assertive Community Treatment (ACT) is a widely implemented evidence-based practice for consumers with severe mental illness. However, fidelity to the model is variable and program drift, in which programs decrease in fidelity over time, can occur. Given substantial variability in fidelity and program drift in evidence-based practices, a study to examine how to *re*-implement ACT to high fidelity on established teams was warranted. The present study examined three teams providing moderate fidelity services prior to a state-wide policy change to the definition of ACT. Two of the teams attempted to implement ACT in accordance with state standards, while the third team served as a quasi-control for factors related to other state policy changes, such as a change to the funding mechanism. The implementation effort was examined using qualitative and quantitative measures over a 14-month period at a large, psychosocial rehabilitation center. Themes that were common across all three teams included the perceived negative impact of fee-for-service, ambiguity of stipulations and lack of guidance from the Department of Mental Health (DMH), difficulties with the managed care organization,

importance of leadership within the agency, and familiarity with the services. Perceived barriers specific to the implementation of ACT standards included DMH stipulations, staff turnover, lack of resources, and implementation overload, i.e., too many changes at once. One team also had the significant barrier of a misalignment of requirements between two funding sources. Staff attitudes represented both a facilitator and a barrier to ACT implementation, while management being supportive of ACT was viewed as a major facilitator. One of the two teams seeking ACT status was rated at high fidelity within 6 months and maintained high fidelity throughout the study. The other team seeking ACT status never achieved high fidelity and decertified from ACT status after 6 months. The agency's focus on productivity standards during the implementation effort hampered fidelity on the two teams seeking ACT status and greatly contributed to burnout on all three teams. The team achieving ACT status overcame the barriers in the short-term; however, DMH requirements may have threatened the long-term sustainability of ACT at the agency.

INTRODUCTION

The term severe mental illness (SMI) is applied to disorders that are characterized by diagnosis, disability, and duration (Schinnar, Rothbard, Kanter, & Jung, 1990). Most people with SMI have a diagnosis that falls under the schizophrenia spectrum or bipolar disorder. The disability criterion stipulates the individual must experience substantial impairment in functioning such as in work, social, or self-care. Finally, the individual must have received intensive psychiatric treatment for a significant length of time. Together, these three conditions determine whether the individual is said to be suffering from a SMI. Once the illness is classified, a key issue is how to effectively treat those who are severely impacted by mental illness.

In 1998, the Robert Wood Johnson Foundation enlisted a panel of experts to identify evidence-based practices (EBPs), or interventions strongly supported by research that are shown to improve client outcomes (Drake & Goldman, 2003), to serve the SMI population. The panel identified five psychosocial EBPs and one that focused on prescribing practices that were considered to promote recovery and psychiatric rehabilitation outcomes for individuals with SMI, e.g., employment, community integration, independent living, illness management, and social integration. The five psychosocial treatments included assertive community treatment (Stein and Test 1980), family psychoeducation (Dixon et al., 2001), supported employment (Bond, Becker et al.,

2001), illness management and recovery (Mueser et al., 2002), and integrated dual disorder treatment (IDDT) for substance abuse and mental illness (Torrey et al., 2002). Of the psychosocial practices, assertive community treatment, family psychoeducation, and supported employed were supported by randomized control studies at the time of the panel. The other two interventions, illness management and recovery and IDDT, were more general constructs for which evidence had been accumulating (Mueser, Torrey, Lynde, Singer, & Drake, 2003).

While effective interventions have been identified, research has shown that the majority of individuals with SMI do not receive EBPs at community mental health centers (CMHCs) (Lehman & Steinwachs, 1998a; McCracken & Corrigan, 2004). In fact, it is estimated that 95% of individuals with SMI receive either no care, inadequate care, or minimally adequate care, leaving only 5% who receive evidence-based care (Drake & Essock, 2009; Lehman & Steinwachs, 1998a; New Freedom Commission on Mental Health, 2003; U.S. Department of Health and Human Services, 1999; Wang, Demler, & Kessler, 2002). In response to these findings EBP dissemination efforts have occurred nationwide and public health authorities have recently allocated over $2 billion to assist with the dissemination of EBPs (McHugh & Barlow, 2010). Studies have also begun to examine the strategies and barriers to EBP implementation to provide assistance to practitioners and mental health agencies in order to bridge the gap between science and practice in CMHCs.

The National EBP Implementation Project examined implementation efforts for the five psychosocial EBPs in eight states (Mueser et al., 2003). The states of Indiana and New York elected to implement assertive community treatment (ACT), which is a

team-based intensive case-management approach that has been shown to be particularly effective for treating those individuals who are the highest users of services (Bond, Drake, Mueser, & Latimer, 2001; Essock, Frisman, & Kontos, 1998; Latimer, 1999, 2005; Mueser et al., 2003; Rosenheck & Neale, 1998; Rosenheck, Neale, Leaf, Mistein, & Frisman, 1995). However, in order to obtain similar outcomes across teams, the primary principles of ACT services must be standardized. Despite research showing that the principles of ACT are widely known (McGrew & Bond, 1995) and the availability of a detailed toolkit to assist with implementation (Phillips & Burns, 2002), not all ACT services are implemented according to the original conception of the model (Bond, 1991; Test, 1992). Therefore, one key indicator of implementation success is fidelity to the model, which refers to degree of adherence to the standards and principles of the model (Bond, Evans, Salyers, Williams, & Kim, 2000).

Variations in fidelity may occur for many reasons, including staff members' regression to providing the more familiar services that were previously offered (Bond, 1991). ACT teams in Illinois illustrate how initial implementation of a service can decrease in fidelity over time. When the state of Illinois switched from managed care to fee-for-service they underwent a critical evaluation of their current mental health services. Previous research indicated that high fidelity ACT teams were once present in Illinois (Bond & Salyers, 2004). However, the statewide assessment concluded that ACT teams throughout the state were not currently practicing high fidelity services (DMH, 2006). The discovery that ACT was no longer properly implemented in Illinois (i.e., not high fidelity) led to an initiative to redefine mental health services, including ACT services, within the state (DMH, 2006). While other states, such as Indiana, implemented

ACT services to replace ineffective brokered case management, Illinois attempted to replace ACT-like services with high fidelity ACT by strengthening the state standards for ACT services. Given the tendency of fidelity to decrease over time (i.e., "program drift"), a study to address implementation of higher fidelity services from existing lower fidelity services was warranted. Additionally, the impact of state-specific changes to the definition of ACT services is an important topic as the ACT model continues to be implemented throughout the nation.

The current study provides a mixed-method examination of the facilitators and barriers to implementing higher fidelity ACT using a large psychosocial rehabilitation center in Illinois as a case study. Facilitators and barriers are activities that encourage and inhibit implementation, respectively, and both can result from actions of the provider agency, the state mental health authority, clinicians, and/or other stakeholders. The introduction first provides a description of ACT services, including the principles of the ACT model, a discussion on the efficacy and cost-effectiveness, the role and importance of fidelity, and the national dissemination of ACT. Next is a discussion on previous implementation research, followed by a description of the policy changes that occurred in the state of Illinois. Lastly, the introduction addresses the rationale for the study and design and presents the study hypotheses.

Assertive Community Treatment

ACT was developed in the 1970s in Madison, Wisconsin under the original name Training in Community Living (Stein & Test, 1980). The model arose from the need to better serve consumers who were caught in the "revolving-door" syndrome in which

repeat hospitalization was common following deinstitutionalization (Tibbo, Joffe, Chue, Metelitsa, & Wright, 2001). The movement toward community-based treatment rather than institutionalization brought with it many providers and services that were often physically separate and under different administrations (Test, 1979). This disconnect between the services made attaining adequate care in all relevant realms difficult for individuals with mental illness, thus contributing to repeat hospitalization. It has long been acknowledged that continuity of care is crucial for effective community-based treatment in the SMI population (Test, 1979; Turner & TenHoor, 1978), yet this was not being provided.

Stein and Test designed a service delivery model in which a multidisciplinary team of professionals provided continuity of care by addressing all the services the consumer requires, 24 hours a day, seven days a week (Phillips et al., 2001) with the aim of preventing unnecessary and lengthy hospitalizations and improving community tenure (Tibbo et al., 2001). The resulting ACT model, also known as the Program of Assertive Community Treatment (PACT), is characterized by intensive services that include but are not limited to a comprehensive team approach with shared caseloads and frequent staff meetings, low staff-consumer ratios (generally 1:10), intensive community-based services with assertive outreach, 24-hour availability, a psychiatrist team member to ensure medication management and continuity between community and hospital care, and individualized services tailored toward consumers' strengths and deficits (Ben-Porath, Peterson, & Piskur, 2004; Bond, Drake et al., 2001; Phillips et al., 2001; Stein & Test, 1980). Rather than brokering services, the treatment, including support and rehabilitation

services are provided directly by the ACT team in a community-based setting (Stein & Test, 1980).

The ACT approach to providing services assumes if appropriate, individualized treatment is planned during daily team meetings, staff members can respond flexibly to variations in consumer needs and potential crises that would normally lead to hospitalization can be averted or handled within the community setting (Latimer, 2005; Tibbo, Chue, & Wright, 1999; Tibbo et al., 2001). The rationale for the ACT model is that by concentrating intensive services on high-risk individuals, continuity and coordination of care will be enhanced, resulting in an improvement in both quality of care and cost-effectiveness (Lehman et al., 1999). Because this intensive level of services provided by a multidisciplinary team is expensive, ACT is most appropriate and cost effective for individuals who experience severe symptoms, have the greatest level of functional impairment, and are high users of hospital services (Bond, Drake et al., 2001; Essock et al., 1998; Latimer, 1999, 2005; Mueser et al., 2003; Rosenheck & Neale, 1998; Rosenheck et al., 1995).

Efficacy and Cost-effectiveness of ACT

Efficacy of ACT

ACT has been extensively researched in the 30 years since its development with over 25 randomized control studies demonstrating its efficacy and validating its label as an EBP for treating individuals with SMI (Bond, Drake et al., 2001; Drake et al., 2001; Latimer, 1999; Lehman & Steinwachs, 1998a; Mueser, Bond, Drake, & Resnick, 1998;

Phillips et al., 2001). Specifically, research has shown that ACT is effective at improving various outcomes, including enhancing independent living and maintenance of stable housing, increasing compliance with appointments and engagement in treatment, improving quality of life, increasing consumer and family member satisfaction and decreasing psychiatric symptom severity. However, the ACT model's most robust impact is in reducing hospitalizations (Ben-Porath et al., 2004; Bond, Drake et al., 2001; Bond & McDonel, 1991; Bond, McGrew, & Fekete, 1995; Burns & Santos, 1995; Herdelin & Scott, 1999; McGrew, Bond, Dietzen, McKasson, & Miller, 1995; Mueser et al., 1998; Phillips et al., 2001; Rosenheck & Dennis, 2001; Stein & Test, 1980). A meta-analysis of 44 studies revealed ACT reduces the number of admissions and proportion of consumers hospitalized while these outcomes tend to increase in non-ACT case management programs. Additionally, while both ACT and standard case management showed a reduction in average number of days hospitalized, ACT was found to be significantly more effective (Ziguras & Stuart, 2000).

Cost-effectiveness of ACT

The ability of ACT to reduce costly inpatient treatment, suggests the possibility that ACT may "pay for itself" in many cases (Latimer, 1999, 2005). A case example of cost-effectiveness is demonstrated by Bond and colleagues' (1988) controlled study in which 167 consumers at risk for rehospitalization were randomly assigned to ACT or a control group, which consisted of treatment as usual, in three CMHCs in Indiana. One of the CMHCs experienced poor implementation of ACT, but even with this factored in, the consumers receiving ACT were rehospitalized an average of 9.2 days over six months,

which was significantly less than the 30.8 days for the control group. The CMHC that was most cost-effective had estimated savings of $5,500 for each ACT client over the six-month period (Bond, Miller, Krumwied, & Ward, 1988).

Another example is provided by Lehman and colleagues (1999) who assessed the cost-effectiveness of ACT in homeless persons with SMI. In their study, 152 homeless consumers were randomly assigned to either ACT or usual services. Those receiving ACT spent 31% more days in stable housing compared to those in usual services. Additionally, the consumers receiving ACT had significantly lower costs associated with mental health inpatient days and mental health emergency room care, but significantly higher costs for mental health outpatient visits and substance abuse treatment. For each day of stable housing, the ACT consumers incurred $242 in direct treatment costs while the cost per day for usual care consumers was $415, leading to an efficiency ratio of 0.58 in favor of ACT (Lehman et al., 1999). In Lehman's study of homeless individuals with SMI the higher use of outpatient treatment by consumers receiving ACT was more than offset by the high cost of inpatient treatment by the consumers receiving usual care.

However, other studies have shown that increases in outpatient costs associated with ACT can counteract the savings obtained from reduced inpatient hospitalization leading to overall cost neutrality but better consumer outcomes (Weisbrod, Test, & Stein, 1980; Wolff, Helminiak, & Diamond, 1995). Whether ACT currently is and remains cost-effective is a function not only of the service itself but also of each team's admission and discharge criteria (King, 2006). Additionally, how effective ACT is in relation to other treatments depends on what constitutes 'usual care', which is likely to continue to change over time (Fiander, Burns, McHugo, & Drake, 2003). Because of the success and

popularity of ACT services, many usual care services have incorporated ACT principles (McHugo et al., 1998), which greatly benefits consumers but also contributes to reduced effectiveness and cost-effectiveness of ACT in comparison to standard care. While ACT has been extensively studied in the past, the ever changing environment and the high cost of ACT relative to other services underscores the importance of continually monitoring its effectiveness (King, 2006). In a narrative analytic review, King (2006) found evidence that ACT will either be cost neutral or more costly than usual care unless the alternative requires lengthy inpatient hospital stays. A separate systematic review found intensive case management such as ACT works best at reducing hospital use when use is high but is less effective when hospital use is already low (Burns et al., 2007). Because most standard care today relies less on lengthy inpatient admissions, King argues the days of ACT being cost-effective may be over (King, 2006).

In addition to the changing service environment and improved standard care, another factor that may increase cost-effectiveness is the extent to which the agency provides ACT services only to those consumers who are most likely to benefit. ACT is most beneficial to a subgroup of consumers who have the most need, such as those with SMI who have a recent history of frequent or long-term hospitalizations or those who require daily assistance to live in the community due to extremely impaired psychosocial functioning (Rosenheck et al., 1995). Therefore, the reduced cost-effectiveness may result from improper admission to the ACT program. One implementation study found some of the ACT teams went against the intent of the ACT model by enrolling consumers who were already well integrated into their existing mental health services in order to

reach goals of rapid enrollment and low dropout rates (Moser, DeLuca, Bond, & Rollins, 2004).

In summary, the issue of whether ACT is more efficacious and cost-effective than standard care largely depends on the characteristics of the services provided as well as the consumers receiving the services. ACT was designed to contain certain key elements (e.g., 1:10 staff to client ratio) and was intended to be used on and is most cost-effective with consumers with the highest levels of inpatient service use. However, while ACT was originally conceptualized to be required by consumers for life (Rosenheck et al., 1995), it is becoming increasingly evident that consumers can make gains in their ability to live independently and can be successfully transferred to less intensive services without causing harm (Salyers, Masterton, Fekete, Picone, & Bond, 1998). Therefore, ACT may not be cost-effective for all consumers at all times of their lives. When agencies implement ACT and other EBPs it is important to follow the model as it was intended to be used, which includes incorporating the key components as well as serving the appropriate type of consumer for whom the service has been proven to be effective.

Fidelity to the ACT model will help ensure the service is provided as it was intended on the appropriate consumers, which in turn is hypothesized to enhance efficacy and cost-effectiveness. In order for newly implemented ACT services to replicate the outcomes found in the literature, the ACT team must have fidelity to the model.

ACT Fidelity

While there is a specific model to guide ACT services that is well articulated and understood (McGrew & Bond, 1995) not all teams are equivalent in their fidelity to the standards and principles of the model (Bond, 1991; Siskind & Wiley-Exley, 2009; Test, 1992). There are several reasons why teams would differ in their fidelity to the ACT model. For instance, local conditions often influence the program design (e.g., rural teams and state standards) and adaptations by CMHCs to internal and external conditions can significantly impact fidelity to implementation (Aarons, Wells, Zagursky, Fettes, & Palinkas, 2009; Bachrach, 1988; Siskind & Wiley-Exley, 2009). Additionally, variations in fidelity may occur when the model is not well understood by the team members, when the training is inadequate, or when staff members regress to the more familiar services previously provided (Bond, 1991). Moreover, according to ACT case managers, some of the critical ingredients such as presence of a full-time substance abuse specialist, a psychiatrist's involvement on the team, the team being involved with hospital discharge, and working with a consumer support system are consistently under-implemented (McGrew, Pescosolido, & Wright, 2003). Therefore, merely labeling the services as ACT does not indicate the team is following all the ACT principles as envisioned by the model developers (Test, 1992). Research has shown high fidelity implementation of EBPs is more likely to occur when the implementers are provided with significant resources in the form of funding and technical assistance (Fagan & Mihalic, 2003). In many settings resources, such as the availability of trainings, are low and as a result adaptation of the model (i.e., lower fidelity) is more likely to occur (Ringwalt et al., 2003).

The variation in implementation of ACT led to the recognition of the need for, and the subsequent development of, practice manuals (Allness & Knoedler, 1998, 2003; Stein & Santos, 1998), videotapes (Harron, Burns, & Swartz, 1993), and the realization that quantitative monitoring of program fidelity is central for quality assurance (Torrey, Finnerty, Evans, & Wyzik, 2003) as well as for adequate interpretation of outcome findings (Teague, Bond, & Drake, 1998). The Dartmouth Assertive Community Treatment Fidelity Scale (DACTS; Teague, Bond, Drake, 1998) was developed to discriminate well-implemented ACT programs from other types of case management services and to assess fidelity to the ACT model in order to provide a useful tool for training and self-evaluation within programs. Support for assessing fidelity comes from research findings that teams with higher ACT fidelity are generally more effective at reducing hospital admissions (Bond & Salyers, 2004; Latimer, 1999; McGrew, Bond, Dietzen, & Salyers, 1994; McHugo, Drake, Teague, & Xie, 1999). In fact, fidelity can account for better consumer outcomes in other EBPs as well. In supported employment it is estimated that 20 to 60% of the variance in program outcomes can be accounted for by program fidelity (Drake, Bond, & Rapp, 2006). Therefore, agencies striving to implement EBPs, such as ACT, should measure their fidelity to the model and make changes to their practices accordingly. Because fidelity instruments identify and measure adherence to the critical ingredients of the EBP, these instruments can be used to provide clear standards, monitor the program over time, improve services, and assess the relationship between adherence and outcomes (Bond et al., 2000). The development of a measure to monitor adherence to the ACT model has helped make the monitoring of large-scale implementation possible.

Dissemination of ACT

Knowledge of the ability of ACT to improve consumer outcomes has spread throughout the United States and the world, resulting in wide-spread dissemination of the model as well as close variations labeled under different terms such as continuous treatment teams and the Thresholds Bridge program in Chicago (McDonel et al., 1997). Dissemination involves strategic efforts to get the knowledge and information about an innovation such as ACT out to individuals, organizations, and communities in an effort to create change (Backer, 1991; Rogers, 1995). A published research article can be considered a dissemination effort. Once the information of an innovation is known, the recipient of this knowledge makes the decision whether to implement the innovation into their practices. Dissemination is the efforts taken to spread knowledge while implementation is the process of applying strategies to adopt this knowledge into everyday practice (Grimshaw et al., 2005). Therefore, while several studies use the terms 'dissemination' and 'implementation' interchangeably, these are two distinct concepts.

Previous research has shown dissemination does not always lead to implementation. One of the most common reasons for failure of past dissemination efforts is the erroneous assumption that getting out information is enough to create change (Backer, 2000; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). It has been established that passive diffusion in which the health care providers are expected to read about and adopt effective interventions on their own (Shojania & Grimshaw, 2005) as well as merely disseminating practice guidelines (Grimshaw et al., 2005) are not effective strategies for implementation. For instance, a study examining the implementation of family psychoeducation found clinicians and administrators rank empirical findings in the

literature of the effectiveness of the intervention as the lowest in terms of factors that help implementation (McFarlane, McNary, Dixon, Hornby, & Cimett, 2001). Once the information is disseminated the stakeholders must first make the decision to adopt the practice and then must carry out actions to assist with the implementation efforts. Therefore, while it is important to establish the effectiveness of an intervention and publish the findings, this strategy alone is generally not sufficient to influence implementation efforts. However, if guidelines are disseminated accompanied by strategies to overcome possible implementation barriers, adherence to the intervention model can be improved (Grol, 2001).

There have been several key dissemination efforts for ACT that contributed to wide-spread implementation of the service. First, the published data highlighting the impact on reducing costly rehospitalizations, is appealing to state mental health planners (Bond & Salyers, 2004) and therefore ACT has been incorporated into several statewide mental health initiatives. Second, in 1996, the National Alliance on Mental Illness (NAMI) established initiatives and began campaigning for the formation of ACT teams. NAMI set a goal of the availability of ACT services in all 50 states by 2002 (Flynn, 1998). Support for ACT and other EBPs has also come from various agencies such as the Substance Abuse and Mental Health Services (SAMHSA), the National Institute of Mental Health (NIMH), and the Agency for Healthcare Research and Quality as well as organizations such as the National Association of State Mental Health Program Managers (NASMHPD) and foundations such as the Robert Wood Johnson Foundation and the MacArthur Foundation (Goldman et al., 2001). President Clinton then advanced the wide-spread adoption of ACT by instructing the Health Care Financing Administration to

authorize ACT as a Medicaid-reimbursable service (News & Notes, 1999). Dissemination and implementation were further supported by strong recommendations in the Surgeon General's Report (U.S. Department of Health and Human Services, 1999), by expert consensus panels in the Schizophrenia Patient Outcomes Research Team guidelines (Lehman & Steinwachs, 1998b), and at the 1998 Robert Wood Johnson Foundation sponsored conference where ACT was identified as an EBP for individuals with SMI (Mueser et al., 2003).

Finally, to facilitate the implementation and maintenance of EBPs, such as ACT, SAMHSA sponsored the development of program-specific toolkits for the National EBP Implementation Project in 1999 (Drake et al., 2001; Mueser et al., 2003). Each of the five psychosocial EBP toolkits was developed by a team consisting of various stakeholders (researchers, clinicians, program managers and administrators, consumers, and family members) and includes engagement material and information for each type of stakeholder, educational and training materials (e.g., instructional videotapes, practitioner workbooks, and research articles), implementation recommendations, and fidelity scales to assist with the monitoring of implementation (Drake et al., 2001; Mueser et al., 2003). The second phase of the National EBP Implementation Project began in 2002 and used these toolkits along with consultation and direct face-to-face trainings to study facilitating conditions and strategies as well as barriers which influence EBP implementation in CMHCs. Eight states agreed to implement at least two of the five psychosocial EBPs in at least two sites for each EBP. A total of 53 sites across eight states participated in data collection that continued through 2004 (Drake et al., 2001; Mueser et al., 2003). The results of this study are described in subsequent sections.

Implementation Studies

Among the SAMHSA-identified EBPs for individuals with SMI, ACT continues to receive much attention with wide-spread implementation in CMHCs throughout the country. A 1996 survey reported on the existence of 396 ACT teams in 34 states, of which, 11 of these states are able to provide ACT in 50% or more of their service areas (Meisler, Blankertz, Santos, & McKay, 1997). However, while ACT has been widely implemented, how to best implement the intervention is not well understood (Moser et al., 2004). The ACT model has an advantage over many mental health models (Brekke, 1988) in that the critical ingredients were well defined by the model developers (Stein & Test, 1980) and these components are generally well understood by program leaders throughout the United States (McGrew & Bond, 1995); however, fidelity to the original program model is still variable (Bond, 1991; Salyers et al., 2003; Test, 1992). Consequently, the ACT model provides an excellent case example of difficulties in achieving successful implementation of a model that has been shown to be effective. The present study determines the strategies and barriers to implementing a state-wide policy change to the definition of high fidelity ACT services in a large community mental health agency.

Implementation is a complex process with several components that could influence the success at every stage of the process including what factors determined the decision to implement (e.g., was the decision shared by all stakeholders or was it ordered?) (Panzano et al., 2005). Therefore, there are aspects that could influence implementation success that occur well before the formal act of adopting the innovation begins. Additionally, research has shown that perceptions of the importance and of the

ability to change both facilitators and barriers varies considerably across stake-holders (Aarons et al., 2009). Moreover, implementation is being studied in various realms with researchers examining different components that they feel should influence the process. The wide variation in implementation studies makes the task of connecting the knowledge from these studies arduous. There is much to learn regarding implementing EBPs, such as ACT, as this knowledge is in its infancy.

The National Institute of Mental Health funded several demonstration projects to attempt to replicate effective model programs through its Community Support Program (Turner & TenHoor, 1978). However, it was erroneously assumed that CMHCs would be able to effectively adopt a new practice if they were provided with a written description of the practice, funding to hire new staff, and minimal initial training. The results of these projects were variable as many programs were poorly implemented or not implemented at all (Backer, 2005; Bond, Drake, McHugo, Rapp, & Whitley, 2009). These early implementation studies demonstrate the need to measure and monitor program fidelity to ensure the program is being properly implemented. Many demonstrations that were able to achieve initial success in implementing the model had poorer fidelity in the long-term (i.e., program drift) (Bond, 1991; McGrew et al., 1994), presumably due to financing regulations, organizational relationships, and data systems not in place to sustain the EBP (Drake et al., 2001). Assessing fidelity represents a strategy for continuous quality improvement to inform and sustain the practice and avoid program drift (Bond et al., 2009; R. McHugh, Murray, & Barlow, 2009). Additionally, some level of pre-existing structure and support is likely integral for successful

implementation of EBPs as these are complex, multi-faceted interventions (Torrey et al., 2001).

Factors Predicted to Influence Implementation

Based on previous implementation studies of EBPs, Figure 1 outlines the theoretical framework for factors that are expected to influence implementation success (i.e., fidelity) in the present study, which includes leadership, staffing/staff attitudes, training/consultation, turnover, agency culture, performance monitoring, and Illinois Department of Mental Health (DMH) policies. It is acknowledged that other aspects such as complexity of the model have also been shown to influence implementation of EBPs, such as IDDT (Bond et al., 2009; McHugo et al., 2007; Moser et al., 2004). However, with the large variation in EBP models and the diverse experiences of the 53 sites represented in the National EBP Implementation Project, it is difficult to arrive at a single list of factors across all EBPs that account for high fidelity (Bond et al., 2009). The factors expected to influence ACT implementation in particular are examined and discussed in the literature review to follow.

Leadership

Leadership is important to assess when studying an organization as it helps to shape perceptions of staff, responses to organizational change, and has been found to be related to mental health providers' attitudes toward the adoption of EBPs (Aarons, 2006). Consequently, the presence or absence of effective leadership, particularly support from upper management, has been found to have a substantial impact on implementation

success across EBPs (Bond et al., 2009; Mancini et al., 2009; McDonel et al., 1997; Panzano et al., 2005; Rapp et al., 2008). In a study of ACT implementation, leadership was found to underlie all the identified organizational facilitators and barriers, including staffing and change culture (Mancini et al., 2009).

When evaluating the role of leadership, it is important to distinguish between leadership from within the team, i.e., Team Leader or emergent leadership from other team members, and leadership from management outside of the team. Both levels of leadership can impact the outcome of implementation. For example, in the National EBP Implementation Project, poor leadership from administrators created significant problems for ACT implementation across teams in two states that included a failure to understand the program model, an excessive focus on productivity standards, poor selection and management of Team Leaders and staff, and reluctance to dedicate necessary resources (Mancini et al., 2009). Earlier analyses from one of these states found administrative policies regarding unreasonable productivity standards were particularly significant in inhibiting the development of the ACT teams (Moser et al., 2004). Productivity standards, or requiring clinicians to amass a certain number of billable hours, make the start-up of a new program difficult as there is considerable time needed for training and mastering the techniques of a new practice (Moser et al., 2004). Conversely, effective administrative leaders were found to promote implementation by having a clear understanding of the model, communicating this understanding to staff, hiring staff with appropriate credentials to meet program standards, allocating sufficient resources including allotting time for trainings without focusing only on productivity standards, and monitoring the team performance and fiscal viability (Mancini et al., 2009).

While having effective upper management leaders clearly has benefits to the success of implementation, the success of the team is also influenced by the leadership style of the team leader. Mancini and colleagues (2009) found a strong team leader was often able to serve as a buffer between the team and less effective leadership from administrators by advocating for the team, thereby promoting effective team functioning. Effective team leaders tended to have a thorough understanding of the ACT model, managed team dynamics, held staff accountable for their actions, and promoted morale. Ineffective team leaders generally did not empower staff, did not organize activities effectively or manage workload equitably, and often did not address personnel problems on the team. Poor leadership from team leaders was found to create several problems to successful ACT implementation, such as providing lower intensity services than the model requires, causing disorder within the organization, and contributing to lower staff morale (Mancini et al., 2009). Therefore, in order to assess the role of leadership in the implementation process, all levels of leadership within the organization should be considered.

Staffing/Staff Attitudes

As previously mentioned, effective leadership can impact whether appropriate staffing occurs. Appropriate staffing includes hiring individuals who have the necessary skills, as well as attitudes that are supportive of the EBP philosophy. Choosing the appropriate staff, who not only have the skills required for the EBP but also have a compatible treatment philosophy and are accepting of treatment derived from research, has been found to be instrumental to successful implementation of EBPs (Aarons, 2004;

Aarons & Palinkas, 2007; Mancini et al., 2009; Moser et al., 2004; Nelson & Steele, 2007; Rapp et al., 2008). In the National EBP Implementation Project, Rapp and colleagues found that the three main barriers to the implementation of SE and IDDT in Kansas were deficits in skills of supervisors, resistance to change by practitioners, and failure of other agency personnel to satisfy new responsibilities (Rapp et al., 2008). Similarly, when analyzing all the SE sites in the National EBP Implementation Project, Bond and colleagues identified staff resistance to SE as a major barrier to implementation (Bond, McHugo, Becker, Rapp, & Whitley, 2008). In a study of family psychoeducation implementation in Maine and Illinois, successful implementation was more likely to occur at sites where staff viewed the model more positively and were interested in receiving supervision and consultation on the model. Implementation in this study was also influenced by whether upper management addressed both real and perceived resource limitations (McFarlane et al., 2001). With ACT implementation specifically, lower performing teams were found to have less skillful staff who tended to have more negative attitudes toward the implementation process (Mancini et al., 2009).

Training/Consultation

Once appropriate staff are chosen, the next step to successful implementation is to provide adequate training and consultation to these individuals. Research has found that both training and consultation are important across EBP implementation (Backer, 2005; Panzano et al., 2005; Rapp et al., 2008) as well as with ACT implementation specifically (Mancini et al., 2009; McDonel et al., 1997; Moser et al., 2004). One project found that a two-day workshop on ACT was not sufficient for promoting high fidelity to the model

(McDonel et al., 1997). Several studies have found that having access to a technical assistance center or outside consultant promoted successful implementation (Mancini et al., 2009; McFarlane et al., 2001; McGrew et al., 1995; Moser et al., 2004; Panzano et al., 2005). McGrew and colleagues (1995) concluded that the key component to the successful implementation of ACT at six sites in Indiana was the presence of an outside, clinically experienced consultant who was in frequent contact with each team and made on-site visits for assessment and training. According to one study, the most effective consultant-trainers to ACT teams were individuals who were viewed as experts, who advocated on behalf of the team, and who had an approachable personality (Mancini et al., 2009). In ACT teams in which there was a poor relationship with the consultant-trainer, the consultation was not only ineffective but also appeared to have negative effects. A particularly problematic relationship occurred when an experienced team leader was paired with a less inexperienced consultant-trainer (Mancini et al., 2009).

Staff Turnover

Staff turnover can occur due to several factors including inappropriate selection of staff (e.g., clinician treatment philosophy does not match the treatment philosophy), inadequate training leading to poor performance, or staff burnout. Turnover can hamper implementation efforts as the replacement staff are not always provided with the initial trainings (Bond et al., 2009; Mancini et al., 2009). A study of IDDT implementation found a drop in fidelity was often observed when turnover occurred; conversely training was important to sustaining fidelity during times of staffing instability (Woltmann & Whitley, 2007). In eight Californian sites implementing IDDT, turnover not only slowed

progress but resulted in complete failure at one site due to the newly hired administrator being uninterested in the project (Chandler, 2009b). Similarly, studies of ACT implementation found turnover created challenges for achieving high fidelity (Mancini et al., 2009; McDonel et al., 1997) with lower fidelity teams demonstrating substantially higher rates of staff turnover (Mancini et al., 2009; Rollins, Salyers, Tsai, & Lydick, 2009). Therefore, when implementing an EBP, special attention should be paid to how turnover is handled when it occurs.

Culture Supportive of Change

In order for change to occur the environment or the agency culture must be supportive of that change. The leadership of upper management and Team Leaders as well as the attitudes toward change and EBPs of the staff will impact whether the culture is viewed as one in which it is acceptable for change to occur (Mancini et al., 2009). One study found that the perceived openness of the clinical setting's culture to allow EBP use influenced whether EBPs were in fact utilized (Nelson & Steele, 2007). Another study found successful EBP implementation was related to extent to which the agency displayed a learning culture that was accepting of change (Panzano et al., 2005). With regards to ACT, many of the sites involved in the National EBP Implementation Project appeared reluctant to adapt their previous services to the ACT model. Mancini and colleagues (2009) conclude this lack of change culture was primarily influenced by the priorities of those in leadership roles.

Performance Monitoring

A review of EBP implementation research also identified performance assessment and monitoring as a key component to successful implementation (Backer, 2005). Fidelity monitoring provides a means of accountability and creates a frame of reference for planning the implementation effort (Bond et al., 2000). Panzano and colleagues (2005) found that the variable most related with positive implementation outcomes was the extent to which the agency monitored their performance during the implementation process. Similarly, Bond and colleagues found frequent assessment of fidelity to be a key element to the implementation model of the five psychosocial EBPs in the National EBP Implementation Project. Specifically, whether the sites used the fidelity reports to improve their practice was found to influence level of fidelity to the EBP (Bond et al., 2009). Additionally, those sites with committed leadership were also more likely to use feedback from performance monitoring and to make the necessary structural changes to the team (e.g., prescribing team meetings on a regular basis) in order to achieve high fidelity (Bond et al., 2009). Separate analyses of the IDDT and SE sites in Kansas also concluded measuring fidelity was a useful strategy for achieving high fidelity in these specific EBPs (Rapp et al., 2008).

Monitoring fidelity was also found to be related with achievement of high fidelity in the 13 ACT sites that participated in the National EBP Implementation Project. However, an interesting finding emerged between the two states that implemented ACT (Mancini et al., 2009). Fidelity elements were incorporated into certification standards in one state, but licensing staff were only required to use a checklist approach to assess compliance. Additionally, these state standards were less stringent than the DACTS

fidelity items from which they were based. A more detailed fidelity assessment and feedback on adherence was completed by a technical assistance center that was independent of the state. The other state in the study used a more comprehensive approach to monitoring fidelity, which included administering the entire DACTS instrument. This more detailed approach was seen as burdensome by providers and auditors and in some cases undermined team morale as the state and local mental health authorities placed extensive and at times duplicate requirements on teams (Mancini et al., 2009). Therefore, while the close monitoring of fidelity ensured that the teams did not diverge significantly from the model, the manner in which fidelity monitoring was completed and the time commitments this placed on the teams also had an impact on implementation (Mancini et al., 2009).

State Mental Health Authority Policies

In the analyses of the National EBP Implementation Project state factors such as funding were found to influence fidelity across the five EBPs (Bond et al., 2009; Rapp et al., 2005). For instance, funding cuts and lack of Medicaid reimbursement served as major barriers to achieving high fidelity in the sites implementing SE in the National EBP Implementation Project (Bond et al., 2008) and in a separate study examining IDDT implementation in California (Chandler, 2009a). Moreover, a study of family pscyhoeducation found uncertainty of reimbursement and financing for the agency as a whole were identified as perceived obstacles to implementation (McFarlane et al., 2001). With regards to ACT, the state mental health authority (SMHA) in Indiana facilitated implementation through the establishment of standards, the formation of a technical

assistance center to aid in implementation efforts, and through adequate funding (Moser et al., 2004). Therefore, the SMHA can either serve as a facilitator or a barrier depending on its actions and support of the EBP.

In summary, several EBP implementation studies across various states have found the following variables are related to whether implementation is facilitated or inhibited: leadership, staffing and staff attitudes toward EBPs, training and consultation, turnover, agency culture, monitoring implementation/measuring fidelity, and state requirements and policies. States and agencies should consider these factors when planning policy changes and implementation of an EBP.

However, these themes, such as leadership, are so generic and can have multiple meanings that they are often not very helpful. Studies need to examine what aspect of these factors accounts for success or failure of the implementation. For instance, what about leadership and leadership on what level (e.g., upper management, supervisor, etc.) influence outcome? Additionally, the current implementation literature focuses on the implementation of services that are novel for the mental health center. With the variation in implementation success (i.e., inability of some agencies to implement with high fidelity) and the occurrence of program drift, research should also examine how to improve upon existing services by moving toward higher fidelity. With regards to ACT services, the state of Illinois provided a case example of a state-wide decision to redefine services and tie funding to fidelity in an effort to provide higher fidelity ACT to consumers.

Policy Changes in Illinois

In 2006 the state of Illinois underwent a System Restructuring Initiative (SRI) lead by a statewide advisory task group that was consumer-chaired and included consumers, providers, trade associations, advocates, and state representatives. SRI work groups were developed to review three mental health service areas: services provided, financial aspects, and access and eligibility. The services work group found the current service definitions did not fully promote recovery/resiliency and determined the Medicaid State Plan should be updated (DHS, 2007). In agreement with the definitions provided in the literature (Strauss, Hafez, Lieberman, & Harding, 1985), the SRI defined recovery as a "non-linear process based on continual growth, occasional setbacks, and learning from experience." Resilience was defined by the SRI as "the ability to harness inner strengths and rebound from setbacks or challenges" (DHS, 2007). The work group also recognized that what constitutes recovery is unique for each individual and therefore the recovery process must be self-directed by the individual (DHS, 2007). The rationale for changes to the existing services was that "recovery and resilience" should be "the goal of services in a transformed mental health system" (DHS, 2007).

In addition to recommending a change to the nature of services (i.e., recovery-focused), the state assessed the type of services being provided to consumers. In 2006, the Department of Mental Health (DMH) along with program consultants from Parker Dennison and Associates conducted statewide assessments of ACT teams in Illinois. At the time of the 2006 assessment, Thresholds, a large psychosocial rehabilitation agency in Chicago, was the largest provider of ACT services in the state with 14 ACT teams and approximately 750 consumers enrolled in ACT (DMH, 2006). The review by Parker

Dennison and Associates and DMH used the draft ACT service definition fidelity tool and concluded, "Thresholds was not providing ACT consistent with the evidence based practice" (DMH, 2006, pp.1). The 14 ACT teams were found to differ in their congruence with the ACT model but none were deemed to meet fidelity requirements. In 2006 Thresholds also conducted four internal fidelity assessments using the Dartmouth ACT Fidelity Scale (DACTS). The ACT team titled Bridge West received a total DACTS score of 3.51, Bridge South scored 3.75, Bridge Southwest scored 3.69, and Bridge Deaf South received a total score of 3.31. A DACTS total score of 4.0 or greater is considered high fidelity while scores between 3.0 and 4.0 indicate moderate fidelity (McHugo et al., 2007). Therefore, all four teams that were assessed internally by Thresholds were providing services that would not be classified as high fidelity according to the DACTS. As a result of the DMH findings, the SRI recommended changes to ACT and other examined services in order to improve fidelity and enhance recovery.

Service priorities, as well as new or expanded services, were established for Community Support Programs (individual, group, team, residential), Psychosocial Rehabilitation, and ACT (DHS, 2007). Changes to Community Support Teams and ACT are relevant to the proposed study and therefore will be covered in detail.

Community Support Teams

Community Support (CS) services are designed to meet various types of treatment support needs for consumers including educational, residential, co-occurring disorders, social, vocational, mental health, and financial (DHS, 2007). The goals of CS services are to provide interventions and activities targeted toward building the consumer's

capacity to achieve their self identified recovery goals, developing their ability to manage symptoms, and to promote stability and independence (DHS, 2007). These goals are to be accomplished through active participation in shared decision-making as well as education, training, and assistance in developing the consumer's strengths, resources, and choices (DHS, 2007).

There are four options for CS services: individual, group, team, and residential. Individual, group, and residential CS services are provided solely by case managers, while community support teams (CST) are similar to ACT teams in that services are delivered by a team of providers. The CST teams are available to serve individuals with moderate to severe mental illness who need more intense, coordinated care than what case management or the other CS services can provide. Therefore, CST teams can serve as a step-down from the more intensive ACT services or a step-up from case management or other CS services depending on the consumer's functioning. Additionally, the state permits CST services to be intensified (i.e., more frequent visits) in times of temporary increased need.

ACT Services

There are three principles that drove the change to the definition of ACT services in the state of Illinois. First, the DMH chose to embrace the belief in recovery driven services. Historically, ACT has been criticized for being overly paternalistic and coercive (Spindle & Nugent, 2000). The new definition for ACT services in Illinois calls for the services to be a participatory process with shared decision-making between the

consumer and provider rather than directed by the service provider in order to embrace the concept of recovery (DHS, 2007).

Secondly, because there are limited ACT resources, the state officials assert these resources need to be focused on individuals with the most acute needs. Therefore, the creation of admission criteria is necessary to ensure that the limited resources are reserved for those who would benefit the most from the service for the appropriate length of time (DHS, 2007). The screening instrument selected to determine eligibility for ACT services is called the Level of Care Utilization System for Psychiatric and Addiction Services (LOCUS; American Association of Community Psychiatrists, 2000). All consumers served by the ACT team are to score above the cutoff of 4 on this instrument, indicating a greater severity of symptoms. In contrast, while the CST teams were conceived to serve consumers with moderate symptomatology, the CST teams may also serve those who would qualify for ACT services (DHS, 2007).

The third principle driving changes to services in Illinois was the need to be compliant with Medicaid's expectation that ACT services be comprehensive (DHS, 2007). The new definition of services requires the ACT team have the capacity to respond to emergencies 24 hours a day, seven days a week and provide all of the services and supports (including peer support) needed by the consumer (DHS, 2007). A new billing system establishing a fee-for-service funding mechanism was initiated to be more consistent with billing and reimbursement from Medicaid.

The differences between CST teams and ACT teams under Rule 132 are displayed in Table 1. As shown in the table, the ACT team not only requires the hiring of a greater number of staff but also stipulates staff must specialize in certain roles (e.g., substance

abuse and vocational specialist). The ACT team must also employ a "person in recovery" commonly known as a peer specialist, which is a staff member who is also a consumer (i.e., individual with a mental health diagnosis). Additionally, the Team Leader must be a licensed clinician on the ACT teams. Agencies can bill $83.60 per hour of CST compared to $122.80 per hour of ACT for services provided in the consumer's home (Illinois Department of Healthcare and Family Services, 2007).

The state standards for ACT and other services are encompassed in a document entitled Rule 132, which also outlined the fee-for-service funding mechanism. While what constitutes the ACT model was defined by the original developers (Stein & Test, 1980), ACT services can have slight variations from state to state. Agencies often strive to incorporate all of the elements outlined by the model developers as these elements are what have been shown to be effective. However, in reality in which time and resources are limited, the elements required by the state for funding are given the most priority. Table 2 displays the discrepancies between Rule 132 and the DACTS. For instance, the Team Leader is required to be a licensed clinician under Rule 132, but the qualifications of the Team Leader are not stipulated in the DACTS. This Rule 132 requirement of licensure proved to be problematic for the agency for several reasons that will be discussed later.

History of ACT Services at Thresholds

In 1978, Thresholds designed the Bridge Program based on the Madison ACT model but with key adaptations that were created in response to a variety of perceived needs and through different funding mechanisms (Bond et al., 1989; McGrew et al.,

1994). The history of ACT and the Bridge program at Thresholds has been complex due to changes in the conceptualization over the 30 year history and the influence of funding sources, such as grant stipulations, shaping the organization of the teams. The Bridge programs included a generalist staff team approach (rather than a multidisciplinary team approach characteristic of the Madison ACT model), group living arrangements in two programs, a no-close policy, and contact with consumers exclusively in the field (Witheridge & Dincin, 1985). The Bridge adopted a program philosophy that consumers should be chosen solely on the basis of their high utilization of psychiatric hospitals, emergency services, and other crisis services (Bond et al., 1995; Bond et al., 1989; McGrew et al., 1994; Witheridge & Dincin, 1985). Originally the Bridge began as a small NIMH-funded demonstration project on the North Side of Chicago serving 50 consumers (Bond et al., 1989; Witheridge & Dincin, 1985; Witheridge, Dincin, & Appleby, 1982) but the success at reducing hospital use led to the expansion of the program throughout the agency and the city (Bond et al., 1995; Witheridge & Dincin, 1985).

Beginning in 1986, the Thresholds Bridge model of ACT served as a model for ACT replications in large cities in other states (Bond et al., 1990). In 1994 Illinois underwent a state-wide initiative to develop ACT programs throughout the state based on the success of the Thresholds Bridge approach. Thresholds and other agencies were enabled to develop a 6-person ACT team, which substance abuse and housing services, serving a caseload of 50 consumers (Bond, Salyers, & Fekete, 1996). However, only about half of the ACT teams implemented in 1994-1996 were at high fidelity when an evaluation was conducted (Bond & Salyers, 2004).

According to the Clinical Director at Thresholds, the Bridge program had grown to 14 teams by 2007. The 2006 *Review of impact of proposed ACT/CST definitions/rates at Thresholds* DMH report indicated program drift had occurred, i.e., that some of the ACT policies were no longer practiced to high fidelity. For instance, the 2006 DMH report found a substantial amount of contact was occurring at the facility rather than in-vivo. Additionally, the Bridge teams were not rated as high fidelity ACT in 2006 due to a difference in conceptualization of the models that resulted in some of the elements not being implemented (e.g., generalist rather than multidisciplinary team approach influenced the staff positions/roles on the team). Therefore, immediately prior to the SRI, Thresholds had 14 Bridge teams, which were moderate fidelity ACT teams, to serve consumers with SMI. With the new state defined conceptualization of ACT and tie to state funding, Thresholds realized the need to implement and maintain higher fidelity teams.

Rationale for the Present Study

ACT has been widely disseminated throughout the United States. However, not all sites that implement the practice reach high fidelity (Bond, 1991; Test, 1992). A survey of 303 ACT programs from 34 states found considerable variation from the model in terms of program size, staff to client ratio, staff composition, team approach to clients, hours of operation, and intended length of treatment (Deci, Santos, Hiott, Schoenwald, & al., 1995). Additionally, program drift in which fidelity scores decrease over time can occur with ACT teams (Bond, 1991; McGrew et al., 1994). With differential fidelity levels represented in ACT teams throughout the nation, it is important to document how

the change to higher fidelity can be accomplished on existing teams. Previous ACT implementation studies examined strategies and barriers to initiating an ACT program. The present study examined the factors that influenced implementation of high fidelity ACT from existing ACT-like services.

Additionally, the majority of previous research has examined an external purveyor model to implementation rather than an internal model. A purveyor is an individual or group of individuals who represent a practice and who actively work to implement that practice with high fidelity and good effect (Fixsen et al., 2005). The purveyor can be internal or external to the agency. The strengths of an external purveyor, such as a technical assistance center, are that experts in the practice or model are integrated into the implementation efforts. These experts are likely to have trainings and fidelity measures specifically for the particular EBP and to have experience with implementation in various agencies. This knowledge can be used to develop different implementation approaches required across agency types, and their ongoing research (i.e., fidelity monitoring) can quickly inform their implementation approaches (Brekke et al., 2009). The strengths of an internal purveyor are that the purveyor is able to quickly intervene and provide consistent, real-time, hands-on training, fidelity assessment, and trainings as needed. Internal purveyors are also better able to develop implementation practice skills that are specifically tailored to the agency context and will allow the agency to feel ownership over the implementation process (Brekke et al., 2009).

While both purveyor models have clear strengths, the prevailing model for studies of implementation has been the use of an external specialist purveyor model (Brekke et al., 2009). Because in the natural environment many agencies do not have access to an

external purveyor such as a technical assistance center, it is important to study how implementation occurs with an internal purveyor model. Moreover, implementation studies of evidence-based interventions have largely been uncontrolled (Backer, 2005).

Purpose of the Study

The purpose of this study was to develop a theory of the variables that facilitate and inhibit a team from transitioning from moderate fidelity to high fidelity ACT services.

Research Question

1. What facilitators and barriers influence the process of implementing high fidelity ACT services from existing ACT-like services?

A Priori Predictions

Based on previous research it was hypothesized that leadership, staff attitudes, training, staff turnover, agency culture supportive of ACT, monitoring progress (e.g., fidelity assessment), and policy/funding would be identified as factors that influence re-implementation of ACT at Thresholds.

Quantitative Hypotheses

1. The two teams chosen to implement ACT were predicted to have higher ACT fidelity according to the DACTS than the CST team.

2. If there was a difference between the fidelity of the two ACT teams, the team with higher fidelity was predicted to have more positive attitudes toward EBPs
3. If there was a difference between the fidelity of the two ACT teams, the team with higher fidelity was expected to rate their team leader and middle management higher on leadership.

METHODS

Study Design

The study used a mixed-method, longitudinal design to assess the strategies and barriers associated with one agency's implementation of a state-wide initiative (Rule 132) as it related to the definition of ACT services. Two service delivery teams chosen by the agency to implement ACT services were studied. They were compared to another service delivery team at the agency serving similar clients but implementing a service model with less stringent program standards (i.e., the CST team model). The CST team served as a partial control for changes as a result of reimbursement mechanisms that were also encompassed in Rule 132. With multiple changes to Illinois policy it was important to include a CST team as a comparison to account for the impact of these other modifications.

Rationale for Mixed Methods

Mixed methods involve incorporating both qualitative and quantitative methods in the study design. Including qualitative methods provided a holistic view of the process of ACT implementation as rich dialogue between the researcher and staff members yielded information that could not be predicted by quantitative measures alone (Munhall, 2007). Quantitative methods frequently play the leading role in assessing program outcomes and

seek the measurement and analysis of causal relationships between variables, not processes (Caracelli & Greene, 1993; Denzin & Lincoln, 2005). In contrast, qualitative methods are chosen for the supporting role of examining program processes (Caracelli & Greene, 1993).

The researcher assessed ACT fidelity, collected clinician ratings on questionnaires, and conducted semi-structured interviews with the Clinical Director, staff from middle management, and staff from the three teams at two time periods after the formal launch of Rule 132 in October 1, 2007. The assessments were at 6 months (April 2008; Time 1) and 14 months (December 2008; Time 2) post-implementation of Rule 132.

Setting

This study was conducted at Thresholds, a large, urban, psychosocial rehabilitation and recovery agency in Chicago. The agency offers a wide array of evidence-based services, including supported employment, integrated dual disorders treatment, and assertive community treatment. According to Thresholds' records, the agency provided services to over 7,000 individuals with SMI in 2008, with 3,780 of these consumers receiving comprehensive, long-term services. All Thresholds clients are assigned to one of several service delivery systems, including receiving the team-based approaches of ACT or CST services. In regards to implementing EBPs, Thresholds has an internal training department and research department that is responsible for informing their implementation efforts (internal purveyor model).

QUANTITATIVE METHODS

Participants

Staff members from the three service delivery teams completed a packet of questionnaires at both time points. At Time 1 there were 17 staff members on the three teams (6 on the North ACT team, 5 on the Homeless Outreach team, and 6 on the CST team). At Time 2 there were 19 staff members on the three teams (7 on the North ACT team, 6 on the Homeless Outreach team, and 6 on the CST team). Across the two time periods, 21 total staff members were present on the three teams.

Surveys were completed by 15 (88%) of 17 staff members at Time 1, including 6 (100%) from the North ACT team, 5 (100%) from the Homeless Outreach team, and 4 (67%) of 6 staff members from the CST team. At Time 2, 16 (84%) of 19 staff members completed questionnaires, including 6 (100%) from the Homeless Outreach team, 5 (71%) of 7 from the North ACT team, and 5 (83%) of 6 staff members from the CST team. Questionnaires were completed at both Time 1 and Time 2 by 12 (57%) of the 21 total staff members. Only two staff members did not complete questionnaires at either of the time periods. One of the staff members who did not complete the questionnaires was hired after Time 1 and was on vacation at Time 2. The second staff member was employed at Thresholds at both time points but was not present in the office during either of the assessments and therefore did not participate.

Measures

The implementation effort was examined through ACT fidelity assessments, degree of staff turnover, and clinician-rated measures used to assess attitudes towards implementation of EBPs, leadership, and perceived factors that influence adoption of a new practice.

Team-Related Measures

Fidelity

The Dartmouth Assertive Community Treatment Fidelity Scale (DACTS; Teague, Bond, & Drake, 1998) assessed fidelity to the ACT model. The development of the DACTS was informed by the literature describing the model (e.g., Stein & Test, 1980), expert consensus, and previous research on the critical components of ACT (McGrew & Bond, 1995; McGrew et al., 1994). The 28-item DACTS has been widely used in research, program evaluation, and policy-making and has been shown to differentiate ACT from other intensive case management services (Salyers et al., 2003). The DACTS items assess critical components of ACT grouped under 3 dimensions: Human Resources/ Structure and Composition, Organizational Boundaries, and Nature of Services. Examples of items grouped under each dimension include *small caseload* and *psychiatrist on staff* for Human Resources, *24-hour coverage of psychiatric crises* for Organization Boundaries, and *in-vivo services* and *no dropout policy* for Nature of Services (Teague et al., 1998).

The DACTS instrument focuses more on the structural aspects of the ACT model (e.g., team composition) than the clinical aspects, which are more difficult to measure (Teague et al., 1998). Instructions for using the scale make recommendations for which sources at the agency (e.g., interviews with supervisors or staff, documents reflecting program authority, etc.) may be relevant for each item. The items are rated on a five-point, behaviorally-anchored scale with an item rating of "5" representing close adherence to the model and "1" indicating a sharp departure from model standards for that element. Twenty-six of the 28 items are then averaged to obtain a total fidelity score ranging from 1 to 5. The total score was used in the analyses as the index of implementation success. In keeping with the convention of the researchers from the National EBP Implementation Project, a total score of 4.0 or greater was considered high fidelity, while scores between 3.0 and 4.0 were considered to be moderate fidelity to the ACT model (McHugo et al., 2007).

Staff Turnover

Team leaders provided details of staff turnover during the 14-month implementation process. The Team Leaders and researcher classified each turnover as either positive or negative, based on the Team Leader's evaluation of the impact on the team. A case of positive turnover would be if a staff member whose personal philosophy did not match those of the team; for instance, if the staff member was overly paternalistic rather than focused on recovery or if the staff member was not comfortable working with the SMI population. Negative turnover would result if a highly skilled staff member

whose contributions to the team were valued resigned. Previous studies have found turnover can have a major impact, either positive or negative, on the success of implementation (Woltmann et al., 2008).

Clinician-Related Measures

Demographic Variables

Demographic variables obtained for program staff included age, gender, race/ethnicity, level of education, and tenure in current job/field.

Clinician Attitudes toward EBPs

The Evidence-Based Practice Attitude Scale (EBPAS; Aarons 2004) was used to assess the staff members' attitudes toward adopting EBPs in general (See Appendix A). The EBPAS has previously been used in studies of EBP implementation at community mental health centers (Gioia, 2007). The instrument was developed based on literature reviews, discussions with providers and researchers, item generation, data collection, and exploratory and confirmatory factor analyses. The result of these efforts was a 15-item scale assessing four dimensions of attitudes toward the adoption of EBPs: *Appeal*, *Requirements*, *Openness*, and *Divergence* (Aarons, 2004). The *Appeal* subscale assesses the likelihood of adopting an EBP if it were intuitively appealing, could be used in the correct manner, or if colleagues were satisfied with its use. The *Requirements* subscale refers to the extent adoption would occur if the EBP were required by the agency,

supervisor, or state. The *Openness* subscale measures the provider's openness to trying new interventions. Lastly, the *Divergence* subscale assesses the extent to which the provider perceives clinical experience as more useful than research-based EBPs.

The EBPAS total scale score is calculated as the average across all 15 items. The overall internal consistency reliability for the EBPAS total scale score has been found to be good (Cronbach's alpha=.77) and subscale alphas have been found to range from .59 to .90 (Aarons, 2004). In the present study, overall Cronbach's alpha reliability for the EBPAS total scale score was good at both Time 1 and Time 2 (alpha=.85, .80, respectively) and subscale alphas ranged from .69 to .97 at Time 1 and .81 to .91 at Time 2, as shown in Table 3.

Attitudes toward ACT and Perspectives on Implementation

Three quantitative rating scales entitled, How I Feel Personally about ACT ("*ACT Feelings*"), Aspects of Implementing ACT in My Workplace ("*Workplace Aspects*"), and Conditions That Can Help or Hinder the Implementation of a Practice ("*Conditions*") were completed by staff members who were actively implementing ACT. The CST team was also administered the *Conditions* scale. All three scales were developed for the National EBP Implementation Project (Drake et al., 2001; Mueser et al., 2003). The scales are tailored to the specific EBP being implemented and are rated on a 5-point scale ranging from 1=strongly disagree to 5=strongly agree. For the current study the wording of the items was modified to refer to "ACT" or "CST."

The *ACT Feelings* scale assesses the staff's personal support and commitment to the ACT model and the implementation effort. Agency-wide support for ACT, including from upper management and fellow team members, is the main focus of the *Workplace Aspects* scale. Lastly, the *Conditions* scale represents a combination of five diverse items ranging from availability of resources, feedback on consumer outcomes, and perceived stress on team members. Item-level responses, particularly for Items 1 (adequacy of training and supervision) and 5 (perception of intense work pressure) on the *Conditions* scale and Item 9 ("It has been easy to implement ACT") on the *Workplace Aspects* scale, were compared to the qualitative themes that emerged from interviews. The responses to the scales served to supplement the qualitative data on what was considered a strategy or barrier to implementation.

Four of the nine items from the *ACT Feelings* scale appear to assess staff member support for the ACT model (Items 2, 3, 4, 5). These items were combined to create a subscale entitled Personal Support for ACT, which is also reported in the analyses. Similarly, 7 of the 10 items from the *Workplace Aspects* scale have face validity measuring agency-wide support for ACT (Items 1, 2, 3, 4, 6, 7, 8). The subscale created from these items is entitled Agency-Wide Support for ACT.

No psychometric data on reliability and validity have been previously reported on the three measures. Internal consistency coefficients for total scores and the two subscales are displayed in Table 4. In the present study the total scores for the *ACT Feelings* and *Workplace Aspects* scales demonstrated adequate internal consistency at Time 1 (alphas=.78 and .95, respectively), while the *Conditions* scale had poor internal consistency (alpha=.39 at Time 1 and .58 at Time 2). Items from the three scales used in

the present study can be found in Appendix B.

Leadership

The Multifactor Leadership Questionnaire (MLQ form 5; Bass & Avolio, 1995) contains 45 items assessing leadership style. The items are rated on a 5-point Likert scale, ranging from 0 (not at all) to 4 (frequently, if not always). The MLQ was developed to measure transformational, transactional, and laissez-faire (recently termed passive/avoidant) leadership concepts. Transformational leaders inspire and motivate followers in ways that go beyond exchanges and rewards to do more than is expected. In contrast, transactional leadership is based on "exchanges" between the leader and the followers that occur when followers receive valued outcomes, e.g., wage or prestige, when they behave in a manner than would please the leader (Den Hartog, Van Muigen, & Koopman, 1997). Transformational and transactional leadership styles are distinct but not mutually exclusive in that the most effective leaders possess varying degrees of both types of characteristics (Holtz & Harold, 2008). The passive/avoidant leader avoids making decisions, which could be seen as a lack of leadership (Den Hartog et al., 1997).

The MLQ generates a nine factor model that includes four dimensions of transformational leadership (represented in five factor scores; *inspirational motivation, individual consideration, intellectual stimulation, idealized influence behavior* and *idealized influence attributes*), two dimensions of transactional leadership (*contingent reward* and *active management-by-exception*), and two forms of passive/avoidant leadership (*laissez-faire* leadership and *passive management-by-exception*) (Antonakis,

Avolio, & Sivasubramaniam, 2003).

The MLQ is one of the most widely used instruments to measure leader behaviors in the organizational sciences (Tejeda, Scandura, & Pillai, 2001) and is largely considered the most validated measure of transformational leadership currently available (Awamleh & Gardner, 1999). The MLQ has also been used to study leadership in mental health and other public-sector organizations (Aarons, 2006; Corrigan & Garman, 1999; Garman, Davis-Lenane, & Corrigan, 2003). In the present study the MLQ was used to rate leaders from middle management as well as team leaders. Previous research has found that internal consistency estimates (coefficient alpha) across the nine leadership factors ranged from .74 to .94 (Antonakis et al., 2003). The nine factor scores were used in the analyses for the present study. Internal consistency coefficients for ratings of middle management were comparable to those previously reported at Time 1, ranging from .76 to .94 at Time 1, but ranged from .41 to .93 at Time 2. Alphas were lower than those reported in previous studies for ratings of Team Leaders at Time 1 with internal consistencies ranging from .20 to .84 at Time 1, but were comparable at Time 2 (.73 to .91). The small sample size likely influenced the internal consistency coefficients of the MLQ in the current study. Internal consistencies for the MLQ are presented in Table 5. A selection of MLQ items is listed in Appendix C.

QUANTITATIVE PROCEDURES

Quantitative Data Collection

The researcher conducted ACT fidelity assessments of the three teams at both time points. The first fidelity assessment was conducted in March 2008 for the Homeless Outreach team and April 2008 for the CST and North ACT teams. The second fidelity assessments occurred in December 2008 for all three teams. The researcher along with two staff members from Thresholds' research department conducted the March 2008 assessment of the Homeless Outreach team. The Homeless Outreach team was being assessed internally by Thresholds at that time as a requirement of the SAMHSA grant that provided funding to the team. The researcher participated in this assessment for training on the DACTs. Prior to the Time 1 assessment of the Homeless Outreach team, the researcher had been trained on the techniques and procedures of the DACTs by an expert (Gary Bond), but had not formally conducted an assessment of a team. Inter-rater reliability was not determined due to the training nature of the fidelity assessment. The remaining five fidelity assessments (North ACT and CST at Time 1 and all three at Time 2) were completed solely by the researcher.

Additionally, staff members from the three teams completed questionnaires consisting of the demographics questionnaire, the EBPAS, and the MLQ at Time 1 (April 2008) and Time 2 (December 2008). Two copies of the MLQ were provided as the staff

members were asked to rate their Team Leader on one form and the Program Manager with the other. The Team Leaders rated themselves on one form and the Program Manager on the other. Of interest, the initial plan was to have the staff members rate upper management, i.e., the Clinical Director, in addition to their Team Leader. However, all of the staff members across the three teams reported that they did not have enough contact with the Clinical Director to make these ratings (even teams that were housed down the hall from her office). One staff member stated that he did not even know who the Clinical Director was. Therefore, the data collection procedures and design were modified to have staff rate the Program Managers who were considered middle management within the agency. At Time 1 the West Program Manager was serving as the acting Team Leader for the Homeless Outreach team. Therefore, this team rated the direct supervisor of their Program Manager (West Regional Manager) as upper management on the MLQ. However, due to a reported lack of familiarity with the West Regional Manager, these ratings by the Homeless Outreach staff members were largely unusable.

Teams that were in the process of implementing ACT also completed the *ACT Feelings* and *Workplace Aspects* scales. This included two teams at Time 1, North ACT and Homeless Outreach, but only the North ACT team at Time 2. In addition, all three teams answered the *Conditions* scale, however the items read as "CST" or "ACT" depending on the service delivered by that team. Staff members were paid $25 at each assessment period for completion of the surveys.

Quantitative Data Analysis

The questionnaires were inspected for data integrity and data were deemed invalid if a respondent rated every item with the same answer. The usable data and fidelity ratings were entered into a SPSS database and checked for accuracy of recording. Reverse scoring was then applied to items as necessary. Subscale and total scores were then calculated for respondents who completed greater than 80% of the items. Table 6 lists the quantitative instruments that were used and how these were analyzed (i.e., total score, subscale score, item-level analysis).

Missing Data

Respondents were treated as missing if less than 80% of the items on a scale were completed. Data were considered invalid if a participant marked all items with the same answer. The MLQ was the only quantitative measure to have any missing data and the degree of data missing was substantial. Of the 30 MLQ questionnaires administered at Time 1 (15 staff members receiving 2 forms each), only 18 (60%) were returned. The North ACT team had the poorest return rate of the three teams at Time 1 (33% for ratings of the Team Leader and 50% for ratings of Program Manager). Additionally, the Team Leaders and only one other staff member from both North ACT and CST teams completed the Team Leader version of MLQ at Time 1, which resulted in insufficient data to conduct any analyses or draw any conclusions.

Analysis of Measures

The small sample sizes and missing data limited the utility of the quantitative measures for statistical comparisons between teams and across the two time periods. Therefore, the analyses of the staff surveys were limited to descriptive statistics; no formal statistical tests are reported.

QUALITATIVE METHODS

In addition to the quantitative measures, the staff members were administered semi-structured interviews to gain a rich understanding of the barriers and facilitators of implementation as well as the perceived impact of the policy change on services provided and their jobs in general.

Qualitative Sampling

The study examined staff members within four levels of the organization; upper management (Clinical Director), middle management (Program Manager and Assistant Program Manager), Team Leader, and line staff. Figure 2 illustrates the relevant organizational chart for the positions interviewed in the study. Individual interviews were conducted with the Clinical Director, two staff members from middle management, three Team Leaders, and 14 different line staff.

A total of 20 staff members were interviewed, resulting in 28 transcripts across the two time points with 16 occurring at Time 1. Staff turnover and scheduling conflicts resulted in some team members represented in one time point only. Of those interviewed, 8 (40%) of 20 staff members were interviewed at both Time 1 and Time 2.

The North ACT team had a total of eight staff members on the team between the two time periods, all of whom were interviewed at least once. Additionally, five out of

six (83%) staff members from the Homeless Outreach team were interviewed at least once. The one staff member not interviewed was new to the team and the mental health field at the time of the Time 2 assessment and was still shadowing her teammates to learn the job. Of the six staff on the CST team, four (67%) were interviewed for the study.

In addition to the staff members from the three teams, the Clinical Director and two staff from middle management were interviewed. The Clinical Director was interviewed regarding how the decision to implement the new definition of ACT was made, the details of the implementation plan, and the facilitators and barriers to implementation from an upper management perspective. She was interviewed at both time points. Two staff members from middle management, one at each time point, also participated in the interviews. At the 6-month data collection (Time 1), the West Program Manager was the acting Team Leader for the Homeless Outreach team and was interviewed from both the perspective of Program Manager and Team Leader (not included in the above count of Homeless Outreach staff members). At the 14-month assessment (Time 2) the Assistant North Program Manager over the North ACT and CST teams requested the opportunity to share his observations with Rule 132 implementation, fee-for-service, and the differences between the ACT and CST models from a supervisor's perspective.

Qualitative Interviews

The protocols for the semi-structured interviews were informed by EBP implementation studies found in the literature. While individuals with SMI are referred to as "consumers" by this author, staff members at Thresholds use the terminology

"members" and therefore this term was incorporated into the interviews. All interviews began with the same broad question that asked the staff to describe their experiences with the policy changes of both Rule 132 and fee-for-service. Follow-up questions then elicited *how* the changes in policy impacted their jobs and the services they provide to consumers. Facilitators and barriers to the implementation process were also asked about first in a broad manner, e.g., "what are the biggest challenges?" and "what helped you through this process?" The identified facilitators and barriers were then narrowed down with specific follow-up questions to either clarify or elaborate on the staff member's comment. The interviewer also inquired on specific topics (e.g., training/supervision, turnover, leadership, DMH policies, agency culture/commitment to implementing EBPs) that were informed by previous implementation studies. For instance, to elicit the individual's perspective on training, questions such as "how did Thresholds prepare you for the policy changes?" were asked. If the staff member responded that "nothing was done," the interviewer would specifically inquire on trainings. In another example of the semi-structured nature, if leadership was not mentioned when asked "what helped?" the interviewer would attempt to determine who provided leadership by asking, "Was there a clear champion for these changes?" When interviewing respondents from the team that chose to decertify from ACT, barriers to the implementation effort were uncovered by gaining their perspectives on *why* they feel decertification occurred. General topics to discuss were formulated based on the literature beforehand. However, the staff member largely dictated the course and content of the conversation on the basis of how the broad, process questions were answered.

QUALITATIVE PROCEDURES

Qualitative Data Collection

Staff members from varying levels within the organization were interviewed in order to triangulate the data, which better ensures comprehensiveness and encourages a more reflexive analysis of the data (Mays & Pope, 2000; Onwuegbuzie & Leech, 2007b). Triangulation involves incorporating various sources in the data collection and should be thought of as an alternative to validation in that it adds rigor, richness, and in-depth understanding of the phenomenon in question rather than directly adding validity to the interviews (Denzin & Lincoln, 2005; Flick, 2002). Additionally, conducting interviews with individuals at various levels within the agency reduces the chance of bias from any one informant (Kumar, Stern, & Anderson, 1993). However, one problem that can arise when sampling multiple informants is the frequent dissimilarity of reports (Kumar et al., 1993). Although, dissimilarity of reports is less of an issue in qualitative research as each person's perspective is viewed as adding to understanding the quality or process (Munhall, 2007).

When conducting the interviews the researcher employed the standards of qualitative methods by checking for understanding and encouraging the interviewee to disclose more detail through member checking (i.e., reflective listening), summarizations, and probing (Mays & Pope, 2000). This helps to ensure an adequate sample of words are

collected from each individual and that the researcher is interpreting the words as the interviewee would intend (Onwuegbuzie & Leech, 2007a). The interviews were recorded on audiotape in order to capture the exact wording used by the subjects and to enhance descriptive validity, as this allows readers to be certain that there is no recall bias on part of the researchers (Maxwell, 1992). The researcher took notes on any observations that occurred during the interview such as the individual's body language, the level of privacy for the interview, or any strange occurrence that might have influence the interpretation of the results.

The researcher conducted all interviews. The interviews were completed face to face in a quiet room at the mental health center and ranged in length from 30 minutes to 80 minutes, with the average interview lasting approximately 45 minutes. Scheduling conflicts resulted in 5 of the 12 interviews at Time 2 occurring over the telephone. The interviews were transcribed in order to aid in recall of information, coding, and interpretation. A professional transcriber was hired to complete the task of transcription. The agency was reimbursed a total of $4,000 for the time required to complete the interviews.

Qualitative Data Analysis

The transcribed interview data was checked for accuracy by the primary researcher through comparison of all 28 transcriptions to the audiotapes. The assistance of a fellow graduate student was then enlisted to develop the codebook for the qualitative interviews. Coding schemes in qualitative research may be developed *a priori,* inductively as themes in the data emerge (e.g., grounded theory), or by a combination of

the two (Ryan & Bernard, 2003; Weitzman, 1999). In the current study, themes generated *a priori* were themes found in the literature, such as 'staffing', 'attitude', 'leadership', 'fidelity monitoring', and 'training/consultation' (Rapp et al., 2008). However, one cannot anticipate all the themes that will arise prior to analyzing the data (Dey, 1993). With the grounded theory technique, the researcher keeps an open mind while analyzing the data and does not endorse any one explanation until all of the data have been analyzed (Munhall, 2007). The current study used a combination of the two methods to derive appropriate codes for the interviews in an "inductive, iterative coding process" (Estroff, personal communication 2007). In an intensive workshop attended by the researcher, Estroff outlined the following steps for developing a coding scheme:

Identify *a priori* conceptual and empirical questions and topics. Then identify sub-themes and specific dimensions of each of the larger questions. As previously mentioned, Figure 1 lists the *a priori* themes that were expected to influence the implementation of ACT.

Revise codes: add, delete, and modify based on the interview transcripts. The more the same concepts occur in the text, the more likely it is a theme (Ryan & Bernard, 2003).

Test revisions on additional transcripts.

Revise coding scheme again. Continue this process until categories and specific dimensions reach saturation (i.e., no new concepts emerge from the data). At this point in the process the more codes, the better as concepts must first be discovered before they can be

combined and condensed into larger categories and themes (Ryan & Bernard, 2003).

The researchers then used a process termed "constant comparison," in which each statement within a particular coding category was compared with the other statements in that category to determine whether the code was appropriate "as is" or was in need of revisions, e.g., forming two separate codes or condensing multiple categories (Pope et al., 2000; Ryan & Bernard, 2003; Weitzman, 1999). This process was completed independently by the two coders in order to incorporate different trains of thought (Ryan, 1999; Ryan & Bernard, 2003). Codes were thought of as "organizing principles that are not set in stone" (Coffey & Atkinson, 1996) and the coding process constantly redefined what constituted a category or theme (Munhall, 2007). Therefore, various codes comprise the themes. Once the two independent code generators consolidated and defined their ideas for coding, the process continued with the next set of steps:

The two coders rated the same transcript independently.

Any differences in coding assignment were reconciled and the code book was revised for overlap, ambiguity, and missing codes.

Decisions were made regarding what constitutes coding units. The researchers decided that thoughts, sentences, and paragraphs constituted the coding units.

Decisions were made regarding multiple coding. The researchers decided that responses seen as containing multiple meanings could be coded into more than one theme. Additionally, a coding unit could have more than one code assigned to it.

Lastly, a coding manual was written that operationally defined each code and provided examples of what constituted the code to help improve reliability.

After the above steps were completed to form the codebook, the primary researcher and the fellow graduate student then independently coded interviews in order to establish inter-rater reliability. When specific difficulties and problems in rating agreement arose, further details were added to the codebook, helping to solidify code content and improve subsequent inter-rater reliability. Additionally, with each interview that was examined, the codes were continuously reevaluated to assess the possibility of collapsing or adding additional codes. When a code was added to the codebook, it was operationalized and specific details regarding how to rate responses made explicit. After each change to the codebook, both raters re-rated the whole interviews. This process was repeated as necessary until the two researchers felt confident that they had generated an exhaustive number of codes to capture possible responses and that they had reached an acceptable level of agreement. At the conclusion of the process a total of 42 codes had been generated. A list of all the codes is presented in Table 7.

Content agreement among raters for how to apply the codes was defined as both raters selecting the same group of words to represent a particular code. Inter-rater reliability was assessed using overall percentage of content agreement among the two raters across four interviews and was found to be good. There were 171 events that were coded across the four interviews of which 136 (79.5%) were assigned the identical code (out of the 42 possible codes) by the two raters. There was very little disagreement regarding whether a particular code should be applied to the text. Importantly, the

discrepancies were primarily errors of omission in which, during the consensus process, the second coder immediately agreed that the code in question was indeed appropriate for the content. The code that appeared to be omitted by one rater most frequently was "Positive Aspects of Change." Additionally, at times the coding discrepancies were related to the second coder's lack of familiarity with the organizational structure at the agency. For instance, when staff members identified an individual in middle management as providing leadership, the second coder at times coded this as leadership from upper management. Both raters had agreed that leadership was the appropriate code but the identified source of leadership was influenced by whether the rater was familiar with which roles the leaders served within the organization. The second coder was then provided with a list of staff member names and their level within the organization to assist with subsequent coding.

Once the acceptable level of inter-rater reliability was established, the primary researcher coded two-thirds of the remaining interviews. ATLAS TI 5.2 was used to code, retrieve, and analyze the qualitative data (Atlas.ti, 2008). The codes reported in the 28 interviews were tabulated using a percentage reporting method in which each staff member was dichotomized on whether the code was reported (i.e., yes or no). This procedure was completed in order to assist with understanding the impact of the codes on both the team level (i.e., which teams were affected) and on multiple roles within the organization (e.g., line staff vs. management). The percentage of staff members reporting a code was utilized rather than frequency of the code in order to avoid inflated emphasis on a code in circumstances where only one staff member mentioned it, but did so several times. The results of this tabulation assisted with the conceptualization of which factors

were relevant enough to be considered a theme.

When identifying themes, the researcher also examined the quotations that were assigned with the various codes and conceptualized how the codes interrelated to describe the process of implementation at Thresholds. For instance, following the coding process, the quotations that were labeled with the code of "Too Many Changes at Once" informed the identification of 3 themes: "Ambiguity of Rule 132," "Implementation Overload," and "Conflicting Regulations from Funding Sources." The code of "Lack of Communication" was broken down into "Ambiguity of Rule 132," "Lack of Communication by Thresholds" (which did not emerge to the level of inclusion in the report), and "Lack of Guidance from DMH." The researcher used this process of examining how the codes interrelate to group the codes into themes that influenced implementation of Rule 132 in general and ACT in particular (Table 8). Themes could be based on a combination of several codes and a particular code could contribute to multiple themes. The codes that contributed to the conceptualization of each theme are presented in Tables 9, 10, and 11 for common barriers, ACT-specific barriers, and facilitators, respectively.

A second type of methodology was employed to ensure that the essence of the stories was well represented in the theme identification and findings. The primary researcher independently read all of the transcripts without the coding marked and immediately wrote a paragraph detailing the main ideas that emerged from each transcript. Each summary paragraph was then compared to the database that listed the dichotomized reporting of codes to ensure that the coding and identified themes captured the "big picture." The summary paragraphs were also used to guide interpretation as to

which themes were most relevant.

The themes that emerged from the three teams at Time 1 were compared. Since all three teams shared the implementation of certain aspects of Rule 132, e.g., the change in funding mechanism, themes that were expressed across all three teams were considered representative of implementing Rule 132 in general rather than ACT specifically.

At Time 1 the themes that were unique to the two teams implementing ACT were considered representative of the ACT implementation process. Because the two teams had differential success in implementing ACT, the themes for these teams were also compared. Lastly, the themes and percentage of staff members who reported these were compared at Time 1 and Time 2 to determine whether the facilitators and barriers had changed over time.

RESULTS

Historical Context

Historical information is presented here in order to provide a context for the state's decision to redefine services and Thresholds' decision to re-implement ACT services in accordance with the new state standards. The primary focus of the study and data analysis involves the process and outcome of early implementation (i.e., the first 14 months).

Origins of Rule 132

As described in the introduction, the DMH in Illinois conducted a "System Restructuring Initiative" (SRI) to evaluate mental health services. In 2006, DMH funded fidelity assessments of ACT teams throughout the state. At that time, Thresholds was operating 14 ACT teams through their Bridge program, which was developed at the agency in 1978 as an adaptation to the Madison ACT model. The 2006 DMH report concluded that the ACT teams at Thresholds (and other agencies throughout the state) had either experienced program drift or had not appropriately implemented the model, as the DMH fidelity assessors did not observe high fidelity to the ACT model. At Thresholds in particular, most of the ACT teams did not have the required frequency of contact and percent of services delivered in the community to meet the proposed ACT

criteria (DMH, 2006). At the time of the report the Homeless Outreach team had 59% of their contacts in the community while the North ACT team had 74% in the community (DMH, 2006), which fell short of the model's recommended 80% in-vivo contact. An earlier study of the North ACT team indicates that in-vivo contact is one aspect that has drifted in fidelity over the years as this team once had 95% of contacts outside the program office (Bond et al., 1990).

The DMH report found that other areas of discrepancy between the ACT model and the practices at Thresholds included a high reliance on group services (e.g., some Bridge teams had nearly one-third of their ACT contacts in group format), minimal evidence of developing family support and involvement, and no 24-hour crisis coverage by the primary team (DMH, 2006). Furthermore, DMH assessors concluded that the ACT teams at Thresholds served many individuals who were not in need of intensive services. While the majority of consumers enrolled in ACT presumably met the proposed ACT admission criteria at the time of admission, DMH assessors concluded that only 20-25% of the consumers met admission criteria at the time of the review (DMH, 2006). As a result of their findings, DMH developed new state standards for ACT and tied funding to fidelity of these standards.

With guidance from the SRI task force, DMH developed a set of guidelines entitled Rule 132. The state then officially issued Rule 132 as a prescriptive set of rules guiding state funding for adult mental health services. Rule 132 modified service definitions (e.g., ACT and CST), implemented a fee-for-service (FFS) funding mechanism, and stipulated that services be driven by the concept of "recovery." The stated rationale for restructuring the existing services was that the previous service

definitions did not fully promote recovery and resiliency, which was the stated goal of DMH (DHS, 2007). The DMH instructed that all types of services provided to mental health consumers should concentrate on "teaching how" rather than completing the activity for the person and also incorporate shared-decision making. Additionally, DMH instituted a FFS funding mechanism and added new billing categories with various rates in order to be in compliance with federal rules for billing federal dollars, i.e., Medicaid. By aligning billing practices with the federal requirements and billing through Medicaid, the state was able to reduce their financial burden.

Changes at Agencies as a Result of Rule 132

The Department of Mental Health acknowledged that Rule 132 would result in several changes at mental health agencies, including new staffing requirements, additional assessments to determine eligibility for ACT, and prior authorization requirements for all consumers receiving services (e.g., CST and ACT). In addition, all agencies were required to monitor fidelity to Rule 132 to ensure compliance with all service definitions in order to receive reimbursement for services under Rule 132 (DMH, 2006).

Staffing requirements for CST and ACT teams are presented in Table 1. Prior to Rule 132, the Bridge program ACT teams at Thresholds were not required to have licensed Team Leaders, nurses or peer specialists. Under Rule 132, all three positions were required for ACT licensing. In 2006 DMH assessed the predicted impact of Rule 132 on the Bridge ACT teams and concluded that two or three Bridge teams, with relatively minor adjustments, could meet Rule 132 requirements for ACT, but that the

remaining Bridge teams would need to make significant changes to qualify. The latter teams had significant staff deficits, including nursing staff and credentialed team leaders. Further staffing gaps in Bridge services included minimal involvement of psychiatrists, vocational specialist, and recovery/peer staff (DMH, 2006). DMH assessors also judged that these latter Bridge ACT teams would require few staffing changes to fit the definition of CST under Rule 132. This was based on the fact that the Bridge teams at Thresholds scored above 90% for program review on Rule 132 CST criteria (DMH, 2006). In essence, what Thresholds program leaders previously considered to be ACT was now classified as CST by the state standards.

Rule 132 instituted two further requirements specific to ACT services that involved locus of responsibility for services and prompt hiring for staff vacancies. The first requirement stipulated that consumers served by the newly defined ACT teams had to receive all services from the team itself and could not receive services from other programs within Thresholds (e.g., they could not attend substance abuse groups led by non-Bridge staff or live in Thresholds housing). The second requirement specific to ACT services was that staff positions could not remain vacant for more than 30 days. The consequence of allowing a staff vacancy to exceed 30 days was severe. If an ACT team experienced turnover and a replacement was not on the job by the 31st day, DMH rules stipulated that the team would lose its ACT certification. As a decertified ACT team, the team would essentially need to go through the process of initiating CST services. First, the team would then have to conduct assessments on all of their caseload. Second they would need to receive authorization to offer CST services for these consumers. These requirements were draconian, given that the admission criteria were less stringent for

CST than ACT. The process of recertification as an ACT team was similarly problematic. When the staff position triggering the decertification was filled, the assessments and paperwork would again have to be completed to re-certify the consumers for ACT services (even if only a matter of a few days had passed). If this were not done and federal Medicaid officials performed an audit, the contracting mental health agency would have to pay back all of the money for services provided during that period of time when the team was not properly staffed. Therefore, the Clinical Director reported during both interviews that there was a constant pressure on upper management to ensure that the staffing requirements were maintained.

Rule 132 also stipulated that contracting mental health agencies restructure their billing system for all service delivery to conform to FFS. A list of the objective changes at Thresholds that resulted from FFS is presented in Table 12. Prior to FFS, Illinois was a grant-funded mental health system, which provided agencies with a yearly contract for services that was paid out monthly (one-twelfth of the contract paid each month). With a grant-funded mental health system, mental health agencies did not need to document or monitor type or volume of services provided by individual staff members. After the introduction of FFS, the regulations required agencies to submit bills for each service provided in order to be reimbursed. Moreover, the total monthly amount for which they could bill was capped. As a result, Thresholds, like other service agencies, established individual productivity standards for staff on service teams. These productivity standards stipulated how many services each staff member had to deliver. To illustrate with a simplified example, if DMH had previously agreed to pay $12,000 per year for a service, the agency would have been paid $1,000 each month. After FFS, rather than a fixed

amount, DMH would reimburse *up* to $1,000 per month or the amount of the original contract. If the itemized billing added up to $850, the agency would be reimbursed $850 rather than the $1,000 maximum allowable and the agency would not recover $150 for which they were eligible. In summary, to maximize their billing and receive the full contracted amount, the upper management at Thresholds developed productivity standards for the number of *billable* direct services hours that each staff member is required to provide to consumers. According to the Clinical Director, in setting productivity standards, the Thresholds administration took into consideration agency paid time off and non-billable activities (e.g., travel, paperwork, and meetings) associated with providing ACT and CST services. Because ACT has a greater number of required weekly team meetings, the standard was set slightly lower for ACT (925 billable direct service hours per year compared to 950 for CST). The productivity standard equates to approximately 4.2 to 4.5 hours of billable direct service hours required per workday, respectively, for ACT and CST. Conversation with an individual from upper management at an Indiana-based agency indicates that this figure for direct service hours may not be unusual. However, it is possible that differences between Chicago and Indianapolis, such as traffic, may impact the staff members' ability to meet the standards.

In addition to the formation of productivity standards, the level of detail required in documentation of services provided changed drastically. Prior to FFS, the Bridge teams used a generic service code of "ACT services" for all of the services that they provided to the consumers. Under FFS, the specific type of activity and its relationship to the treatment plan had to be itemized (e.g., "support of activities of daily living, medication monitoring, assist client with social/interpersonal relationship," etc.) in order

to be in accordance with Medicaid billing. Staff members were required to learn the nuances of each billing code and to itemize all activities that occurred during each visit. The change to FFS funding mechanism also resulted in the requirement that all billing and notes be completed within 72 hours, whereas there was not a strictly enforced time limit prior to FFS. Lastly, under FFS, billing was now restricted to the time spent with the consumer and therefore travel time was not considered billable.

Thresholds' Decision Process

The Clinical Director of Thresholds provided details of the decision to implement ACT in accordance with Rule 132 and the initial steps taken to formulate the implementation plan, which are outlined here. DMH hired consultants to interview selected administrators from agencies, including Thresholds, to determine the impact of the proposed new regulations. Because Thresholds was involved in discussions with the state's consultants, they were cognizant of what DMH was considering and began making preparations even before the decision to adapt Rule 132 was finalized. As the Clinical Director described:

> "We were one of the pilot sites for the state. The consultants that were working for the state came here to sort of talk to us. So I don't think that was any way meant to help us. It was sort of meant to help the state figure out where they needed to go in terms of the Rule change for ACT. But that was kind of beneficial. It had some secondary benefit to us because then we got sort of the ear of the expert and some understanding of what was going to happen and so we were sort of prepped I think in a way that some other institutes weren't" (Clinical Director, Time 1).

The agencies throughout the state were officially notified on July 1, 2007 that Rule 132 had to be implemented by October 1, 2007. Prior to this announcement,

Thresholds had already formed an ACT steering committee, had developed an implementation plan (e.g., determined which teams would implement the services), and had made Program Managers aware of the restructuring requirements to staffing.

Though initially Thresholds administrators considered converting as many as 6 Bridge teams to the new Rule 132 ACT standards, in the end, Thresholds administrators decided to pilot the Rule 132 ACT with just two Bridge teams, the Homeless Outreach and North ACT teams, leaving the option open to expand to more teams later. The Clinical Director assumed that the actual direct service contacts would not require major modification under Rule 132, in that the Bridge program teams were accustomed to providing ACT-like services. However, staffing changes would be needed. Specifically, very few of the Bridge teams were staffed with nurses, which was now required under Rule 132. Thresholds administrators had to decide whether to commit internal resources to hire the appropriate staff as there was no additional start-up funding from the state to implement ACT. As the Clinical Director explained, the higher financial cost for ACT teams associated with hiring advanced degree personnel (e.g., licensed Team Leader and nurse) limited the number of teams that they were willing to implement under the new rule. Additionally, the state's requirements for ACT teams were much more rigid than for CST teams, such as the stipulation concerning staff vacancies. With uncertainties surrounding how the new policies would impact the agency, the upper management at Thresholds made the decision to lower their risk by first implementing ACT on two teams and changing 12 of the Bridge teams to CST. Less up-front financial commitment was required to switch the Bridge teams to CST teams than to ACT teams.

Thresholds had an even more compelling reason not to convert more than two Bridge teams to the Rule 132 ACT model. Put simply, there was no economic incentive to do so and a substantial disincentive to make further conversions. Even though agencies could bill at a higher rate under Rule 132 for ACT than CST ($122.80 vs. $83.60 per hour; Illinois Department of Healthcare and Family Services 2007), the state placed a limit on the amount of money an agency could receive and therefore Thresholds would not receive more revenue for services with additional ACT teams, yet would have more costs associated with the required professional staff with higher salaries than the CST line staff. The Clinical Director explained how economic considerations impacted their decision:

> "We had to make a decision as to which services we were going to provide under the new Rule [132] and get approval from the state for that. They weren't giving us any more money. So it was the same amount of money they were giving us ongoing but it costs more money to do ACT the way it is defined under the new Rule. So you had to add a nurse, a full time nurse, you had to add a certain amount of psychiatric time. So the agency basically committed resources that we had from, we decided to reallocate resources internally to do two ACT teams even though the state was not going to give us any more money. And they said well you know what it's a higher rate. Yeah, but you're only giving us the same amount of money so it just helps us get to our cap sooner. So that's why we decided to do two ACT teams. We also weren't really sure how it was going to be with putting the ACT teams together and going through the ASO process [authorization process] so we decided two would probably be a good pilot for us to see if it could be done in the environment" (Clinical Director, Time 2).

According to the Clinical Director, Thresholds chose to re-implement ACT according to state standards on the Homeless Outreach because they were closest to fidelity in terms of staffing as this team already employed a nurse through funding from a SAMHSA grant. The North ACT team would require the hiring of appropriate staffing

(e.g., nurse) but was selected because this team was housed where the original Bridge ACT team was located. As such, the Thresholds North Regional Manager had expressed to the Clinical Director a strong commitment to maintain the service in this location. Thresholds decided to pilot ACT in accordance with Rule 132 in these two teams with the consideration of later implementing ACT in additional service delivery teams throughout the agency if the efforts were successful.

ACT Fidelity after the Introduction of Rule 132 at Thresholds

Fidelity to the ACT model, as measured by the DACTS, was used by the researcher as the criterion for successful implementation. DACTS scores for the three teams across time periods are presented in Table 13. The two teams that attempted ACT implementation had differential success. The North ACT team was able to successfully implement ACT services within 6 months and sustain high fidelity throughout the study, as measured by a DACTS score greater than 4.0 (4.29 at Time 1 and 4.46 at Time 2). Conversely, the Homeless Outreach team was not successful at reaching high fidelity. For reasons that will be discussed later, Thresholds made the decision to decertify the Homeless Outreach team from ACT status and instead provide CST services. The decision to decertify occurred 10 days after the fidelity assessment (March 2008) was conducted at Time 1, but before the qualitative interviews were completed (April 2008), which enabled the interviewer to assess perceived reasons for decertification. The Homeless Outreach team had not reach high fidelity prior to decertification (3.89, Time 1) and, as would be expected, continued to decrease in fidelity once it was determined that this team would provide CST services (3.61, Time 2).

As was expected, the CST team displayed a moderate level of fidelity to the ACT model throughout the study. Intensive case management teams, such as the services provided by CST teams, have been found to score around 3.5 on the DACTS (Teague et al., 1998), which is consistent with the CST team's scores in the present study (3.39 at Time 1 and 3.50 at Time 2).

QUANTITATIVE RESULTS

Staff Characteristics

Of the 19 staff members surveyed, mean age was 40.3 years (SD=11.2), 12 (63%) were female, 12 (63%) were Caucasian, mean length in the mental health field was 9.6 years (SD=8.2), and mean tenure in their current position was 2.0 years (SD=1.6). The majority of the staff members (11; 58%) had a bachelor's degree as their highest degree and eight (42%) had a master's degree.

Staff composition on the three teams was relatively similar in terms of demographics but the make-up of the team differed depending on the type of service. Staff characteristics by team are described below.

North ACT Team

The North ACT team consisted of a Team Leader, a substance abuse specialist, a case manager who specialized in housing, a case manager who specialized in benefits, a supported employment specialist, and a peer specialist. At the time of the Time 1 assessment, the team had recently filled a nurse vacancy with a replacement from a temp agency. This stop-gap decision was made to avoid decertification. The temporary nurse had no experience in mental health. The Time 1 interviews were conducted on the

nurse's first day at Thresholds and as such she was not interviewed in regards to the implementation effort.

Of the six team members on the North ACT team at Time 1 (excluding the temporary nurse), mean age was 46.0 years (SD=11.6), four (67%) were female, four (67%) were Caucasian, mean length in the mental health field was 10.4 years (SD=8.4), and mean tenure in their current position was 1.5 years (SD=0.6). The Team Leader and two line staff had master's degrees. The other staff members had bachelor's degrees.

Homeless Outreach Team

The Homeless Outreach team had difficulty finding a licensed clinician to satisfy the Team Leader position. As a result, the West Program Manager had temporarily filled this position in addition to her existing program manager responsibilities. At Time 1, the team consisted of a case manager, an IDDT specialist, a nurse, and a peer specialist. In addition to lacking a dedicated Team Leader, two case managers had unexpectedly left the team in the 3 weeks prior to the Time 1 assessment, leaving the team understaffed.

Of the five staff members on the Homeless Outreach team at Time 1 (West Program Manager included), mean age was 41.2 years (SD=7.9), three (60%) were male, three (60%) were African American, mean length in the mental health field was 10.8 years (SD=8.6), and mean tenure in their current position was 3.4 years (SD=2.1). The West Program Manager/acting Team Leader had a master's degree and the other staff members had bachelor's degrees.

CST team

The CST team consisted of a Team Leader and five additional case managers. In accordance with the staffing requirement for CST, this team did not have specialized roles for the case managers. It also differed from the other two teams in that half of the team members were consumers themselves, though not formally identified as peer specialists to the clients. Rule 132 specified that a peer specialist on CST teams was optional. No regulations exist as to the number of peer specialists permitted on one team.

Of the six team members on the CST team at Time 1, mean age was 36.2 years (SD=10.8), four (67%) were female, five (83%) were Caucasian, mean length in the mental health field was 10.2 years (SD=10.3), and mean tenure in their current position was reported to be 2.1 years (SD=1.3). The Team Leader as well as one staff member had a master's degree with all others holding bachelor's degrees.

Staff Turnover

The three teams varied considerably on staff turnover during the 14 month study period. The North ACT team experienced four staff departures including two nurses, one peer specialist, and one Team Leader. The first nurse left the team approximately five months into the implementation (prior to the Time 1 assessment) over a salary dispute. The second nurse was hired from a temp agency in order to fulfill the DMH requirement that vacancies could not exceed 30 days. Thresholds ended the contract of the second nurse after one month due to her inexperience and lack of comfort working with the SMI population and the high cost of employment through a temp agency. At the time of the Time 1 assessment, the peer specialist had decided to take another role within Thresholds

and left the team. Finally, the Team Leader had resigned from the team with her last week of employment occurring during the Time 2 assessment. Two of these four turnovers were judged by the Team Leader to be positive, i.e., benefiting the team, due to conflicting personalities and/or inability to work well with the SMI population.

The Homeless Outreach team experienced five staff departures including two in the Team Leader position, two case managers, and a vocational specialist. The first Team Leader was reassigned prior to October 1, 2007 to meet the DMH regulation that ACT teams employ licensed clinicians as team leaders. Her replacement resigned very early in the implementation (prior to the Time 1 assessment) after approximately 1.5 months in the position. Thresholds was then unsuccessful in hiring another Team Leader during the course of ACT implementation. The West Program Manager served as the acting Team Leader for 7 months. As previously stated, the Homeless Outreach team decertified from ACT status March 20, 2008. After decertification the vocational specialist role was no longer funded on the team, resulting in this staff member being transitioned to another position within Thresholds. Finally, in the three weeks prior to the first interviews (April 2008), two case managers left the team for employment at other agencies. The West Program Manager and acting Team Leader judged all of these turnovers to be negative, i.e., disruptive to the team.

Unlike the two teams that attempted ACT implementation, the CST team did not experience any turnover throughout the study period.

Staff Surveys

Because formal statistical analyses to evaluate differences across teams were judged to be unsuitable, the results are limited to presentation of descriptive summary statistics.

Staff Attitudes

Evidence-based Practice Attitudes Scale (EBPAS)

In general, the three teams appeared to be similar in their acceptance of EBPs and manualized treatment options, as measured by the EBPAS (Table 14). Although sample sizes were too small to determine whether slight variations were statistically significant, at face value the differences do not appear to be clinically significant. For instance, at Time 1, the Homeless Outreach team produced a higher total score than the North ACT team (2.8 vs. 2.4), though both scores were in the range indicating that endorsement of EBPs was between "moderate" and "to a great extent." Additionally, EBPAS scores were high (i.e., averaging at least a moderate level of EBP acceptance) for all teams at Time 1 and showed very little variation over time.

National EBP Implementation Project Scales

The *ACT Feelings, Workplace Aspects,* and *Conditions* scales inquired specifically on attitudes toward ACT and the ACT implementation process. Table 15 contrasts the North ACT team and the Homeless Outreach team on the *ACT Feelings*

scale at Time 1, while Table 16 shows change over time on this scale for the North ACT team. On three items, the mean ratings for the Homeless Outreach Team were higher than for the North ACT team: perceived understanding of the ACT model (Item 1), their belief that ACT was consistent with their personal philosophy (Item 5), and personal commitment to implement ACT (Item 3). Conversely, the Homeless Outreach Team had a lower mean rating on the statement that implementing ACT required a significant change to daily practice (Item 7) than the North ACT team. Scores on the *ACT Feelings* scale remained relatively unchanged over time for the North ACT team.

As with the *ACT Feelings* scale, the North ACT and Homeless Outreach teams recorded similar responses on the *Workplace Aspects* scale at Time 1 (Table 17). Staff from both teams perceived that there was agency-wide support for the implementation effort, particularly from supervisors. However, across the two teams, the majority of the staff members (9 of 11, 82%) indicated disagreement with the statement, "It has been easy to implement ACT" (Item 9). The North ACT team members produced similar ratings at Time 2 (Table 18), including still perceiving implementation as difficult.

The *Conditions* scale items were tailored to the service being provided by the team, i.e., ACT or CST. The results for all three teams at both time points are presented in Table 19. The North ACT team and the CST team rated the items in relation to the same type of service at both time points (ACT and CST, respectively), while the Homeless Outreach team rated ACT at Time 1 and CST at Time 2. Responses at Time 1 suggest that inadequate training and supervision as well as staff skepticism of the added value of the service may be potential problems for ACT, but not for CST services. Moreover, in comparison to their responses while providing ACT services (Time 1), the

Homeless Outreach team rated training and supervision more positively under CST service (Time 2). However, this finding may be explained by the fact that the team did not have a full-time Team Leader at Time 1 (the West Program Manager was serving as an acting Team Leader), but did have a designated, full-time Team Leader who was integrated into the team at Time 2. All three teams at both time periods reported experiencing intense work pressure (item 5), indicating that this factor was not unique to ACT implementation.

Leadership

Leadership style ratings as well as outcomes of leadership (i.e., satisfaction, motivation to put in extra effort, and effectiveness of the leader) are presented in Tables 20 and 21, for Time 1 and Time 2, respectively. The CST team generally rated the North Program Manager more favorably than did the North ACT team, despite the fact that this was the same middle manager for the two teams. In particular, the North ACT team perceived the North Program Manager to be more passive/avoidant in his approach than what was perceived by the CST team. Also, the CST team members endorsed a higher level of satisfaction with their interactions with this person. However, all the rated leaders, including the North Program Manager, were rated higher in transformational and transactional leadership characteristics than passive/avoidant traits. Additionally, all leaders were rated on the MLQ as at least moderately effective.

Examination of Quantitative Hypotheses

The results of the study supported Hypothesis 1, which predicted that the two teams implementing ACT would have higher DACTS scores than the CST team. The fidelity scores were consistent with the goal of implementing high fidelity ACT in the North ACT team, however neither of the other teams achieved high fidelity. The Homeless Outreach team did not achieve high fidelity but did have a higher fidelity rating than the CST team (even after decertification to CST services) due to ACT-like requirements of the SAMHSA grant (e.g., a nurse on the team).

Hypotheses 2 and 3 made predictions involving the EBPAS and MLQ, respectively. Due to the small sample sizes on the three teams and the frequent missing data, Hypotheses 2 and 3 were not examined.

QUALITATIVE RESULTS

Staff members shared their experiences with implementing Rule 132 for both CST and ACT services. As previously stated, the themes for implementation are presented in Table 8. The interviews revealed that nuances of Rule 132, such as implementing a FFS funding mechanism and ACT team requirements beyond what is specified in the model (e.g., decertification if staff vacancies exceeded 30 days), introduced unique challenges for the teams at Thresholds. The common themes that emerged from the coding across all three teams (CST and ACT) are discussed first. The common themes were related to implementing Rule 132 in general rather than ACT specifically, but lend a perspective on the challenges at Thresholds during the re-implementation of ACT. Unless specified as occurring at Time 1 or Time 2, the stated figures of those reporting a particular theme in the text of this manuscript represent a summation across both time periods. At times the figures reported in the text may not appear to align with the tables. For instance, a particular staff member may have reported a theme at both time periods, which would be listed in the tables under both Time 1 and Time 2. However, the tables do not specify which line staff member reported the themes.

Common Themes for the Three Teams

The primary barriers that were common across all three teams, and therefore not specific to ACT implementation, were the perceived negative impacts of FFS, ambiguity of Rule 132 standards and lack of guidance from the DMH, and difficulties with the manage care organization that the state hired to manage Rule 132. Common themes of leadership, positive staff attitudes, and familiarity with the services outlined by Rule 132 represented facilitators to implementing the changes. Additionally, the themes of good communication and preparation through a gradual process of change were also early facilitators to the implementation of Rule 132.

The Perceived Negative Impact of FFS

As previously mentioned, Table 12 lists the objective changes at Thresholds as a result of instituting a FFS funding mechanism. In order to ensure the agency was able to receive the maximum allotted funding from DMH, management at Thresholds established productivity standards for billing purposes. Additionally, FFS restructured the billing system to be in alignment with Medicaid billing. In response to these changes that resulted from the switch to FFS, many staff members reported a strong negative impact on their jobs and morale. In particular, they reported an inability to meet the productivity standards in an eight-hour day, pressure for billing and perceived lack of support and understanding from management, concern for their jobs as a result of productivity standards, and the perception of decreased quality of services.

As evidence of the negative impact of FFS, the majority of staff members (17 of 20, 85%) reported a perceived *inability to accomplish all required tasks (i.e., productivity*

standards) in an eight-hour day (see Table 22 for percentage of staff reporting each barrier at Time1 and Time 2). The only staff members who did not complain about this standard were management staff. In response to FFS, the management staff at Thresholds established productivity standards regarding direct face-to-face contact with consumers for line staff members to achieve each day in addition to their meetings, travel time, and note writing. Staff members overwhelmingly reported at both time periods that it was challenging for them to meet these productivity standards in an eight-hour workday. One staff member explained:

> "The main challenges have been trying to fit everything in an eight-hour day. Everything that we have to do---the billable hours, the service reporting, and then all the hundred other little tasks that we have like meeting, making sure that the medications are taken care of, making sure that our paperwork's done. I think that's probably the biggest challenge is that it's not really a job that can be done in an eight-hour day and we're kind of forced to do that or work more hours after that" (CST, Time 2).

Another staff member described how it is difficult to accomplish all tasks even when accommodations were made to their work schedule:

> "When I first got here we were meeting [staff meeting] once in the morning and once in the evening and then try to do your notes and then try to get out and see them [consumers] and it's unrealistic. Now we meet once [staff meeting] and it's still very hard to have time to get back and get your notes in and then you have to have them in within a window of 72 hours. Support-wise in that area, it's very hard to get it all done. So you're always rushing to get it all done" (Homeless Outreach, Time 1).

A member of the CST team indicated how these accommodations to their work schedule that are intended to help staff meet productivity standards can actually have a negative impact the team:

> "Well they cut, we used to have an afternoon meeting where we would, at four o'clock at the end of the day we would be able to sit and talk about our visits for that day and any other work that we did and they cut that out

> so that we could spend more time in the field and would have more time doing notes. And that's one thing that was pretty stressful. It's kind of reduced kind of the team feeling that we had and we had to lead a really kind of, I can't think of the word, but just come down after a day. Kind of de-stress and talk about what was going on that day and getting input right then about what we might have done. That's one example of a change that has made things more stressful because we don't have that kind of team feeling anymore. We're in a rush all the time. Just get out of the office and get the hours in" (CST, Time 1).

A member of the North ACT team explained how the work load can then accumulate over time and become overwhelming:

> "When you go out or you leave here 10:30 or 11 in the morning and you schedule your day to try to accommodate the 4-5 hours you need, you may get back here 3:30-4:00 and I'm personally drained, physically and mentally and it's difficult for me to try to sit there and type notes because I'm not the greatest typist in the world so it takes some effort, some thought for me to do that. And then you may not get all your notes in during an afternoon and then the next day it starts again with the meetings and then you have to be out of here at 10:30-11 so you get behind and it's almost a snowball effect. There's no way to get caught up. And if it's not documented, it didn't happen. It's sort of a catch 22. Pressure for billing and lack of support" (North ACT, Time 1).

Several factors were identified as contributing to the inability to meet the productivity standards in an 8 hour timeframe, including the inability to bill for travel and consumers not being home or not wanting to meet for long periods of time (see Table 22). Prior to FFS, staff were permitted to bill for travel time if the consumers or property of the consumer (e.g., money or medications) were in the car. However, this allowance was removed once Illinois instated a FFS funding mechanism to comply with Medicaid billing. In a city the size of Chicago, staff members reported that this created a major challenge to achieving the required number of direct service hours in an eight-hour workday. Moreover, if the consumer is not home after the staff member has traveled to visit them, staff members indicated that it becomes increasingly difficult to amass the

mandated number of direct service contact hours for that day. One staff member described the challenge of attaining hours due to travel and consumers not being home for appointments:

> "I mean you're in the car, which you can't bill for from one side of the city to another. Sometimes it takes an hour in travel. Which puts the pressure on you because you have to meet the criteria of a certain number of hours per day. And if you're in the car and can't bill for that, what are you going to do. It's tough to be able to develop enough hours basically for billing…Because a lot of times people aren't home or people aren't communicative so it's difficult with that and not being able to charge for travel time so that is a major issue" (Homeless Outreach, Time 1).

A staff member from the CST team explained how the productivity standards make staff feel pressured to spend more time (i.e., longer visits) with consumers even if this is not desired by the consumer:

> "Sometimes members don't like you in their space. You're being invited into their personal lives and it's really intrusive when you say hey, I need to spend more time, you don't say that but hey, you kind of push to spend more time" (CST, Time 2).

A second factor that contributed to a perceived negative impact of FFS was the *pressure for billing*, which was perceived as a priority of the management at Thresholds. All of those interviewed (20, 100%) acknowledged an increased pressure for billing at either Time 1 or Time 2 (see Table 22). As one staff member explained:

> "We're a lot more focused on getting our billable time. It's become a major focus of the agency and the pressure is on us to make sure that we get our hours in and to still provide quality service but to work around the limitations that have been put on us with that" (CST, Time 2).

Another staff member voiced the perception that billing was the top priority rather than quality of services:

> "Over the years I've seen, and not just Thresholds but other agencies as well social service-wise, have looked at the dollar and have lost a little

> luster for the quality of what they do for folks. In other words, the mission is not driving them anymore, it's the money" (Homeless Outreach, Time 1).

The increased pressure for billing led the majority of team members (10 of 17, 59%) to perceive *a lack of support and understanding from upper management* in terms of productivity standards and billing (Table 22):

> "I think it sometimes it's hard for them to understand what we're going through. A lot of the upper management, before also did direct service and feel like okay, we [upper management] were able to do this but it's a little different. The population and the job are totally different now. They're asking us to do too much" (Homeless Outreach, Time 2).

Another staff member commented on pressure for billing in particular:

> "But then you come back and you're dealing with more challenging members and then you come back and you've got this building permeating pressure to get your notes in, to do all your paperwork, and it's like, it doesn't feel like it's a very supportive agency-wide for anybody" (North ACT, Time 2).

Another staff member voiced a strong opinion of the agency's pressure for billing and perception that management does not consider the welfare of the employees:

> "We always had to do notes but now that it's FFS it's get the money, get the money, get the money. And I feel like that's what they're concerned about; they're not concerned about those on the forefront, us out here, the difficulties and the places that we go in to…if this is ACT, this is FFS, do this, you have to have 4 hours, if you don't we write you up and that's it, get our money and we'll worry about you later" (Homeless Outreach, Time 1).

Another staff member described the impact of this pressure for billing on his relationship and perception of those in management:

> "That's the message that I walked away with in most of the meetings was still about the billing, the billing, how to bill, and get it done. So, yeah. That was still the primary focus of everything I was ever talked to about…I think overall it certainly made me wonder about the integrity of the agency that would cause that to be their primary focus. While I

> understand it, of course, and as many people do, it still made me think about the integrity of the agency and to what extent then my importance was as an employee. What extent the importance of the clients' lives were, the members' lives were. I mean are we doing this so we can get, so we can bill to get paid to keep doing it? Or, you know, I don't know. I questioned that. I questioned the integrity of the agency."

He further added:

> "I try to stay focused on what the whole mission statement is here—I mean it's a wonderful mission statement but I wonder sometimes if somebody shouldn't sit down and re-write it a little bit given this FFS thing, really…I mean I think it creates in this work culture, animosity, frustration. I think it creates distrust between management and myself. Always second guessing what their motives are" (North ACT, Time 2).

Nearly half of those who were held to productivity standards, i.e., team members (8 of 17; 47%) reported being reprimanded or feeling *concern for their jobs* as a result of productivity standards (Table 22).

One staff member stated:

> "But the FFS and making sure that we have a certain amount of hours logged and we make a certain percentage, it's been pretty stressful…I know just within the last few months they've really cracked down on our hours and meeting a certain percentage and people are getting written up and not meeting those percentages and our jobs are on the line because of that" (CST, Time 1).

Another staff member described the impact of feeling reprimanded based on productivity standards:

> "If after a day of doing what you feel like you've been called on this earth to do and then you get back here and you're punished, this can't be good. I mean any professional worth their weight is going to tell you this is not a good healthy work environment and it's because of that reason. Because of the punishment that goes on… Don't punish us when we don't meet those expectations that are somehow just completely unrealistic" (North ACT, Time 2).

When asked about FFS, the Team Leader from the North ACT team provided a thorough description of the impact that highlights the various codes represented in this theme such as the *inability to complete all requirements in an eight-hour day*, the *pressure for billing*, and the perception that *upper management does not understand* the consequences of their demands:

> "It's [implementation of FFS] been far harder than the implementation of ACT. We can't do it in the eight-hour day over and over and over again…But it's been really, really hard and it's not a question that my team isn't getting their billable hours, they are. But finding the time in the day to get the notes in has been a nightmare. And I think the agency could have done a lot better job in showing support. Everybody's feeling the pressure so, so, so strongly…. But the big deal is the pressure to get in the billing, to get it in on time, and then while you're at it you can do this, this, and this and then a pile of assessments we weren't expecting to have done and we feel like we're constantly getting thrown off guard and I feel bad because I'm putting in ten hour days. [Names another team member] is putting in ten hour days. Everybody else is trying to juggle with the eight [hours] and it's not working and management doesn't realize that what they're asking from us is a ten hour day…And many of my team feels like they're not being heard…It's like the demand is there and that's it and we have nothing to say about it. Okay, that's fine if it really was an eight-hour job. But it's not. They never take lunch, never. I'm nibbling on finger food from location to location and my team is doing the same thing. They're [upper management] not accounting for enough transport time…I mean there aren't enough hours. I'm putting in ten hour days. I'm not even scratching the surface…I'm working at home on the computer on the weekends. If my husband knew how many hours I was in front of the computer at home he'd kill me. But it's getting bigger and bigger and I don't see it stopping. And that is probably the biggest problem we've got and unless they can take away some of the billing hours or figure out a faster way for us to be able to get in their notes, I don't see any big changes" (North ACT Team Leader, Time 1).

The stressful workplace atmosphere that was created by the demands of a FFS funding mechanism, contributed to nearly half of team members reporting *staff burnout* (8 of 17, 47%) over the course of the study (Table 22). One staff member indicated that he had enrolled in college courses with the intent of switching careers after 22 years in

the mental health field. When asked of the reason for the decision to change careers, he stated, "You know what, I think really this FFS thing is just killing me, really" (Time 2). Moreover, the Clinical Director described burnout as a major problem throughout the entire agency. She indicated that burnout was likely the result of multiple changes occurring at once (discussed later) and the poor financial situation within the state of Illinois that then contributes to pressure within the agency for billing:

> "I think that that's an issue [burnout] that we're struggling with here. It seems to be that there are a lot of changes in a very short period of time that have been quite challenging and I think what we try to do is we try to increase communication around what's happening. We keep looking at that. We keep listening. It feels like there hasn't been very much that we've been able to do. I mean, you know we've had to take away some things. We've taken away staff recognition day. We've taken away staff development day because we just can't afford it. I think we're trying to overly communicate with people about the real challenges that we're faced with here in the State of Illinois and that, these are not things that Thresholds is necessarily imposing. But this is as a result of the economic environment in our state situation that we're in right now…I think morale is a real issue right now. One manager just called me to say it's [morale] the most difficult thing they're dealing with now. Realities are you still got to get your numbers [productivity standards] in" (Clinical Director, Time 2).

Therefore, changes that came about due to FFS rather than the implementation of ACT, such as productivity standards and pressure for billing, contributed to staff burnout. Staff burnout was a factor in the decisions of staff who resigned, including the Team Leader for the North ACT team at Time 2. As discussed later, staff turnover, particularly in key positions such as Team Leader, was a major barrier to ACT implementation.

In addition to being concerned for their jobs due to an inability to meet productivity standards and a poor financial situation within the state, the pressure to meet billing requirements contributed to the staff's perception of *reduced quality* of services

(11 of 20, 55%), which was viewed as another negative impact of FFS (Table 22). One staff member commented:

> "You're talking about taking the human factor out of it and saying we need this many number of hours for billing. So, it becomes quantity instead of quality. You spend more time trying to meet your hours whereas prior to that you may have had some time to sit down and really go in-depth with someone. Between the traveling and trying to meet the hours, it makes it more quantity versus quality. I think that you can't get the true quality that you would like to have or to achieve from that aspect" (Homeless Outreach, Time 1).

Another team member of the Homeless Outreach team expanded on this concept by tying the *reduced quality* specifically to *concerns for her job*:

> "I don't think that there's any quality in the service that we provide now. I don't think that we have, like I said, there's no quality. We're not giving quality service to the members that I think that we can, that we have the potential to do. Because we're thinking about we have to get out here and then most of us are thinking about getting back in, getting our notes in so when that quarter comes up, we're not being written up" (Homeless Outreach, Time 2).

Another line staff reported:

> "I have noticed the impact it has on members the way I seem to experience it which is members don't get, because we have to rush back and bill, or we have to make sure we take the time to bill and do that plus provide the services, the delivery of the services, plus create a plan so we can figure out how we're going to deliver those services, at the end of an eight-hour day there's no time to do all that. So what doesn't get done is the delivery of the services the way I think they could be if we weren't FFS" (North ACT, Time 2).

A member of the Homeless Outreach team had also noticed a decrease in the quality of progress notes since the change to FFS:

> "It seemed like when we were putting notes in the computer [prior to FFS], it was more for the members' progress so if I came in and I want to see what they were doing a week ago I could see where they're at, what advances are going on. Whereas now it's just like we did this so we could get the billing. It's like coding. So it's, I'm reading a note, I'm not really

> knowing where this person's at in the recovery process. I just know that they did this for the day to get the billing…You don't get anything like a narrative proportion to it anymore. It's more like we're going to meet this objective for payment and then move on" (Homeless Outreach, Time 1).

The Clinical Director acknowledged the potential for a temporarily reduced quality of services and increased pressure for billing in the following statement:

> "It's been a huge change for us…When all of a sudden you have to start paying attention to productivity I think the quality of the service tends to take a back seat and trying to maintain because it's all about productivity here. That's what it's turned into and trying to maintain the balance of making sure staff achieve their billable targets but that they're also not committing fraud and that we're also trying to pay attention to quality. I think as somebody in my role it's been hard to try to manage both and I'm hoping, we're still not where we need to be in terms of productivity and as soon as we get that taken care of then we can pay more attention to sort of the evidence based practices and best practices and quality of services which isn't to say it's taken a total back step but it has. I think if you were to talk to staff and if there's not a research project happening in their particular program, which is focused on some service, clinical service, or evidence based practices they would say, "It's all about productivity, it's all about productivity". And that's true because we haven't been able to, haven't been able to account for that just yet" (Clinical Director, Time 1).

At the Time 2 assessment the Clinical Director had felt that the focus on productivity standards was lessening:

> "We're trying to move ahead with EBPs and I think the staff are wanting to get back to the business of providing good clinical services and having to focus on that rather than on productivity, productivity, productivity. So I think, I don't want to say that we're totally over the hump in terms of never having to worry about productivity again but I think we're in a position now where we can also focus, provide a little bit more balance in terms of let's focus on the clinical issues and not every conversation we have need to be about productivity" (Clinical Director, Time 2).

However, this perception of lessened stress for billing was not generally endorsed by team members. Of the 10 team members, i.e., Team Leaders included, interviewed at Time 2, 8 (80%) still complained of pressure for billing (see Table 22) and only 1 staff

member spontaneously reported that the adjustment to productivity standards in particular was going well:

> "I think initially it was really hard to switch over to FFS because we had to get accustomed and learn to adapt to that and make our days different. Sometimes not having lunch or whatever it may be to get those hours in and then finding the time to do your notes. But I think it transitioned quite well. I think we, you know, it started off we were expected to do 70% of the expected hours, then 80%, then 90% and eventually 100% and I think a lot of people have been making that. The slow transition helped that and I think people are use to it now" (CST, Time 2).

Therefore, the switch to FFS was viewed by all, including the Clinical Director, as a major change for staff members that resulted in many difficulties such as the formation and enforcement of productivity standards. Staff members perceived FFS as having varying negative impacts on their jobs, which led to an environment in which they felt increased pressure and lack of upper management support for handling these challenges. In addition, those interviewed expressed frustrations with the ambiguity of Rule 132 standards and lack of guidance from the DMH.

Ambiguity of Rule 132 Standards/Lack of DMH Guidance

According to half of those interviewed (10 of 20, 50%), a barrier to Rule 132 implementation was that the standards and interpretations of Rule 132 changed often, particularly early in the implementation (i.e., Time 1; see Table 22). The ambiguity of the standards and constantly changing rules contributed to confusion and frustration for staff members and made it difficult to be in compliance, e.g., with the authorization process (discussed in next section). As a member of the CST described:

> "And then adjusting to…just learning the rules. The rules are constantly kind of being revised or how we are interpreting them for CST services. I

> think it is so new that new changes are coming about. And that's a challenge because you don't know if you're doing something this week and then next week they tell you, "Ok, now you have to do it a different way or this change is coming in a week." It's all very confusing" (CST, Time 1).

A staff member from the North ACT team indicated that the constant change was the biggest challenge and that the ambiguity gave the impression that no one knew how to properly interpret Rule 132:

> "I suppose the biggest challenge would be continually hearing about changes coming down and just always kind of waiting for something to change. Because there's always something new, almost every day it seems. I feel like none of us are comfortable with it just yet…[information on changes] trickle down I felt like. Just sort of piece by piece and I think that every, from what I have heard it seems like nobody is the real expert or anything on it [Rule 132]" (North ACT, Time 1).

The Clinical Director indicated that the confusion regarding the interpretation of Rule 132 was complicated by a *lack of guidance from DMH*. She explained:

> "So there's FFS and there was the Rule [132] change. So those were two huge changes for us. Unfortunately the state, there's nobody in the state who can make any decisions right now. So when you have a question about how to proceed, there's nobody who can make a decision, there's nobody who has the answers, and it just feels like the providers are being left with all of the risks and we're left holding the ball because the state is not assuming any role in kind of helping is figure this out" (Clinical Director, Time 1).

The lack of guidance from DMH was infrequently reported by line staff (1 of 14, 7%) in contrast to the comments made by those in management positions, particularly the Clinical Director (see Tables 22 and 23). It is likely that the problems interpreting the regulations were better understood by those in management positions who had the responsibility of interacting with the state, while line staff may not have understood the nuances.

Difficulties with the Managed Care Organization

A particular area of poor guidance from the DMH involved a lack of coordinated effort with the managed care organization (referred to as "the ASO" by staff members) that the state hired to monitor the roll out of Rule 132. Among other things, the ASO was responsible for approving the authorizations for services. While this theme was reported by a small percentage of those interviewed (4 of 20, 20%), the ASO was judged to have created significant barriers to providing services for both the CST and ACT teams at both Time 1 and Time 2. Similar to the theme of lack of guidance from DMH, this theme was largely identified by those in management positions (see Tables 22 and 23). Team Leaders and Program Managers were responsible for interactions with the ASO and therefore, this barrier appeared to be largely hidden from the line staff. The Clinical Director and Team Leaders described the difficulties with the managed care organization as substantially impacting the implementation of Rule 132 due to the ASO presenting conflicting information from DMH and instituting an unorganized, tedious authorization process.

According to the Clinical Director, one problem for implementation of Rule 132 was that DMH and the ASO often presented conflicting information concerning Rule 132 to the agencies:

> "And they say well, you know, that's the other thing that they did to, is they kept publishing documents and we have three documents that we need to use currently to know whether we're doing ACT right. There's the Rule [132], there's the ASO protocol which was different than the Rule. So, for example, the Rule did not state the number of team meetings that the psychiatrist had to be present at but the ASO protocol does. And then at the last phone call we heard that they're going to be using the DACT when they review us. So there's three, you know, and each one of

> them and so what we did is we sort of took the Rule and the DACT and we sort of looked at it initially but then here came the Protocol which had different stuff in it and now they are saying they are going to use the DACT which, so nobody really knows what tool, what they're eventually going to use when they come in [to evaluate fidelity] and we have to pay back if we're out of compliance" (Clinical Director, Time 1).

She further described a couple of the challenges with interacting with the ASO, including a lack of guidance on their regulations:

> "We don't have enough time to really go into all the problems with the ASO but the ASO sort of, at the state's bidding, went ahead and rolled out the first managed care gatekeeper option before they were ready to do it. So there were some challenges associated with that and one example is, you know, we have to submit faxes for authorization and they couldn't accept batch faxes so that meant you had to submit each fax separately with its own separate cover sheet. That kind of stuff is very, very painful. They also, we have to reauthorize every six months but we don't really know for them how they define six months. We've asked them a couple of times. In fact, I organized a meeting with the ASO and they came here because there were multiple problems that we were having. They'd been unable to answer those questions. It's been kind of strange and I think that's because the state isn't providing them with any answers. So we're sort of wondering these questions and we've asked a couple of times. Who is making these decisions? Who's in charge? Can you just tell us so that we can go and talk to them. There is nobody. So I think the management staff-the Team Leaders and the Program Managers are the ones who are primarily dealing with those challenges that the CST team and the ACT team are dealing with. That has been challenging for them" (Clinical Director, Time 2).

The Clinical Director further described a lack of guidance on an ASO authorization rule that conflicted with Rule 132 stipulations specific to CST teams:

> "So our community support teams, they [ASO] require that for authorization you have a service plan done but the Rule 132 says that you have 45 days in which to complete the service plan. So we're wondering why they're requiring something over and above the Rule. Why can't, and how do you do a service plan when you first meet somebody? How do you get a service plan done that makes sense? And so we asked them and

> oh, hmm, yeah that's a good question but they still don't come back to us so we still have those teams who are struggling to get the service plans done before they can get the person authorized. They don't do that for the ACT team. They allow them more time to get the service plan done maybe that's because it's a different population. I don't know" (Clinical Director, Time 2).

The Team Leader of the North ACT team described how interacting with the ASO has impacted her job in terms of confusion with previous DMH regulations, additional *paperwork* beyond what was required by DMH, and lack of flexibility:

> "My working for the state was really the, my initial authorizations were very easy to do. The guy from the state was a breeze to work with, very nice, very helpful. With the ASO coming in there's more confusion. They don't have their policies down yet. I think that's where the problem is right now. And then their [ASO] changes are coming down and then sometimes there's confusion connected with the changes that we already heard [from DMH] and so it's just a lot of chaos right now… Because their [ASO] demands got flung on us at the last second. They, the state wanted one form [paperwork] with the diagnosis, name, MRN number. I mean when I had done the initial authorization in September they were a breeze. I had to do the LOCUS, we got diagnosis, it was a two-page sheet to fill out, faxed it over to the state…But the ASO insisted that a full mental health assessment be done with every single person. So basically you're talking a two-hour—and that's if you're experienced doing it—a two hour assessment care plan and then the authorization is literally two hours solid of work to enter in, in order to submit to the ASO [4 hours total of work per member to submit to get them authorized to receive ACT]. That was thrown at us a month before they, a month before I had all of these due. We hadn't even touched them. We hadn't even gone into our computer system. They still hadn't even done the training on them yet. So that wasn't the state. That was the ASO that did that. And here we are panicking trying to get them all in. I get them in by the skin of my teeth and it was exhausting me. I was literally locked in this office for days on end, two months. I mean, that part of it has been a nightmare. I'm still not finished with them. I'm sending over a ten page assessment, care plan, and everything for each individual [instead of the two page form originally required by DMH]" (North ACT Team Leader, Time 1).

She further describes a lack of understanding from the ASO regarding the level of work involved with their regulations and the challenges of interacting with them as leading to *burnout*:

> "And the one day I sent two [assessments for authorization] at once they called and said, oh no you can't do that. Shame, shame, shame. Well there's nothing written that I couldn't… Everybody's under enough pressure already, we don't need that pressure of every six months having to do essentially 34 care plans at the same time. And I've been trying to get it through their heads. You guys don't want the flood [of authorization forms] either, yeah. That's been the roughest part. Now we've got all of these people on the same cycle and so every six months we're going through that. How much longer will staff stay" (North ACT Team Leader, Time 1)?

The Clinical Director also provided an example of how the current authorization process can put the agency at financial risk:

> "Like one thing that the ASO says when we submit an authorization we fax it to them. Then they're supposed to send out a letter to us, but they were sending our letters everywhere [e.g., sending North ACT team's letters to the Homeless Outreach team] and it was a real mess and so we say to them well, can you let us know. And we got, "Oh, well if you don't hear from us you can just assume that the person's been approved." Well, you know what, that's just not good enough because if we don't have the approval and we get audited then it's a pay back risk for us. So no, we can't accept that…And nobody quite seems open to input from the providers either [on authorization process]. I think that's painful. We could have avoided a lot of these snafus that caused us a lot of administrative problems if they had sort of piloted the authorization process with one agency first. It was rolled out without any input or any foresight to some extent" (Clinical Director, Time 2).

Therefore, the ambiguity of the procedures and stipulations of Rule 132, including interactions with the ASO, coupled with the lack of guidance from the DMH, contributed to frustration and hampered implementation of Rule 132 at the agency level. These common barriers along with the perceived negative impact of FFS, particularly

demanding productivity standards and pressure for billing, resulted in an agency-wide atmosphere full of chaos and stress.

Common Facilitators

Positive staff attitudes, leadership, and familiarity with services were identified as common facilitators to implementing Rule 132 across the three teams.

Positive Staff Attitudes regarding Rule 132 Changes

Over half of the those interviewed (12 of 20, 60%) were able to identify some positive aspects of either FFS, such as more accountability and becoming more creative with the type of service provided, or implementing the recovery-centered concepts intended by program criteria in Rule 132 for both CST and ACT services. This positive outlook was expressed by all three Team Leaders and all three of those in management positions and nearly half of the line staff (6 of 14, 43%). Of the 6 line staff to mention a positive aspect to implementing Rule 132 at either time period, 3 were represented on the North ACT team, 1 was from the Homeless Outreach team, and 2 were on the CST team (see Table 24). The Team Leader from the CST team explained the potential benefit of the funding mechanism change as forcing the clinicians to really consider the services that they were providing to the consumers:

> "Well, it's [FFS] made us think a lot more about money and how our agency runs and basically billing…But as far as the services provided to the members, I don't think that has changed. I still think we're providing very good services, quality services to the members. We have to look at it differently and really think about the services that we're providing. Okay, are we providing community support? Are we providing case management? Are we providing that training? It makes you think about

> that more. We can't just lump it under ACT anymore. Have to break it out and say okay, this is what I'm doing. It also has made us think about what more can we do with this person? It's just not a money and med drop. It's like what other things can we assist this person with and kind of, I think has helped us have longer visits with people or you know, more quality visits and getting to know people more" (CST Team Leader, Time 2).

Another staff member from the CST team was able to find a positive aspect of being unable to bill for travel:

> "We aren't able to bill for travel time. We used to be able to bill for travel time. So that's changed where we can see the members and in a good way it's worked out for us to be a little more creative with how we do our visits and trying to find ways to spend more time with members" (CST, Time 2).

The West Program Manager and acting Team Leader for the Homeless Outreach team discussed the benefits of introducing recovery concepts to ACT services to both staff and the consumers:

> "With Rule 132, since we're no longer maintaining, we're not doing things for members. We're showing them how to do it so they can be independent. It just naturally gives you the opportunity to spend more time with people because maybe you're modeling them making the phone call to the psychiatrist or when you go to the grocery store you're modeling what you need to do so I think if they use that time as it was meant for as in skill training and not doing things for members then it's easier to get that time [productivity standard] and I think it's easy to spend more time with members…We're not doing a member a service by doing it for them. You know, our goal is to be able to gradually remove ourselves from the members' lives and have them reach their goals and do things that they want to do and to know how to do that without us" (West Program Manager, Time 1).

Leadership and Support

Another common facilitator to implementation of Rule 132 was leadership and support. All 20 staff members who were interviewed identified leadership from one or

more sources as instrumental for overcoming or coping with the challenges of implementing changes to the service delivery system (see Table 24). However, the source of leadership and support varied depending on the level of the staff member within the organization (see Table 25). When asked of the support that she provides to the teams, the Clinical Director indicated that Thresholds follows a top-down communication chain. Therefore, upper management interacts almost exclusively with middle management, who then communicated the information to the Team Leaders and finally the line staff. Consequently, while upper management was viewed as highly supportive by middle management (2, 100%), the upper management staff members were largely unknown to the line staff. One Program Manager (middle management) described the communication, support and commitment from upper management as:

> "We had constant contact with [names the Clinical Director] and my supervisor [names the West Regional Manager] and as soon as they heard things coming down the pipe they would let us know and we would rally around how to address every step. I felt like there was always ongoing support…[names the Clinical Director] I think was a champion for us. She was always at each and every meeting. She was very hands on and enthusiastic" (West Program Manager, Time 1).

However, when a line staff member was describing leadership from "management" he was asked who he considered "management" to be and the name of the Clinical Director was mentioned by the researcher as a possibility. The line staff member replied, "I don't know who [names Clinical Director] is. I don't even know who she is" (North ACT, Time 1). The respondent considered his Team Leader to be "management."

The line staff identified the Program Managers (labeled as middle management in this study) as the highest authorities that they interact with on a regular basis. Consequently, the line staff reporting receiving leadership and support mainly from

middle management (i.e., Program Managers and Assistant Program Managers; reported by 10 of 14, 71%) and their Team Leader (9 of 14, 64%), as well as emergent leadership from other teammates (9 of 14, 64%). The line staff identified middle management as providing significant leadership, guidance, and a source of buffering from the demands of upper management:

> "I think we have a really good Program Manager and Assistant Program Manager and so they help us, they help buffer us from a lot of the critical stuff going on and the numbers [productivity standards] and all that but they've been forced to bring that to our attention a lot….our supervision is really good kind of keeping our focus on providing services but still letting us know that we're being pounded on the head from people above [upper management] saying that we still need to meet these [productivity standards] and we still need to do this and come back to the office and input all these notes and it has to be on time" (CST, Time 1).

The support from middle management was also reported by all three Team Leaders (including the Homeless Outreach Team Leader who was hired after decertification):

> "The support that we get from our bosses like the Assistant Program Manager and the Program Manager really helps. And just the ability to communicate and share with each other. I think that's the most important thing and the main thing that has helped us get through it [Rule 132 changes]" (CST Team Leader, Time 2).

Team Leaders were also a source of support for line staff:

> "[Names Team Leader] is really diligent about making sure we get supervision. She's demonstrated that she has an open door policy. We can call her on weekends. We can call her after work. She's available at any time…she's really dedicated to making ACT work on this team" (North ACT, Time 1).

Support from other team members was also identified by line staff as instrumental to implementing change and to dealing with challenges that emerge:

> "… I feel that with collegial support I'm able to do this job and handle all the challenges, and as the weeks go by I get a little bit better at it and I understand some of the administrative aspects of it-the paperwork, etc. And that's good and it looks like, you know, I'm looking forward to staying with the ACT team for some time" (North ACT, Time 2).

One staff member on the North ACT team was also acknowledged by her teammates for becoming an emergent leader in regards to researching the ACT model and stipulations of Rule 132 and sharing this information. When asked what facilitated implementation, one of her teammates stated:

> "I would say that [names team member] was instrumental to implementing the Rule [132] changes. Because she was the one that was really like, OK guys this is a very precise model and looked at it very thoroughly. She even provided us with articles [to read]" (North ACT, Time 1).

The support of line staff to assist with implementation was also mentioned by two of the three (67%) Team Leaders:

> "Having a team that's willing to go with the flow and be adaptable helps me out quite a bit. Because if you had people that weren't willing to make these changes or fought you on the changes every step of the way that would make it much harder but the team is open to these changes and I mean it's a learning process for them too. So, the team helps a lot" (CST Team Leader, Time 1).

In summary, leadership and support from others in the agency provided assistance with adjusting to and coping with the policy changes. The top-down organizational structure of Thresholds influenced the perceptions of line staff in terms of their relationship with those in upper management and reporting more support from Team Leaders and those in middle management.

Good Communication and Preparation

While at Time 1 the stipulations of Rule 132 were in a constant state of change and many elements had to be implemented with short notice, staff members did report that Thresholds generally provided good communication surrounding the changes (12 of 20, 60%) and sufficient time to adjust to the changes whenever possible (9 of 20, 45%) (see Table 24). A member of the North ACT team explained:

> "I think the amount of time we took to get ready for that day to come [October 1, 2007] was very helpful and I would give the management team credit for that. We talked about it ad nauseam about how this was going to look. I think our Team Leader worked really hard at getting us ready for that. So months before an actual start date we were talking about it. And on our own, reading about it and finding about what it meant and listening to whatever anyone told us through the agency. Also, the preparation to get on our team who needed the services [appropriate consumers] and off of our team onto another team who didn't, that was all done very well in advance and I think that was key. When that day came [October 1, 2007] we were as ready as we could be" (North ACT, Time 1).

Staff members were informed of the upcoming changes and the elements of the service delivery models (e.g., ACT or CST) when hired into the positions. When asked about preparation for the changes, a member of the Homeless Outreach team explained:

> "Just communication, that's really it. They just let us know this is what's going to happen. We knew, I knew we were going to become an ACT team once I got on the team and they had talked to us about it prior to it happening" (Homeless Outreach, Time 1).

The Team Leader from the North ACT team added:

> "And each person that came onboard understood that this is the model that we were going to follow so I guess they were attune with that prior to even taking the position…We began making preparation well in advance and were more or less forewarned of the changes that were about to happen so it really wasn't that big of a surprise" (North ACT Team Leader, Time 1).

Thresholds also allowed a gradual process of change for staff members to learn the new billing system required under FFS and to attempt to become accustomed to the productivity standards. Staff members began tracking their hours several months prior to the date that the productivity standards were required to be in place. A CST team member describes the process by which management at Thresholds prepared them for the establishment of productivity standards:

> "We were prepared for the changes [to FFS] fairly well. They starting pretty slowly as far as us being part, I'm assuming we were part of this pilot program and taking charge of our hours and counting them up every day and then it got a little more strict as time went on making sure and then when it was implemented then they started coming up with targets and percentages we had to reach. So in the beginning they had us start becoming aware of our hours but there were no direct consequences if we didn't meet it and they slowly added in consequences" (CST, Time 1).

Therefore, good communication and allowing a gradual process for the change to occur whenever this was possible was perceived by staff members to be a facilitator. However, as mentioned in the barriers, the ambiguity of Rule 132 and lack of guidance from DMH often resulted in "constant" changes that often had to be implemented with little or no warning.

Familiarity with Services

A final facilitator common to all three teams was that the actual type of services provided were not considered to be much different from the type of services they provided under the Bridge program prior to the establishment of Rule 132. Staff members communicated a familiarity with the requirements of ACT and CST services and perceived that the main change would be to learn how the billing was completed. Of

the 20 people interviewed, only 2 (10%) felt that the type of services would require a large change to the previously provided services (Table 24). Both of these individuals were on the North ACT team and had been transferred from other programs within Thresholds that were not team-based. Therefore, the majority (18 of 20, 90%) of staff members interviewed, including middle and upper management, believed that both CST and ACT services in accordance with Rule 132 were similar to what was provided under the Bridge program, with the exception of placing more emphasis on *recovery* and providing a higher intensity (i.e., frequency) of services for ACT. The Team Leader from the CST team described her understanding of the changes to their service philosophy model:

> "I think the services we provide stayed the same mostly but I think what has really helped is how we see it and how we provide the services more towards teaching and modeling instead of doing for. I mean sometimes you're still going to have to do something for the member but now you're more cognizant of ok well if I do this for the individual all the time, they're never going to learn how to do it for themselves. So, to be more willing to teach them and show them and have them do it on their own. In that sense I think that has changed. But we still do a lot of the same things like helping people get benefits, getting them set up with doctors, we provide those services still. It's more in the minds of the individual worker going out there to how to actually provide the services to teach the person to do stuff on their own" (CST Team Leader, Time 1).

The Program Manager and acting Team Leader for the Homeless Outreach team explained the team's familiarity with ACT-like services:

> "Aside from having to have a team leader that was a licensed clinician and working on the weekends, everything else were things that we were used to doing. We were use to having people on call, we were use to seeing members three times a week…we were use to being the center of the services-kind of linking members to where they needed to be. We were use to doing that…Cause we've always had the team approach" (West Program Manager, Time 1).

Therefore, a common facilitator to implementation of Rule 132 was that CST and ACT services were viewed to require little actual change to the delivery of services. Consequently, staff members had to learn new regulations such as a new billing system, but they did not also have to completely learn a new type of service.

In summary, Thresholds was in a stage of transformation and uncertainty regarding the change in funding mechanism when they were also initiating the new service definitions for ACT. The workplace environment was filled with negativity in relation to staff members feeling overwhelmed, unable to meet their requirements, concerned for their jobs, and perceptions that leadership in the management roles did not understand or care about their perspective. Additionally, the stipulations for Rule 132 and billing under FFS were constantly being redefined, leading to frustration and uncertainty on the part of staff. A common facilitator was that, when possible, the agency attempted to provide staff with communication and adequate time to prepare for the changes. Moreover, the actual services in accordance with Rule 132, whether CST or ACT, were perceived by staff to be similar to the services already being provided by the teams. Additionally, leadership was viewed as essential for overcoming any of the challenges of implementing a change to the service delivery system. However, as anticipated, the source of leadership and support varied depending on the level of the individual within the organization. Implementing ACT in accordance with state standards on two service delivery teams during this time period brought with it unique challenges and facilitators for overcoming these barriers.

Themes Specific to ACT Implementation

When implementing ACT in accordance with Rule 132, the two teams had the challenges of implementing Rule 132 in general, such as ambiguity of rules and lack of guidance from DMH, but they also experienced barriers related specifically to ACT implementation. Because one team had decertified from ACT approximately three weeks prior to the first interviews, the two teams were compared at Time 1 to determine factors that influenced the implementation effort. The CST staff members (N=4) were not included in the comparisons as they did not attempt to implement ACT. Consequently, 16 staff members were involved with the process of implementing ACT (13 were members of one of the two teams, 3 were in management roles).

Several themes emerged as perceived barriers and facilitators that were specific to the implementation of ACT at Thresholds. As previously mentioned, staff turnover was significant for the two teams that attempted to implement ACT. Staff turnover was identified in interviews by the majority of staff members (13 of 16, 81%) as creating barriers to implementation, particularly when coupled with the DMH regulations, which were perceived as the main barrier for both teams. Other barriers included lack of resources and implementation overload. A unique barrier to the Homeless Outreach team was the misalignment of requirements across two funding sources, a SAMHSA grant and ACT services in accordance with Rule 132. Negative staff attitudes specific to the ACT model represented a barrier to the process of implementation on both teams and positive attitudes were a facilitator on the North ACT team. Finally, upper management's commitment to EBPs and ACT in particular was viewed by staff members as a facilitator.

DMH Regulations, Staff Turnover, and Lack of Resources

There were three categories of *DMH regulations* that created substantial barriers for the implementation of ACT at Thresholds (see Table 22): Staffing requirements (i.e., licensed team leader and nurse on the team; 10 of 16, 63%), staff vacancies cannot exceed 30 days (4 of 16, 25%), and the ACT team has sole responsibility for all services provided to the consumers (10 of 16, 63%). Separate themes, but having an impact on consequences of the *DMH regulations*, were themes of *staff turnover* (13 of 16, 81%) and *lack of resources* (10 of 16, 63%), including lack of resources in terms of training in advanced therapy skills (6 of 16, 38%). These interrelated barriers are discussed and dispersed throughout the DMH regulations to which these had the greatest impact.

Staffing Requirements

The staffing requirement of a licensed Team Leader was problematic for the Homeless Outreach team (reported by all 6 staff members who were involved with this team at Time 1), while maintaining staffing in the nurse position posed complications for the North ACT team (reported by 3 of 7 who were involved with this team at Time 1, 43%). As a result of the staffing requirements, the Team Leader for the Homeless Outreach team had to be demoted. As the West Program Manager explained, this requirement caused significant disruption to the functioning of the team:

> "Well, initially I thought the changes in the policies were awful because first of all, the policy stated that you had to be a licensed clinician to be a Team Leader for ACT teams. And at that time I had a wonderful Team Leader who has been here [Thresholds] about almost 10 years now and she was doing a wonderful job but because she was not a licensed clinician we had to find a different position for her within the program and fortunately there was one but that was very traumatic so we lost a good

> Team Leader. And it just started off the chaos and disconnect and things like on the team. For me, that was the biggest thing---to actually have to demote this Team Leader who was doing a wonderful, wonderful job" (West Program Manager, Time 1).

Those in management (Program Managers and the Clinical Director; 3 of 3, 100%) indicated that the staffing requirement was problematic because it was difficult to attract proper staff to positions that require an advanced degree, such as the nurse or the Team Leader position (see Table 23). This difficulty had been communicated to line staff as it was reported by the majority of the line staff on the Homeless Outreach team (3 of 4, 75%) and some of the North ACT staff (2 of 8, 25%; Table 22). The pay grade that Thresholds was willing to offer individuals with these advanced degrees was not competitive for either of the teams implementing ACT:

> "I think the biggest barriers have been finding people who want to do this kind of work for the pay that we have to offer, finding the nurse positions and the team leader positions. I think because of the Rule changes there's more demand for LPHAs and for RNs and once again, it's the same old problem we had before the Rule change. There's both nurses who, doing ACT, that's not what they want to do with their nursing degree. Same thing with the psychiatrists too. So that's been a real barrier" (Clinical Director, Time 1).

As a result, the Team Leader position on the Homeless Outreach team was difficult to fill and the West Program Manager had to act as the Team Leader to avoid state-imposed decertification due to the rule on staff vacancies that will be discussed later. A member of the Homeless Outreach team described the impact of losing the Team Leader on the team as well as on the consumers served by the team:

> "Some of these changes, the new classifications, I think it disrupts the functioning of the team. The first one that I experienced was the team leader [had to be a licensed clinician]. We had some continuity going and then [names original Team Leader] was removed. Given that some of our members have abandonment issues and the fact that it happened rather

> abruptly, I think that that's not good in therapeutic terms. Changes happen but I think you need to do it in a way that it does not devastate folks…And because now you're looking for another person that can come right in and with this population building rapport is not as quick. They're [consumers] not comfortable around a lot of folks. Then we've had 3 team leaders since then, well 2 unless you count [names the Program Manager who was acting as Team Leader] then that's 3. That's a very short period of time to have experienced this kind of turnover" (Homeless Outreach, Time 1).

The Homeless Outreach team did not have a designated Team Leader throughout the period of time that they were attempting to implement ACT. The West Program Manager held both positions for 7 months, which contributed to a neglect of certain Team Leader activities, such as formal supervision (3 of 4 line staff reported, 75%; Table 22). One Homeless Outreach team member explained:

> "I think not having a team leader was a major challenge. What you had was the whole team taking on that role [Team Leader]. You want to have someone there that's going to make that final decision rather than having the team make it. I know that the Program Manager is making it but I think that a Team Leader is very important to provide support, direction, and guidance…we've had 3 team leaders if you count the Program Manager within a period of a little over 2 years so I think that you can't get stability in that area, especially supervision. I don't think I've had individual supervision in quite some time. I've had it maybe 3 times since I've been here. You know what you have to do and so you went out and did it and [you] didn't necessarily get any guidance in that area" (Homeless Outreach, Time 1).

Another team member described the impact that *turnover* in the Team Leader position had on their workload in regards to increased *paperwork* (3 of 4, 75%; Table 22), such as having to complete the assessments that are typically the responsibility of the Team Leader. Additionally, only licensed clinicians are able to bill for assessments and therefore the work that the unlicensed staff members were completing would not count toward their productivity standards:

> "And I find that we're taking on a lot of the normal stuff that I think should be separated out from doing the actual work. We go out and do the assessments and do all those things and I think Thresholds would benefit by having someone who just does the intakes. When I first came the Team Leader was doing that. Now we have to do the assessments and the paperwork and if you don't have the skills, some of those questions are very invasive…but you can't bill until you get this information so you have folks trying to get this information before you build rapport. Very invasive questions before you even have any rapport with the individual" (Homeless Outreach, Time 1).

The West Program Manager for the Homeless Outreach team indicated the impact that *turnover* in the Team Leader position had on the team members in terms of *burnout*:

> "I think they have experienced burnout because, you know, we lost the first Team Leader and then we got a new Team Leader who had worked with Thresholds but she only worked for the team for about a month and a half and then she left the agency. So I think the change, the staff turnover was more of a burnout than the actual implementation of ACT" (West Program Manager, Time 1).

The Homeless Outreach team was not successful in hiring a Team Leader until after the team voluntarily decertified and became a CST team due to the inability to attract a licensed clinician for the offered pay grade.

Similar to the Homeless Outreach team, staffing requirements created obstacles for the North ACT team. The North ACT team experienced *turnover* in the nurse position and a qualified replacement was difficult to find. A member of the North ACT team described the impact of losing the nurse:

> "Of course, we lost our nurse which was a shame, her being good at the job and her caring way and personality. I mean that, it hurt the team in a more personal level than just work related but I think that also management found it harder to find a replacement that they anticipated" (North ACT, Time 1).

Therefore, the staffing requirements of a licensed Team Leader and a nurse on the team created obstacles to implementation when the salary that Thresholds was willing to

offer was not competitive to attract individuals with these advanced degrees. Though the West Program Manager, who was the acting Team Leader, was generally viewed as supportive by the Homeless Outreach team, the team went without the daily leadership that is provided by a designated Team Leader for the entire time that they attempted ACT implementation.

Regulation on Length of Staff Vacancies

The turnover and then difficulty attracting advanced degree individuals to the required positions was particularly problematic due to the DMH regulation that staff vacancies could not exceed 30 days. As the Clinical Director described:

> "Well, probably the biggest challenge is that if you lose a position on the team and you don't fill it within 30 days, on the 31st day you cease to be ACT…You know with the 31 days, I mean do we really want have to go through the effort then of redoing all the care plans to the community support team, getting everybody then approved for CST through the ASO. It's a huge shift in what we have to do. It's not like we can just say, okay, we're not billing ACT, we're going to bill community [CST]. But you can't do that unless you change all of the service plans. Do you know what I mean? Get approval for all of those people, pre-approval, because you can't just bill CST without the ASO's approval. So it's huge for us…it requires a certain level of oversight too, to the Rule so that if the team were to forget that after 31 days we didn't have a replacement, should an auditor come in and look at that and we'd have to pay that money back. So there's a financial risk to us with ACT that doesn't exist with some other services" (Clinical Director, Time 1).

Due to the severe consequences of a lapsed staff vacancy, *staff turnover* in the key positions requiring advanced degrees was problematic to sustaining ACT status. The West Program Manager had to perform dual roles on the Homeless Outreach team and the North ACT team had to hire a nurse from a temp agency in order to avoid

decertification when replacements could not be hired within the 30 day limit. The Clinical Director described the challenges with *staff turnover* and the *DMH regulations*:

> "Turnover in key positions was difficult, primarily the Team Leader position at the Homeless Outreach team which was intended to be an ACT team. That was huge for us because at the time the position required somebody to be a licensed clinician, LPHA, and it's very hard to find people who want to do this kind of work with that level of, or with that license. So as you know, we couldn't find anybody and the Rule states that if you don't have that position filled within 30 days you cease to be an ACT team anymore. So we had the Program Manager doing the Team Leader job for a very, very long period of time… We had a similar problem happen on the North side here where the nurse left and it was very hard to find another nurse who wanted to do this kind of work for the kind of pay we have to offer and once again we had to, after 30 days, we had to come up with a solution or else we were going to cease to be ACT so we went to a temp agency and hired a temp nurse. That hourly rate that we had to pay for that temp nurse came to annual wise was a hundred thousand dollars a year. Not only that but she was not experienced in doing this kind of work and didn't want to go out by herself so she always went out with another staff person and therefore she couldn't bill. So we weren't recognizing, not only were we paying her a lot of money but she wasn't pulling her weight in terms of the billing and documentation piece of it. So after we had her for awhile and it was becoming increasingly frustrating because she wasn't really the kind of nurse that we would have wanted to have on that team, we decided hmm, well maybe we can just let her go and then we'll have another 30 days to find somebody. So it actually worked out okay. We let her go and we were able to finally find a nurse to come in. So those are some of the challenges associated with maintaining the ACT status" (Clinical Director, Time 2).

The Clinical Director further indicated that this particular *DMH regulation* may eventually result in Thresholds not having any ACT teams in the future:

> "I like the ACT model but we eventually might not be able to do it should we lose another nurse or lose another team leader and after 31 days we can't come up with a viable solution because we can't really commit another Program Manager to the role of Team Leader or hire a temp nurse just doesn't prove to be economically viable for us, we may decide that it doesn't make sense to do ACT…But for right now we're doing one [ACT team] and that seems to be working out but if our nurse left tomorrow I'm not sure what would happen" (Clinical Director, Time 2).

ACT Team Provides All Services

When compared at Time 1, several line staff from the Homeless Outreach team (3 of 4, 75%) and the North ACT team (4 of 5, 80%) expressed great concern regarding the stipulation that all services be provided by the ACT team, i.e., not able to refer out to other services within the agency (see Table 22). Staff members felt that this stipulation resulted in consumer care being disrupted and individuals not receiving the care that they need due to *lack of resources* provided to both staff members (e.g., time to develop groups or skills, lack of training on advanced therapy skills) and consumers (e.g., inability for ACT teams to offer all available services to the individuals).

> "Some of it [the changes] doesn't make a whole lot of sense. A lot of our members experience trauma and have a lot of pathology in that area. To be self-contained [requirement for ACT teams], I understand that concept but that person may need to be with a therapist but in order for them to remain with the team that person cannot go seek out a therapist. That type of stuff doesn't make sense. I think you should meet the person where they are at in order to help get them to a better place and that rule doesn't speak to that… Some people on the team are more skilled than others but some folks are not…I found that a lot of our members as they get more stable a lot of stuff floods back in, even going back to childhood. I thought that we should do something about getting them help with the trauma and get people stable around how to operate normally now. But it's difficult because ACT is all self-contained, everything is suppose to be all self-contained. You can't reach out for help outside of that team…When you're talking about outreach, I think that you're talking about the basics. Some staff might have brought higher skills with them from other places but you're not getting that here and I don't see a lot of staff having the higher skills. And a lot of our members have those issues" (Homeless Outreach, Time 1).

Another staff member discussed her own lack of training in therapeutic skills, frustrations with not being able to refer consumers to those that can help, and *lack of resources*:

> "I'm so new to the field. I don't have a lot of training outside of what Thresholds has provided. So I don't feel comfortable doing anything really intensive as far as like trying any kind of therapy and stuff like that. I don't feel that would be appropriate…If anything's it's kind of been frustrating because we can't refer members to certain services because of billing conflicts. So like the Dincin Center where there's groups, people can't participate in and do like a drop in program. We can't send them there anymore. So that's really frustrating in my opinion. It's like okay, well we're supposed to be really intensive but we're really in a way limiting their services. Because we have to provide as a team all the services they get. And I understand the reason behind the model but I don't feel like there was the support or resources to implement it successfully to be quite honest."

When asked about what resources or support were lacking, she added:

> "I guess just like support of services like we're so busy just doing paperwork and stuff like that that it's hard to, you know, you can get the time billing. We wouldn't have time to do groups if we wanted to just because of like okay, doing notes. So I don't know if it's an issue of not having enough staff or if it's financial resources or what. I don't know. I mean I love the team. Everyone I work with is great but it's just, we just don't have enough time in the day to successfully do this in my opinion" (North ACT, Time 1).

Another staff member added:

> " Well, to me the biggest problem became the lack of resources. When we were a CST team we could link people to anything. You want a therapist? You help find them a therapist. If they wanted to go to a day program, we could link them to a day program. Not a problem. They could receive services from multiple providers for a few different things. If they had family issues, they go to the family institute. So you had resources that you can set them up with. Because we didn't do that stuff for whatever reasons and so but at least we had opportunity to do that [refer out] and we had people who were seeing therapists and we had people who were in day programs and things like that. We had members who went to Dincin all the time, participated in groups. We had a lot of members who were in groups at various places and that was probably the first complaint I heard from the members. Like well I can't go to groups anymore? I was like guess not" (North ACT, Time 1).

When the above staff member was asked about the availability of group therapy through the ACT team, she replied:

> "Well I mean, you look at the Rule, you've read our Rule [132]. [It] says groups. I mean in the laundry list of services that we are to provide it includes groups and it only makes sense because if you restrict someone from going to groups elsewhere then you're either going to have to make the ACT team do it or you're just basically cutting that as an available resource to the member and I don't, I just, I refuse to believe the state really meant to cut services from these people. You're restricted to, I don't even know what it is that we would if we didn't have all this array services for them. To me, like well what are these people getting out of it then. What the hell is ACT about if we're not providing all the array of services" (North ACT, Time 1)?

This person and another staff member from the North ACT team attempted to advocate for the formation of groups, but found resistance due to a *lack of resources*, particularly the resource of time:

> "Good old [names team member] said well why don't we ask [names the Program Manager] if we could start some groups. I went Yes, finally. So I talked with her about that and then she sent an email and we worked together and [names Program Manager] thought about and I'm sure he went to his superior but the problem is time constraints giving all the stuff we were going through and he says well, we really don't have time for that now. Yeah, I mean and he's right in the sense that we've got crises on our hands every day. If you hung around, you see, I mean the dire state of our members. It's really, really, really bad and so we aren't able to achieve nearly as much as I would have hoped that we could have achieved. But I think in part it's because we're not giving those kinds of services. I think if we did have groups, if we did have family, did have psychotherapy, if we did have daily programming for activities. You know, a lot of these things that are in there—psychoeducation. If we had classes for god's sake. If we had a lot of this stuff, I think that our members would be faring better and we wouldn't have as many crises…But the resources were not there in order to provide them [consumers] with all that they really needed in order to make more of a recovery than just reduced hospitalizations" (North ACT, Time 1).

In addition to this *DMH regulation* of having to provide all services being viewed as decreasing appropriate care to consumers, the Homeless Outreach team found that individuals were refusing their ACT services and instead requesting the "old services (i.e., now labeled CST)" due to this stipulation. Thresholds has housing options

available through the agency, but the homeless individuals who were approached by the team were unable to take advantage of these housing options in addition to advanced psychotherapy due to the fact that these services would be provided by a section of the agency removed from the team. As described by the West Program Manager and acting Team Leader:

> "Several members were moved [from the ACT team] although they might have been more appropriate for ACT. The team felt as if the need of the individual therapy outweighed the ACT services. So members were transferred to CST teams so that they could get the therapy. People didn't feel as if they were qualified to do that therapy. Now we do counseling all the time. But it's not really therapy…a lot of our members who, you know, have histories of chronic homelessness, there is a lot of trauma, you know, other things in their past that they really need to work through and we didn't feel as if we were qualified to do that it and that was a disservice and we couldn't refer them out for it. Because ACT won't allow you to. And they couldn't move into our housing, you know, and our group homes or our nicer apartments. They couldn't take advantage of that because they had the ACT service. And that housing [Thresholds' housing], as you know, is better than like the SROs and the hotels that a lot of our members tend to reside in" (West Program Manager, Time 1).

Consequently, the strict adherence to the principle that *all* services must be provided by the ACT team resulted in less treatment options (e.g., housing, groups, advanced therapy) available to the consumers who were considered to be the most severely impacted by mental illness.

Misalignment of Requirements from Two Funding Sources

As previously mentioned, the Homeless Outreach team was also funded through a SAMHSA grant that required a certain number of referrals for homeless consumers each month. The primary goal of the SAMHSA grant was to provide homeless individuals with better housing. However, as the above quote from the West Program Manager

highlights, ACT in accordance with Rule 132 stipulated that consumers could not receive the housing options available through Thresholds. Therefore, ACT clients were ineligible for Thresholds housing, which were perceived as better housing options, which contradicted the intent of the SAMHSA grant. With consumers declining the Homeless Outreach team's ACT services in favor of CST services, the team was not receiving enough referrals and intakes that were required by the SAMHSA grant (reported by 5 of the 6 staff members who were involved with the team at Time 1; see Table 22). This theme coupled with the above theme that the ACT team alone was required to provide all services, was identified as two of the major reasons that the Homeless Outreach team was decertified:

> "The other part of it [reason for decertification] is that members who qualified based on the LOCUS were unwilling to only get ACT. They also wanted to have access to other services that they knew about from the former agency [i.e., Bridge teams prior to Rule 132]. So that's the other piece of it too is that some people aren't willing to only accept, they can see our doc and only the ACT staff. They want to go to groups or they want to see a therapist on the outside and they can't do that [and be served by the ACT team]… Well, they [Homeless Outreach team] weren't getting the numbers [referrals] because of that and they also weren't getting the numbers too because when the whole system shifted, agencies that decided to provide CST weren't prevented from seeing people who met the definition for ACT [i.e., CST teams who could refer out to groups and other services were selected by the consumers over this ACT team]. So, there just weren't enough referrals and because this team was funded by SAMSHA we were getting into, we were getting on SAMSHA's bad side because we weren't meeting our end per the requirements of the grant that we had written for them. So because we weren't able to fill the Team Leader position and because we weren't able to get the people in the door and because SAMSHA was threatening to pull our funding, we de-certified the team" (Clinical Director, Time 1).

Consequently, unique to the Homeless Outreach team was the barrier of misalignment of requirements from the two funding sources.

Implementation Overload

In addition to themes that were common to implementing Rule 132 in general (e.g., ambiguous rules and a lack of guidance from the DMH), and DMH stipulations that created havoc (e.g., staff vacancy rule), some staff members (6 of 16, 38%; Table 22) who were associated with the two teams implementing ACT (includes those in management positions) felt that there was implementation overload, i.e., they were attempting to implement too many things at once. One staff member felt that it was too much for the state to require a change to both the funding mechanism and service definitions at the same time:

> "I think it's [ACT] a great model and I think that over time it could be adapted better with more resources but I think doing ACT at the same time they're switching for FFS and doing other things in conjunction with, was just extreme. Too many changes and a lot of stress. You know, you feel the tension but I do think the model, I think that with more support it [ACT model] could be really good" (North ACT, Time 1).

Within Thresholds, the agency was also attempting various implementation efforts at this same time including IDDT implementation on the teams and throughout the agency in general. As the North Assistant Program Manager explains:

> "There were all sorts of changes with Rule 132 and FFS and then recovery [component of Rule 132]. The fact that we've always been trying to have more of a recovery based outlook, what we do with members. So we're trying to be more on top of that. Being less paternalistic and things. All these were different changes and then we, then when we really focused on the EBPs and just implemented IDDT, those have been a sea of change. In two years it's really, not any one thing but altogether it's kind of just changed things…Change is hard and it's hard to implement change and where I'm very comfortable helping people implement the IDDT or the ACT model per se, you throw in the other pressures like FFS and it's many, many things. It' just too many things at once. They kind of all happen exactly at once" (North Assistant Program Manager, Time 2).

He further described the additional obligations for the North ACT team in particular:

> "If anything the team has had too much, it's like Fidelity [measurement] overload. You know, ACT Fidelity and then the state [fidelity to Rule 132] and then ACT Fidelity from Indiana [current study]. Then ACT team Fidelity from Thresholds and then IDDT Fidelity from Dartmouth and internal from Thresholds. And supportive employment Fidelity from Dartmouth and Thresholds. Because they have all of those, [names the Team Leader of North ACT] used to just kind of say, just let them in, whatever, Fidelity…And so they've had little additional time. One or two doesn't make it, but it kind of adds up…So they have little extra that way which I think puts a lot of pressure on them and leads to burnout" (North Assistant Program Manager, Time 2).

Therefore, focusing on multiple implementation efforts at once was perceived by some staff members as a barrier to implementing ACT in accordance with Rule 132.

Negative Staff Attitudes/Criticisms Specific to ACT

Staff attitudes specific to the ACT model were also observed to have both a negative and positive impact on implementation in terms of morale on the team. Dislikes regarding the population served by ACT or certain aspects of the ACT model, such as weekend shifts, the team-based approach, mandated number of visits, and rotating which staff member visits a consumer, were expressed by 8 of the 13 (62%) team members who attempted ACT implementation (note that the Team Leader for the Homeless Outreach team at Time 2 is not included in this figure as she was hired after the team decertified from ACT status).

The West Program Manager for the Homeless Outreach team indicated that enforcing the weekend shift was an area that had lapsed in fidelity under the Bridge program and she had concerns regarding how her team would react to this stipulation.

> "With the true definition [of ACT] coming out, we actually had to have staff work Saturdays and Sundays. So that was a big change for the team. We have a lot of folks who either work other part-time jobs or are parents so that was kind of a difficult transition for people to have to juggle and work Saturdays and Sundays. My biggest fear was that we wouldn't get buy-in [from the team] for the weekend shift. That I would have a mass of people saying, "No, I can't do this job"…I think having to work weekends kind of affected morale slightly" (West Program Manager, Time 1).

In addition to the requirement of weekend shifts, other components of the ACT model were criticized by staff members. For instance, one staff member even indicated a lack of support and understanding of the rationale for the team-based approach of the ACT model:

> "Rule 132, the way it's written as I understand, you have to do a team approach and I think that's, I guess after being in this business for 20 years I can't believe how short sighted that is to make that such a deliberate part of that rule. I think services aren't delivered as well [in a team-based approach]. I think continuity of care is absolutely breached every day. I hear from members every day why do I have to see another person. That's just a real difficult thing. I mean I think the whole basis of good mental health is about seeing one professional that you can develop trust, develop a relationship with" (North ACT, Time 1).

The majority of the staff members who had concerns with the ACT model itself (7 of 8, 88%) complained of the perceived lack of flexibility (see Table 22). Specifically, that there was a mandated three visits per week for each consumer and more than one staff member must visits a particular consumer each week. The North ACT team enforced a strict rotation of visits to comply with the rule that multiple staff members visit each consumer each week. Four line staff (of 7, 57%) on the North ACT team were particularly concerned with this strict rotation and felt that it led to a "breach of continuity of care". As one of the North ACT team members explained:

> "I mean even if we didn't have any other resources, just us caseworkers, just make do with what we have, the minimum, the ante for getting into

> the game [providing ACT services] for me is regular, consistent visits. If we can't even do that with someone I don't see how we can really be effective. And they weren't willing to do that because of this rotation because it's a strict team model and that just got me…And the thing is that oftentimes I'd see someone and we'd have this wonderful conversation. They just felt okay, comfortable, and they opened up. I wouldn't see them for a month, a month and a half. That sucks. There's no other way to put it and who knows what they're imagining. God, I shouldn't have said it to [names herself], she probably hates me now. Bet that crossed their minds. She thinks I'm an idiot. She thinks I'm stupid. She doesn't like me anymore. I mean that's the natural reaction of a lot of people, especially our members. Many of them told me that. I hear you don't like me anymore. I've heard that a million times" (North ACT, Time 1).

Another staff member explained how mandating the number of visits each week can have a negative impact on the consumers:

> "We go and visit people one-on-one where they live so it can be limiting for them just trying to do things they want to do 'cause if you meet someone 3 times a week, it could hinder them because they just don't want that much contact and it just limits maybe something they want to do without involvement from an ACT team" (Homeless Outreach, Time 1).

A staff member from the Homeless Outreach team also expressed a negative attitude towards the population of consumers served by the ACT team:

> "There were maybe like three I wanna say that were chronic cases of mental illness as well as drug abuse going on with it and these were people who were continuously in and out of the system as far as the justice system, in and out of the hospital. We had one guy who actually had a run in with the sheriff department and it was just a lot of stuff that we were like, "whoa should we really be taking this person on" you know considering our safety and things of that matter. They were never stable…So I'm thinking why are we getting this person? …So that's the only thing 'cause I feel like Thresholds is picking up people for the numbers. We have to have so many numbers; referral, referral, referral. And we're getting some people who are not even fit to be in the community and that's pretty scary for me as a woman" (Homeless Outreach, Time 1).

There were three staff members across the two teams (2 on the North ACT team) that held particularly negative attitudes towards the components of the model. At Time 2,

one of these staff members had resigned and the remaining two indicated that they intended to leave Thresholds in the near future.

Positive Staff Attitudes Regarding the ACT Model

Unique to the North ACT team was spontaneous reporting of the positive aspects of the ACT model itself. Across both time periods seven of the eight North ACT team staff members (88%) mentioned some benefit to the model (see Table 24). One team member explained:

> "I think the ACT model is great and after working previously I know that it's very effective and it really does work well and many more [ACT teams] are needed. We definitely don't have enough [ACT teams] out there to assist all of those that are in need… But I just feel that having this team approach makes it fantastic because if nothing else, everybody knows what's going on [with the consumer] and anybody can go out and continue [to help the consumer], take that ball and move it to further and that's the most excellent part that came out of having that team approach. And when you've got a good team working together it makes a difference and this is a good team" (North ACT, Time 2).

Another member of the North ACT team described the team's belief in the model and commitment to implementation:

> "We understand the charge [providing ACT services] that we've been given and we take it seriously. We show up and we try to find something that works about this team and the program ACT. I think we all believe in it 100%. There's examples I could tell you—many, many examples of why it works and how it works in people's lives…So I think the team champions that" (North ACT, Time 1).

In contrast, none of the members of the Homeless Outreach team spontaneously reported a benefit to the ACT model. However, the team's decertification from ACT status may have influenced their reporting of any perceived benefits.

Management Supportive of EBPs

Staff members (13 of 16, 81%) communicated in the interviews that there was agency-wide support for implementing ACT and cited the support of upper management as a facilitator to the implementation (Table 24). The North Assistant Program Manager described the support for ACT and other EBPs from upper management:

> "We wouldn't be doing it [implementing ACT] if it wasn't for [names the Clinical Director] and [names the North Regional Manager] deciding to do it and I think that they certainly support the team. So we don't have a problem with the ACT model not being supported by upper management. And generally we've had, and all the EBPs, a big part of many EBPs is getting upper management buy-in when they tell you all the kits [SAMHSA toolkits], you know all the things like that and we don't have a problem here at Thresholds. They buy into it [EBPs]. IDDT, strong buy-in. Supportive employment, strong. I don't know much about IMR but it seems like it's got a strong support too from what I hear. So yeah, they're behind it" (North Assistant Program Director, Time 2).

A line staff member of the Homeless Outreach team commented on the support and commitment for ACT implementation agency-wide even though his team was not successful at implementation:

> "There was commitment and support, I think a lot of effort put in to make sure each criteria was met to be an ACT team and when we weren't able to do that there was still a big push to get that done. Not only from like on our team but from management on up that even though we didn't have a Team Leader but higher up than that, it was really stressed and really worked on to make it work but it just didn't… it just seemed like they really wanted to make it work but it just didn't for our organization, at least on this team" (Homeless Outreach, Time 1).

When asked what factors facilitated the implementation of ACT, the Clinical Director perceived that the agency-wide commitment to providing EBPs was the sole facilitator:

> "What have been the facilitators for this? You know, I think probably just the agency's commitment to wanting to do EBPs, a long history of

> working with the people who need these services the most. Whether we find out it's worth doing ACT in the future or that can we continue to serve those people [ACT consumers] on CST teams. I think we will always be committed to working with those highest needs. But I'd say sort of the agency was the big facilitator—our passion for doing that total team approach and working with those with the highest needs…So I think it was sort of our history and our current ongoing passion for believing in that approach helped. Is there anything else that facilitated it? No. External? No, not really" (Clinical Director, Time 1).

In summary, the agency had a culture that valued EBPs and the leadership expressed commitment to providing ACT services in particular.

Themes Specific to the CST Team

There were no barriers specific to the CST team. As previously mentioned, the former Bridge teams at Thresholds were judged by DMH assessors to be 90% compliant with CST regulations prior to the initiation of Rule 132. Therefore, for the Bridge team to transition to a CST team was largely a change in how the team was labeled. The elements of Rule 132 that were a change for the CST team examined in the study were the focus on recovery principles (i.e., "teaching" consumers rather than doing for and shared decision-making) and the implementation of FFS, both of which were also experienced by the two teams implementing ACT.

However, there was a unique facilitator to the CST team in that this team did not experience any turnover during the study period. The Team Leader for the CST team described how her team was adjusting to the changes at Time 2:

> "I think people are starting to get the hang of everything and adjusting well. I mean we've had a year and we've kind of, we know what we have to do now. And it's still hard like, but it's getting easier I think. At least for myself I think it is and I think for most of the people on the team it's getting easier."

When asked what has made the process easier, one aspect that she highlighted was the lack of staff turnover:

> "…The fact that we've had the same team for over two years now. At least with my team that has helped a lot. So we haven't had the staff turnover that some of the other teams have had so everyone knows their job and it's not like we're retraining someone every few months or every year of whatever. People know the job well. They know what have to do and that's a big help for me and the team in general" (CST Team Leader, Time 2).

Changes to Themes over Time

Changes on the teams between Time 1 and Time 2, such as hiring a Team Leader on the Homeless Outreach team and a permanent (i.e., not from a temp agency) nurse on the North ACT team, influenced the reporting of some of the factors and overarching themes that were perceived to impact implementation of Rule 132 and ACT specifically. Of the 12 staff members interviewed at Time 2, 8 (67%) were also interviewed at Time 1. However, 3 (25%) were hired after Time 1 (2 on the North ACT team and 1 on the Homeless Outreach team) and therefore did not experience the early implementation phase, which may have influenced their responses. As previously mentioned, the CST team was the only team that did not experience any staffing changes during the study.

Overall, the primary themes were quite similar between Time 1 and Time 2. There were no totally new content factors to emerge at Time 2 that were not present at Time 1 (see Tables 22 and 24). Additionally, some factors that supported the concepts at Time 1, such as "cannot bill for travel," were not mentioned at Time 2 (Table 22). One factor was hardly mentioned at Time 1 but was moderately important at Time 2 and is described below as a new facilitator. While the primary themes remained relatively

constant (with the addition of one new facilitator), there was some movement in the intensity and pattern of reporting within the overarching themes. The movement that occurred within the themes (see Table 8 for a list of themes) is presented in this section for the barriers and facilitators. As previously referenced, Tables 22-25 provide a breakdown of the concepts coded in the interviews by team, staff member role with the agency (i.e., line staff compared to leadership positions), and time point.

Barriers

Many of the barriers that were common to implementing Rule 132 (e.g., difficulties with the ASO and lack of guidance from DMH) as well as those that were specific to ACT (e.g., DMH regulations) remained relatively unchanged from Time 1 to Time 2, which created challenges for the agency. However, there was some movement within themes across time, staff roles, and across teams as will be discussed below Additionally, changes at Thresholds (e.g., hiring staff) helped reduce some of the barriers, at least in the short-term.

Movement within the Common Barriers

On the surface the *perceived negative impact of FFS* theme and the four perceived components (i.e., inability to fit all in an 8-hour day, pressure for billing, concern for one's job, and reduced quality of services) continued to receive a great amount of attention from staff members throughout Time 1 and Time 2. Line staff continued to identify productivity standards (i.e., inability to fit all in an 8 hour day) as a major

stressor and barrier to implementing Rule 132. Additionally, those in middle and upper management continued to insist that the productivity standards were reasonable (see Tables 22 and 23). Similarly, the intense *pressure for billing* continued to be widely reported by all levels of staff members and across all three teams throughout the study. However, the statements from the staff members suggest that this pressure became even more intense at Time 2. Those in management positions indicated that the state's financial situation had become much worse at Time 2 as grant funding was further reduced, which prompted the need for more FFS dollars:

> "The state is in a funding crisis. They cut over a half a million out of our budget for grant funded programs from what they were… the driving force in the State of Illinois now is trying to get enough billable time…Everyone's a nervous wreck about funding" (North Assistant Program Manager, Time 2).

While financial concerns within the state were discussed by a greater percentage and in greater depth by those in leadership positions at Time 2 (4 of 5, 80%) than line staff (3 of 7, 43%), line staff were becoming more aware of the external conditions than they were at Time 1 (1 of 12, 8%; see Table 23). One line staff explained how the financial uncertainty within the state contributes to pressure within the agency for billing:

> "The state has cut us [the budget] even more. There's a lot of [financial] problems on the state level and I know the agency's freaking out over it…It makes us feel even more pressure for the hours" (North ACT, Time 2).

The increasing external financial concerns and state-wide budget cuts not only further intensified the pressure for billing and pressure to meet productivity standards, but also contributed to staff members having more *concern for their jobs*. Over half of the line staff (4 of 7, 57%) expressed concern for their jobs at Time 2 (see Table 23). While

the majority of those in leadership positions (4 of 5, 80%) also voiced concern for job security, this was primarily in relation to line staff rather than their own jobs. Although, the management staff also acknowledged that recent lay-offs had included individuals in management positions as well. Several agency-wide lay-offs had occurred during Time 2 and those in management positions expressed concern that the state's financial situation would contribute to more cuts:

> "The State of Illinois is broke so they haven't been paying us on time and that's one thing that's just put us in a really difficult position. We've managed to make payroll but it's gotten iffy a couple of times and it will probably remain that way for awhile. Then on top of that, because we haven't gotten any cost of doing business increase in four years and because they've actually instituted some cuts to our budget this year, we've had to lay off staff which has been demoralizing I think for everybody. So that's been really hard and that's, it's not like we've gotten through that and things are getting better. There will probably be more layoffs and so people are now living with the question of "Who's next? Am I next? Who's going to be next?" (Clinical Director, Time 2).

The Team Leader for the North ACT team identified the uncertainty with state finances as the primary reason she chose to leave Thresholds for federal employment in the VA system, with *burnout* as secondary, but still a large component of her decision.

Also related to the persistent focus on billing, line staff continued to report the perception that the quality of services was reduced (5 of 7, 71%) while this was mentioned much less by those in leadership positions (1 of 5, 20%) at Time 2 (Table 23).

A*mbiguity of Rule 132*, was a less commonly cited barrier at Time 2 (4 of 12, 33%) than Time 1 (9 of 16, 56%; see Table 22). One staff member explained how policy changes were less common at Time 2:

> "I think when the change to ACT was initially being implemented, the team felt like they were getting a new piece of information every day. You know, just something new every day. And it was just like really? One

> more thing? One more weird little change. It was just kind of like we've got enough going on. We can't handle all this instability. So now that things have settled in a little bit…there's still some confusion but it's not daily" (North ACT, Time 2).

However, as previously mentioned, the challenges with the ASO and their differing interpretations of Rule 132 remained. Those staff members who had to interact with the ASO, such as the Clinical Director and Team Leaders, indicated that there was still ambiguity to many of the stipulations enforced by the ASO at Time 2. The Team Leader of the North ACT team reported at Time 2 that the ASO had recently imposed a slight change to authorization process, but that the change was not "to the level that I need to inform the staff" as she was primary person who was responsible for completing the authorizations. Therefore, the perception that the *ambiguity of Rule 132* was lessening at Time 2 was largely held by the line staff (1 of 7, 14% reported continued ambiguity of regulations compared to 3 of 5, 60% for those in leadership positions like the Team Leader; see Table 23).

Movement within the ACT-Specific Barriers

The barrier of *implementation overload* (i.e., implementing too much at once) was perceived by ACT team members across the two teams to have been more of a problem at Time 1 (3 of 10, 30%) when the implementation effort was still in its early stage than at Time 2. None of the line staff reported implementation overload at Time 2, but middle and upper management (2, 100%) continued to identify this as a factor that had negatively impacted the team (Table 22). Four *DMH regulations* (i.e., licensed Team Leader, required nurse on the team, staff vacancies cannot exceed 30 days, and ACT

team provides all services to consumers) created barriers to implementation throughout the follow-up period. However, the impact of these regulations on the team members varied depending on staffing and turnover on the teams at each time point. At Time 2 the one remaining ACT team was fully staffed as a full-time nurse who intended to remain with the team long-term had been hired and a replacement for the resigning Team Leader had been found prior to her departure (her last week of work occurred during the Time 2 assessment). Consequently, even though the North ACT team was experiencing *turnover* in the Team Leader position at Time 2, the team was not in a current state of crisis regarding the stipulations and the requirements of a licensed Team Leader, a nurse on the team, and staff vacancies must be less than 30 days were not mentioned by the team members (Tables 22 and 23). However, the Clinical Director still reported that these requirements remained a substantial barrier to the implementation of any additional ACT teams and to the sustainability on the remaining team. She had previously commented on the level of oversight required for the one remaining ACT team at Thresholds as a result of the DMH regulations:

> "One team. So much energy for one team and I'm hoping we can do it [continue with ACT]…The state's just made it impossible for us and we'll keep letting them know that" (Clinical Director, Time 1).

At Time 2 she indicated that maintaining ACT status still created a substantial level of oversight on her part and speculated on the impact of the DMH regulations on ACT in general throughout the state:

> "…Because of all the hoops that you have to jump through to maintain the ACT status, I think we could very soon be a state where there is no ACT" (Clinical Director, Time 2).

The decertification of the Homeless Outreach team from ACT status enabled this team to concentrate on the requirements of the SAMHSA grant and therefore the barrier of *conflicting regulations from funding sources* no longer existed. Moreover, because the team no longer had to follow the DMH regulation that ACT teams provide all the services utilized by their clients, the Homeless Outreach team was once again able to refer their clients to groups and other treatment options as well as to Thresholds housing. Consequently, at Time 2 the Homeless Outreach team members were no longer reporting having a *lack of resources* to provide all services to consumers and they had an adequate number of referrals for their CST services. By contrast, *lack of resource*s was still reported by the North ACT team at Time 2 (3 of 5, 60%). The North ACT team staff members were also still reporting the negative impact of being required to provide all services (2 of 5, 40%) and not having the resources available to develop group therapy options for the consumers (see Table 22).

Facilitators

Many of the facilitators, such as leadership, remained of great importance to the implementation effort throughout the study. However, when examined by team and staff member role (see Tables 24 and 25), there was some movement within these themes. Additionally, a concept that was briefly mentioned at Time 1 emerged into a common theme at Time 2.

Movement within the Common Facilitators

The staff member's *familiarity with the type of services* and belief that the service delivery component of their job did not change substantially with Rule 132 was widely perceived as a constant facilitator throughout the study (14 of 16, 88% at Time 1 vs. 10 of 12 at Time 2, 83% at Time 2; Table 24). Staff members indicated a benefit to not having to learn a whole new method of delivering services while also learning new regulations and a new billing system. Also the familiarity with the new regulations appeared to provide some benefit at Time 2. The *passage of time* or being accustomed to aspects, such as the new billing categories, through practice was identified as a facilitator by nearly half (5 of 12, 42%) of the staff members at Time 2, compared to a minority (2 of 16, 13%) at Time 1 (Table 24). One staff member explained how the team members had become more accustomed to working as a team over time and that this coupled with not having a current staff vacancy provided was helpful to the functioning of the team:

> "I think things are running much more smoothly now I would say. I think it has something, I mean, something to do with just time and getting used to how we all work together as a team and sort of what the expectations are. And having a full staff of people that are pretty much, a little more, I don't know if I want to say happy but a little more content with how we operate. Other than that I don't know. I think just trying out new things to see how it will work more effectively as a team and kind of settling in I suppose" (North ACT, Time 2).

Therefore, concept of the things getting better with the *passage of time* reached the level of becoming a theme at Time 2, although this facilitator was expressed more by those in leadership positions (Table 25).

Leadership was identified as a facilitator by staff members on all three teams at both Time 1 and Time 2. Of the three teams, the Homeless Outreach team reported an

increased influence of leadership on implementation at Time 2 than Time 1. Leadership was identified by only one (25%) staff member from the Homeless Outreach team at Time 1, compared to all three line staff and all three managers at Time 2. As previously outlined, at Time 1 the same staff member (West Program Manager) was filling both of these roles and consequently leadership responsibilities were compromised. Because the Homeless Outreach team decertified from ACT status, the team was not subject to the barriers created by the ACT regulations at Time 2 and was successful at hiring a designated Team Leader after 7 months without one. The line staff reported a great benefit to having a Team Leader on the team in terms of providing guidance:

> "Having the team leader helps quite a bit. She keeps things organized answers and also really help finalize a decision that one person might not think that they can make on their own" (Homeless Outreach, Time 2).

Another staff member commented on support she provides in terms of assisting with workload and paperwork, specifically the authorizations, and reducing overall stress:

> "[Names the Team Leader]'s been with us for a short while and she's been great. She helps out when she can. She's been very active in trying to reach the guy over in SSI for us as well. When we need assistance in something or like members that we can't bill for or, she takes that role in having that done or getting the authorizations done for us. So since she's been aboard, a lot of the stress has been taken off of the team because we can, all that administrative stuff that needs to be done, we can shoot through her now because she's in place" (Homeless Outreach, Time 2).

Consequently, having a designated Team Leader provided the Homeless Outreach team with a greater level of leadership at Time 2. The theme of leadership as a facilitator to adjusting to and coping with any significant change was supported across time for the three service delivery teams.

In addition to leadership, good communication regarding changes and a gradual process of change allotted by upper management were perceived as facilitators at Time 1. However, with regulations more stable at Time 2, staff commented much less on communication on changes (reported as a facilitator by 10 of 16, 63% at Time 1 vs. 1 of 12, 8% at Time 2) or a gradual process to implement changes (8 of 16, 50% at Time 1 vs. 2 of 12, 17% at Time 2; Table 24). However, when good communication is broken down by staff member role at Time 1 (Table 25), the perception of good communication was cited more by those in leadership positions (i.e., upper management, middle management, and Team Leaders; 4 of 4, 100%) than line staff (6 of 12, 50%).

Movement within the ACT-Specific Facilitators

Specific to ACT implementation, a high percentage of staff members on the North ACT team spontaneously reported valuing the ACT model throughout the study (all 6 at Time 1 and 4 of 5, 80% at Time 2). Additionally, despite the challenges with maintaining ACT status (e.g., because of DMH regulations), upper management was viewed as supportive and committed to providing ACT services throughout the follow-up period. The majority (4 of 6, 67%) of the staff members on the North ACT team reported this facilitator at Time 1 as well as at Time 2 (5 of 5, 100%; Table 24). As the Team Leader of the North ACT team explained:

> "Well, we know the ACT team has the full support of everybody up the line. All the way up to the president of the board. Everyone is committed to providing the service" (North ACT Team Leader, Time 2).

The agency's commitment to ACT was less frequently communicated by the Homeless Outreach team at Time 1 (2 of 4, 50%); however, this team had decertified from ACT status in the weeks prior to the interviews.

In summary, while there were no new content factors that emerged at Time 2, there was some movement with regard to the intensity and importance of many of the themes, whereas others remained more constant. Additionally, the perception that adjustment to changes becomes easier with the *passage of time* was reported by staff members and reached the level of being considered a theme at Time 2. Many of the barriers (e.g., DMH regulation on staff vacancies) that were addressed by Thresholds in the short-term (e.g., through hiring appropriate staff) were noted as a possible future barrier to sustaining ACT at Thresholds in the long-term.

A Priori Themes Not Found in the Interviews

As previously outlined in the introduction, *a priori* themes were identified based on the previous implementation literature and included leadership, staff turnover, training/consultation, culture/upper management supportive of EBPs, staff attitudes, performance monitoring, and DMH policies/funding (see Figure 1). The current study found that support for all but two of these predicted themes. Training on the ACT model and monitoring performance were not employed by the agency to facilitate the implementation of ACT.

Lack of Training on the ACT Model

It was anticipated that training on the ACT model, particularly for new staff, would have been completed to facilitate the implementation of ACT. Line staff, including new hires did not receive any formal training on the ACT model. When asked about their training, staff members indicated that all training for new hires was conducted "on the job" through shadowing the other team members. The Clinical Director explained that formal ACT training was previously employed at Thresholds, but state budget cuts resulted in this being eliminated. She also indicated that the fundamentals of the ACT model were relatively "easy" and therefore formal training was not viewed as necessary:

> "We used to have an ACT training institute, research and training institute with all the ACT people used to go off and get the history of ACT and training but the state defunded that of course. So it [ACT] probably gets the short shrift here at Thresholds in comparison to the other EBPs because ACT is relatively easy to implement. It gives you pretty concrete in terms of here's how to teach it. Here's what you do but it doesn't necessarily address the workers' interventions. I think that IMR, IDDT, supported employment really require the worker to sort of change how they're doing things and ACT doesn't. So there's not much attention focused on ACT…So I think there's more attention [i.e., training] paid to those other EBPs on that team [North ACT] than there is to the ACT practice" (Clinical Director, Time 2).

Moreover, because ACT in accordance with Rule 132 was perceived to be so similar to the services previously provided by the Bridge program (familiarity with services), many other staff members did not feel that training was required:

> "I don't really remember if there was any special training since we were doing it all along kind of under the Bridge program. There really wasn't a special training needed to transition to being an "official" ACT team" (Homeless Outreach, Time 1).

Two staff members from the North ACT team (one at each time point) indicated that they would have liked to receive more training on the ACT model (Table 22), but this was not perceived as having a substantial impact on the implementation. While lack of training did emerge as a factor that influenced implementation, this was specifically lack of training on advanced clinical skills rather than on the ACT model. During the interviews, staff members from all three teams indicated that they were receiving training on other EBPs such as IDDT.

Lack of Performance Monitoring

It was also anticipated that the agency would make efforts to monitor the fidelity in order to inform the implementation. However, this was not done at Thresholds during the current re-implementation of ACT. One staff member on the North ACT team reported that an ACT fidelity assessment occurred very early in the implementation but stated that the team was not provided with any information on how to improve their services. The Clinical Director commented on the perceived ease of implementation, the concrete structure of ACT fidelity measurement (i.e., measures structural components such as number of visits and does not focus on higher clinical skills), and the agency's long history of providing ACT services as reasons for why continual fidelity measurement did not need to occur:

> "You know, we're not doing fidelity. We don't need to do internal fidelity. Why don't we? Because the state does it. They come in and they do it and if you're out of compliance you don't get paid. It's really not hard to do ACT. You do this many visits and so once you get that sort of routine established and the meetings established you're really not paying attention to the intervention that the staff person's having [for fidelity measurement purpose], so and I think that's been more of our focus is

> better clinical practices and I think we've got sort of the ACT framework down" (Clinical Director, Time 2).

The importance of conducting fidelity assessments to improve the delivery of the other more skills-based EBPs such as IDDT and supported employment was discussed by the Clinical Director. Therefore, the agency does not ignore fidelity measurement altogether, but did not feel it was necessary to commit resources to monitor ACT fidelity throughout the implementation process.

DISCUSSION

The current study of ACT implementation differed from many previous studies (Mancini et al., 2009; McDonel et al., 1997; Moser et al., 2004) in that implementation was occurring on teams that were already providing ACT-like services rather than newly formed teams. With the substantial variability in fidelity to the ACT model and tendency for program drift (Bond, 1991), a study to examine how to *re*-implement ACT on established teams in an effort to reach higher fidelity was warranted. In the present study, the quality of services provided by all three teams was at least moderate fidelity to ACT even in the team that did not attempt ACT implementation. The CST team was comparable to many intensive case management teams (Teague et al., 1998). The North ACT team achieved high fidelity ACT services and did so within 6 months of implementation, which is consistent with other studies (Mancini et al., 2009; Moser et al., 2004). While the Homeless Outreach team did not achieve high fidelity and decertified from ACT status, the type of services provided by this team reflected the moderate ACT fidelity range.

Methodological Considerations

The study sought to determine the barriers and facilitators of implementing high fidelity ACT in accordance with state standards (Rule 132) on existing ACT-like teams

through qualitative interviews with agency leaders and with staff members and supplemental quantitative measures administered at two time points. The study employed a comparative method in which the themes were compared across three service delivery teams of which two were attempting to implement ACT. The teams were operated by a single agency, providing partial control for organizational factors. Because multiple changes to policy were incorporated at the same time, e.g., FFS, a service delivery team that did not attempt to implement ACT (i.e., the CST team) was studied in order to determine which factors were related to the policy change in general versus ACT implementation. This comparative method worked well in the present study as several factors were common across the three teams and therefore were not directly related to ACT. Without the comparison team, these factors may have mistakenly been attributed to ACT implementation rather than instituting the other components of the policy change, such as the change to the funding mechanism and the use of a managed care organization to monitor Rule 132. Additionally, the serendipitous event of the Homeless Outreach team decertifying from ACT status, enabled a comparison of the unique challenges inherit to the two teams that initially sought ACT certification. While unfortunate for the agency, the differential success of the two teams enhanced the present study in that it highlighted a barrier unique to the one team that when coupled with the other barriers to ACT implementation was insurmountable for the Homeless Outreach team to overcome.

The study also attempted to incorporate mixed-methods, however small sample sizes and substantial missing data limited the utility of the quantitative measures other than the fidelity assessments. Formal statistical analyses to evaluate differences across teams were judged to be unsuitable, and therefore the results were limited to means and

general trends for the instruments. Though limited, some of the reporting on the quantitative measures was consistent with the qualitative findings.

Quantitative Findings

The staff members' high initial ratings on the EBPAS and little variation over time, suggests acceptance of EBPs was present prior to the implementation effort. This lack of variability is not surprising as Thresholds was observed to be an agency that prides itself on implementing EBPs. Moreover, while the staff members did not receive training specific to ACT, they did receive training on the importance of other EBPs such as IDDT and supported employment prior to and during the study period, which would likely influence their perception of EBPs and elevate the EBPAS scores. This finding is similar to another implementation study that found elevated initial EBPAS scores and subsequent little variation over time likely resulted from the agency training on the importance of EBPs prior to administering the instrument (Gioia, 2007). Therefore, while the staff members' perceptions of EBPs did not change as a result of the current implementation effort, the EBPAS findings indicate that staff member support of EBPs in general was relatively high.

Support for ACT in particular was demonstrated by the Personal Feelings subscale (*Feelings* scale) and the Agency-Wide Support for ACT subscale (*Workplace Aspects* scale), which was consistent with the qualitative findings that identified management's commitment to ACT as a facilitator. Other ratings on the three scales used in the National EBP Implementation Project were also consistent with the qualitative themes. For instance, while implementing ACT was not viewed as requiring a

significant change to how they provided care (Item 8 on *Feelings*; similar to the familiarity with services theme), the actual implementation effort was judged to be difficult (Item 9 on *Workplace Aspects*). Additionally, as was expressed in the qualitative interviews, staff members from all three teams reported experiencing intense work pressure (Item 5 on *Conditions*).

While the MLQ had substantial missing data, all of the leaders who were rated were judged to be at least moderately effective, which is consistent with the qualitative theme that leadership was viewed as important to coping with the policy changes.

Therefore, though the utility of the quantitative measures was limited in the present study due to small sample size, much of the reporting supported the qualitative findings. However, many themes arose that could not have been predicted by the quantitative measures.

Qualitative Findings

Staff members from four different levels within the agency shared their insights into the challenges and facilitators across two time periods (6 months and 14 months post-implementation of Rule 132). At times there was a difference in reporting between line staff and those in management positions that was influenced by their role within the agency (e.g., management had contact with DMH while line staff did not, those in management positions were not subject to productivity standards, etc.). All of the perspectives were considered valid and contributed to the conceptualization of the themes that influenced implementation.

The qualitative interviews revealed numerous barriers imposed by regulations promulgated by the state mental health authority rather than the ACT model itself. However, further challenges also arose from instituting other components of Rule 132 that were not directly related to ACT, such as the change to the funding mechanism, i.e., FFS. Consequently, though not the intended focus of the study, the results provided a description of the impact of transitioning to a FFS funding mechanism and implementation of policy change (i.e., Rule 132) in general in addition to factors related to ACT implementation. The common themes of the impact of FFS and implementing Rule 132 in general provides a context for the environment in which ACT implementation was also being attempted.

Challenges Common across Services

While staff members reported an agency-wide culture that values EBPs and ACT in particular (through interviews, the *Workplace Aspects* scale, and suggested by the high initial ratings on the EBPAS), this atmosphere had been overtaken by pressure to meet the productivity standards that were instituted by upper management in response to switching to a FFS funding mechanism. The workplace environment was filled with negativity in relation to staff members feeling overwhelmed, unable to meet their productivity requirements, concerned for their jobs (due to demanding productivity standards and the additional financial uncertainty within the state that emerged at Time 2), and perceptions that leadership in the management roles did not understand or care about their perspective. Staff members from all three teams reported experiencing "intense" work pressure (both in interviews and on the *Conditions* scale) and burnout at

both Time 1 and Time 2. Those in management positions acknowledged that the line staff were experiencing burnout, but largely did not perceive that the productivity standards were unreasonable. However, the management staff did not carry a caseload and therefore did not directly experience the challenge of productivity standards. Separate from the present study, an administrator at an agency in Indianapolis, IN indicated that their agency had a similar figure for productivity standards; however, it is possible that geographical differences between Chicago and Indianapolis may impact the feasibility of the standard.

Similar to what rural ACT teams encounter because of geographic distances (Siskind & Wiley-Exley, 2009), the Chicago-based teams found that the time required for travel through traffic in a metropolitan area posed challenges for meeting productivity standards. Other factors identified by line staff that made the standard difficult to achieve were the additional paperwork required by the state for service authorizations and consumers not desiring long visits. Many staff members reported trying to drag out time in contact with consumers who were "less communicative" in an effort to meet their hours, even though briefer visits may be more effective (Bond et al., 1990). Therefore, the pressure to obtain enough *billable* direct contact hours in an eight-hour workday affected staff morale, it was seen as compromising their ways of interacting with clients, it led to cutting corners (e.g., less detailed progress notes and CST decreased the number of daily team meetings), and it may have resulted in staff turnover. Upper management at Thresholds indicated that all of the required activities for completing the job that are non-billable, such as travel and paperwork, were accounted for in determining the productivity standard. However, an unpublished report found that the typical Thresholds

Bridge ACT team case manager in 1990 averaged 3.76 hours per day in direct service contact after the other responsibilities were completed (Hampton, Korr, Bond, Mayes, & Havis, 1992), a figure that is less than the 4.2 to 4.5 hours that is now required. During this earlier era, the Thresholds Bridge team held daily afternoon team meetings (in addition to morning meetings), which the teams in the current study reluctantly abandoned because of productivity standards. One line staff from the CST team, in particular, reported a negative impact on her sense of cohesion with the team and level of burnout as a result of eliminating the afternoon meeting. Consequently, productivity standards that were viewed as demanding affected everyone and represented a barrier to retaining good staff and focusing on clinical care. Moreover, the strict enforcement of productivity standards during ACT implementation also compromised fidelity to the model when staff members were not allotted time to develop dual diagnosis groups for the consumers being served by ACT. Other studies of ACT implementation have also found that strict adherence to productivity standards impedes implementation (Mancini et al., 2009; Moser et al., 2004).

In addition to the negative impact of productivity standards that were formed in response to FFS, there were other challenges that were common to implementing Rule 132 in general rather than ACT specifically. A significant barrier to implementing the policy change was the ambiguity of the regulations and lack of guidance from DMH on how to interpret aspects of Rule 132. Additionally, the managed care organization that the state hired to roll out the policy changes presented conflicting information to agencies on these regulations than what was stated in Rule 132. Consequently, early in the implementation staff members were receiving updated interpretations of the requirements

on an almost daily basis, which made it difficult to focus on their jobs of providing services to consumers. Moreover, being out-of-compliance with the regulations meant that the agency was at risk for having to pay back money to the state. However, it is difficult to be in compliance with rules that are unclear and frequently changed.

Lack of guidance from DMH and difficulties with the managed care organization were largely reported by those in management positions as line staff did not have interactions with these entities and were often not privy to this information. While much of the ambiguity of the regulations had resolved by Time 2 (14 months post implementation) and changes were no longer being thrown at line staff daily, the difficulties with the managed care organization remained. In particular, the managed care organization continued to present conflicting information from what was stipulated in Rule 132 and the authorization process was viewed as poorly designed. According to management at Thresholds, the managed care organization was not adequately prepared to manage the policy changes. In retrospect, the managed care organization could have better anticipated the problems if the changes were piloted in a few agencies beforehand. Consequently, the implementation of ACT in accordance with Rule 132 occurred during a period of transformation and uncertainty throughout the state and the agency, which meant that the focus was not solely on the ACT implementation effort.

Pre-Implementation Considerations

Prior to the implementation of ACT in accordance with Rule 132 standards, Thresholds had to first decide whether to provide ACT services and second how many Bridge teams to convert to ACT versus CST. Financial considerations played a huge role

in these decisions. The ACT state standards included specific multidisciplinary staff requirements (i.e., licensed clinician as Team Leader, a full-time nurse and increased hours from a psychiatrist) that were not part of the standards for CST teams. The additional staffing requirements translated to higher personnel costs for the agency. However, DMH did not provide agencies with any additional start-up funding to hire the required staff needed to implement ACT. Previous research has found that the success or failure of many social policies is contingent on whether an incentive structure is built into the policy (Rapp, 2002). Moreover, while a fee-for-service environment generally encourages providers to increase the amount of service provided (Rapp et al., 2005), in the current study the state of Illinois placed a cap on agencies' billing. Therefore, even though ACT services were assigned a higher billing rate, this was not an actual incentive in that it did not increase total annual agency revenues but rather only resulted in the agency reaching the cap sooner. While the lack of additional start-up funding or incentives to implement ACT services did not prevent the successful ACT implementation at Thresholds, it did influence the decision to implement (pre-implementation). As a result of a lack of financial incentive and initial uncertainties surrounding new state regulations for ACT, Thresholds decided to pilot the implementation on two teams, the North ACT and Homeless Outreach teams, rather than six as was originally conceived by upper management. Thresholds' decision-making process was consistent with Panzano and Roth's (2006) findings that agencies base adoption of EBPs on risk assessments.

Challenges with ACT Implementation

Once the effort to implement ACT in accordance with Rule 132 began several additional barriers became apparent that were specific to implementing ACT. A few staff members felt that too many implementation efforts were occurring at the same time (i.e., implementation overload) at Time 1. For instance, in addition to ACT, the teams were also implementing IDDT and supported employment. This led to the focus being split up among these various implementation efforts. While this created a challenge for some staff members early in the implementation, it was no longer identified as problematic by line staff at Time 2 after they were more settled into their roles. In contrast, DMH regulations for ACT services were identified by those in management positions as significant barriers to maintaining ACT status at both Time 1 and Time 2.

One tangible consequence of ACT in accordance with Rule 132 was substantial disruption in staffing in both teams seeking ACT certification. These findings are similar to previous research that found turnover created challenges for achieving high ACT fidelity (Mancini et al., 2009; McDonel et al., 1997; Rollins et al., 2009). In the current study, the functioning of the Homeless Outreach team was significantly disrupted when the DMH requirement that Team Leaders be licensed resulted in the removal of this leader. Additionally, the pay grade that Thresholds was willing to offer did not attract a suitable replacement during the entire period of time that the team attempted to implement ACT. The DMH regulation that staff vacancies could not exceed 30 days resulted in the West Program Manager having dual responsibilities when she was required to also serve as the acting Team Leader to prevent decertification. Having one person complete two roles for 7 months naturally resulted in some responsibilities (e.g.,

supervision) being neglected. The North ACT team had a similar challenge at Time 1 when the nurse left the team and the agency had to hire a nurse through a costly temp agency to avoid decertification. Even more concerning is the fact that the temp nurse was not comfortable working with the SMI population and refused to visit the consumers alone. Therefore, to avoid decertification as a result of the staff vacancy stipulation, Thresholds and other agencies may have to hire staff members that they would typically consider as not appropriate for the job, which does a disservice to the consumers who are being served by these staff members. Though the North ACT team was "successful" in that high fidelity was achieved and there were no staffing crises at Time 2, the staffing requirements of a licensed Team Leader and nurse on the team were identified by the Clinical Director as potential barriers to this team should turnover occur in the future. Moreover, high turnover is relatively common on ACT teams (Salyers et al., 2003; Siskind & Wiley-Exley, 2009; Woltmann et al., 2008). Consequently, the strict regulation on staff vacancies will remain a challenge for ACT teams in Illinois. The Clinical Director at Thresholds was aware of other agencies that were decertifying teams from ACT status as a result of these DMH regulations, particularly as a result of the severe consequences of the staff vacancy regulation.

The fourth DMH regulation that was problematic at Thresholds was the requirement that the ACT team must provide all the services. Because staff members were not provided with the resources needed to provide the full array of services (e.g., no training on advanced therapy skills and not granted time to develop group therapies), this element was not implemented with full fidelity and less treatment options were available to the consumers being served with ACT than those being served with CST. The lack of

availability of group and trauma-focused therapy impacted ACT implementation when consumers began to refuse the Homeless Outreach team's ACT services in favor of CST teams that would allow them to receive these services from other programs within Thresholds and other agencies. The ACT model has previously been adapted to accommodate specific needs. For example, the development of a capacity to serve people with substance use disorders grew out of the emergence of substance abuse as a major problem (Test, Wallisch, Allness, & Ripp, 1989) and the same was true for serving consumers with borderline personality disorder (Swenson, Torrey, & Koerner, 2002). However, the lack of flexibility in the DMH regulations and the lack of resources actually discouraged the adaptation of ACT to better serve consumers with trauma histories. The Homeless Outreach team had better success in receiving referrals for their services at Time 2 after they had decertified from ACT status and had more resources (e.g., access to Thresholds housing and ability to refer consumers to outside services) available to offer consumers. While the North ACT team also reported a lack of resources, they did not have the same experience of consumers refusing their services due to this factor. One key difference between the teams is that the Homeless Outreach team was also funded through a SAMHSA grant, which stipulated that all of their consumers must be homeless. Therefore, it may be that the consumers served by the Homeless Outreach team represented a somewhat different population than the consumers served by the North ACT team. Consequently, the inability of the homeless consumers served by the Homeless Outreach team to receive housing from Thresholds was likely the deciding factor to refuse services rather than the lack of group therapy. At any rate, the DMH regulation resulted in less treatment and housing options available to the consumers who

were served by ACT. Having fewer treatment options available is unfortunate given that those served by ACT have more severe symptomatology and functional deficits. Additionally, restricting the access to Thresholds' housing contradicted the SAMHSA grant that was intended to provide better housing options to homeless consumers, which created a unique barrier to Homeless Outreach team. Consequently, the barriers imposed by DMH stipulations coupled with a misalignment between regulations of two funding sources, resulted in the inability to continue to provide ACT services on the Homeless Outreach team. This is not uncommon for agencies to receive funding from several sources (Riggs, 1996), however it becomes difficult when attempting to meet the demands of all of the funding sources.

Facilitators to Implementation

With the challenges of constantly changing rules, staff members reported that good communication surrounding these changes and a gradual process of change (when possible) were beneficial at Time 1. Additionally, similar to previous implementation research, leadership (Bond et al., 2009; Mancini et al., 2009; McDonel et al., 1997; Panzano et al., 2005; Rapp et al., 2008) and staff attitudes (Aarons, 2004; Aarons & Palinkas, 2007; Mancini et al., 2009; Moser et al., 2004; Nelson & Steele, 2007; Rapp et al., 2008) were found to be facilitators for coping with the challenges of implementing a change in general. However, the source of leadership and support varied depending on the level of the staff member within the organization. Line staff reported receiving support and leadership from team leaders and those in middle management positions

rather than upper management. This finding is not uncommon for large organizations that have a top-down organizational structure.

Anecdotally, the lack of first-hand contact between upper management and line staff resulted in a feeling of alienation and a lack of understanding and support from upper management, particularly in regards to the perceived demanding productivity standards. Feeling unappreciated by upper management contributed to significant reports of burnout from line staff. This qualitative finding that line staff felt distant from upper management is supported by the reporting on the MLQ. While middle management identified the Clinical Director as the "champion" for ACT implementation and EBPs in general, all team members, including Team Leaders, felt that they did not have enough contact with the Clinical Director to be able to rate her on a measure of leadership. Periodic communication to line staff directly from upper management regarding the implementation effort and challenges of the agency may have eased some of the feelings of alienation, fostered a sense of team work, and resulted in those in upper management being perceived more as leaders.

While line staff tended to feel unappreciated by upper management, they did feel supported by upper management in regards to commitment for ACT and other EBPs. The importance of commitment and support of upper management in terms of implementing EBPs has been found in previous studies (Bond et al., 2009; Fixen et al., 2005; Mancini et al., 2009; McDonel et al., 1997; Panzano et al., 2005). In fact, upper management's strong commitment and support for ACT was identified by the Clinical Director as the sole reason the agency was continuing to provide ACT services on the North ACT team at Time 2 despite the vast challenges posed by the DMH regulations

and the lack of financial incentives. The Clinical Director herself was identified as a champion for the ACT implementation. The presence of a champion for a particular EBP and implementation effort may be especially needed in times of adversity as was the case in this study. However, the agency's commitment to providing ACT services may not be sufficient to sustain the practice at Thresholds in the long-term given the substantial barriers created by the DMH regulations.

Implications

The ACT implementation effort at Thresholds highlights the importance of state administrators and program planners to set realistic program requirements and provide adequate funding to promote implementation. Policy makers should have some understanding of the mental health field and inherent challenges associated with a particular job prior to developing state standards and should be better equipped to adapt policy when it becomes apparent that regulations are problematic to sustaining the practice. For instance, the requirement of position gaps of less than 30 days proved to be very difficult to sustain ACT teams at Thresholds as the agency found that it was hard to attract qualified staff to fill the DMH staffing requirements (e.g., licensed Team Leader and nurse) after turnover had occurred. These two challenges could have been predicted by DMH. Previous research has found that ACT teams in general experience difficulty in maintaining staff continuity and full staff capacity (Salyers et al., 2003), which is not surprising considering the struggle of recruiting and retaining qualified staff in the mental health field (Peterson & Lippincott, 1993; Woltmann et al., 2008).

In addition to making recruitment more difficult, the DMH regulations that the Team Leader be licensed resulted in the demotion of a good leader on the Homeless Outreach team. Thresholds' inability to find a suitable replacement for this Team Leader for the offered pay grade was one of the key reasons the Homeless Outreach team did not succeed in their implementation. Thresholds likely would have received appropriate candidates if they had offered a higher pay grade. However, upper management judged that this additional money was not within budget for the agency.

In regards to *re*-implementing a service at the agency level, the belief that the teams were already very familiar with ACT services and that implementation would be relatively "easy" resulted in no monitoring of fidelity to the practice and no additional resources allocated to the two teams that were implementing the state standards. The finding that Thresholds did not monitor fidelity to inform the implementation effort was surprising given the agency's long-standing commitment to providing EBPs and their assessment of fidelity for other EBPs, such as IDDT. According to one staff member on the North ACT team, the Thresholds did conduct a fidelity assessment at the beginning of implementation but no feedback was provided to the staff on the assessment. Bond et al. (2009) found that frequent assessment of fidelity was a key element to the implementation model of implementing EBPs, which included ACT, in the National EBP Implementation Project. Specifically, the previous research found that whether fidelity reports were used to improve practice influenced the level of fidelity to the EBP. Therefore, it was anticipated that fidelity measurement would have informed the current implementation process. It is possible that the agency's long history of providing ACT

services contributed to the perception that they know the principles well enough to not measure fidelity on a regular basis.

Staff members also did not receive any additional resources to assist with implementation, such as training on the ACT model or the time required to learn new skills or develop group therapy. A few staff members did not understand the rationale behind some of the components of ACT (e.g., team approach), and as a result demonstrated a negative attitude towards the model and implementation in general. It is unclear whether training on the model components would have improved attitudes towards the model and influenced fidelity to those components.

The lack of time as a resource was a barrier to providing high quality services. Several staff members were passionate regarding wanting to develop groups for the consumers. However, the strict enforcement of productivity standards precluded staff from having the time to develop groups, and one manager refused to approve release time needed to pursue this idea. The focus on productivity standards at the expense of developing group therapy was surprising given that Rule 132 permits the ACT team to bill for group therapy provided both on the agency grounds and off-site. Previous studies of ACT implementation have also found administrative policies regarding unreasonable productivity standards were particularly significant in inhibiting the development of the ACT teams (Mancini et al., 2009; Moser et al., 2004).

In the current study the strict adherence to productivity standards during the period of time wherein the teams were attempting to implement ACT state standards contributed to the neglect of developing group therapy for dual disorders and lack of training in more advanced therapy skills. This fact coupled with the stipulation that the

ACT team must provide all of the services to consumers resulted in the individuals with the most severe symptoms being denied interventions that might have addressed their needs. Furthermore, the requirement that dual disorders group therapy be available through the team is stipulated in both the ACT model and in the state standards. Prohibiting staff members from developing these groups due to the focus on productivity standards resulted in this element not being implemented to fidelity as well as reduced treatment options for consumers.

Therefore, even though the state standards for ACT were judged to remain similar to the services provided under the Bridge program, there were key differences that warranted attention. Agencies should consider allowing some flexibility in productivity standards for training and program development. In contrast to the effort at Thresholds, the Indiana ACT standards were expressly designed in 2001 to accommodate lower productivity standards to facilitate implementation (Moser et al., 2004). If the ACT teams in Illinois are to be successful in properly providing all services to consumers, the staff members on the team require additional training and time to establish therapy protocols and advanced skills.

From the standpoint of a large mental health center, the allocation of resources to develop group therapies (e.g., for substance abuse) may not be appealing if there are already well-developed programs within the agency (i.e., not wanting to "re-invent the wheel"). Thresholds has a wealth of services and programs to serve their consumers and developing a separate subset of these services for the one ACT team to deliver, may not make financial sense, particularly when the established programs are already providing high quality services.

While the intent of the ACT model is to prevent brokered services from resulting in individuals "falling through the cracks," preventing *all* consumers from taking advantage of services within the same agency may impede recovery. Moreover, requiring the consumers who are served by ACT to see a particular psychiatrist or attend particular treatment groups (if available) at the exclusion of others that may have been previously beneficial to the individual (e.g., substance abuse treatment groups at the Dincin Center), appears to be paternalistic and lacking in the spirit of 'recovery' and consumer choice. The ACT model as defined by the DACTS does permit some flexibility in that 10-20% of consumers can receive outside services without dropping down to low fidelity on this item. However, the agency's interpretation of Rule 132 was that DMH did not allow any flexibility (i.e., 100% of services had to be provided by the ACT team), which was perceived by staff to be disruptive to consumer care. As with many of the Rule 132 regulations, the wording of this stipulation is vague and open to interpretation. Therefore, it is unclear whether Thresholds took a defensive posture to avoid penalties or whether it was the intent of DMH to not allow *any* brokered services. DMH's lack of guidance when Thresholds posed questions and inflexibility and severe penalties when other regulations were violated (e.g., staff vacancy > 30 days), may have made the agency risk adverse on this stipulation. At any rate, the ambiguous nature of the stipulations within Rule 132 was problematic to properly implementing the regulations. Prior to instituting policy change, DMH should ensure that stipulations are clear and should provide guidance to agencies on interpretation. Additionally, regulations become particularly problematic when there is inflexibility and strict enforcement without consideration for the impact. Importantly, the researcher did not

interview anyone from the state level and therefore DMH's perspective is not included in this report.

Whether the stipulation that requires the ACT team to provide all services was over-interpreted by Thresholds or whether there was inflexibility in the hands of the state officials promulgating this regulation, Thresholds could have also taken several steps to lessen the consequence. For instance, the ACT teams could have been expanded to include staff members who are qualified to conduct trauma-related therapy and the agency could have also provided the resources required to develop and maintain group therapy. However, resources are particularly tight at local agencies in Illinois given the state's financial concerns.

A final consideration is whether the use of an internal purveyor model in which there was no external assistance provided to the agency could have contributed to the challenges with implementation. Previous research has largely examined an external purveyor model and has found that successful EBP implementation was related to having access to a technical assistance center or outside consultant (Mancini et al., 2009; McFarlane et al., 2001; McGrew et al., 1995; Moser et al., 2004; Panzano et al., 2005). While having assistance from a technical assistance center would have likely resulted in more training on the ACT model being provided to the staff members, the presence of external assistance likely would not have made a difference with overcoming the barriers created by the DMH regulations and the interactions with the managed care organization. Therefore, the lack of an outside consultant is not likely responsible for the main barriers to implementing ACT in the present study. However, an outside consultant might have provided Thresholds administrators with some perspectives on their blind spots, such as

demanding productivity standards during implementation tends to hamper the effort and the challenges of balancing regulations from two funding sources.

In conclusion, strict enforcement of productivity standards within an agency during an implementation effort (and after) can significantly inhibit the adoption of key ingredients even when the type of services being implemented are considered to be very similar to the previous service. Additionally, extensive regulatory requirements by DMH create barriers (Mancini et al., 2009) and dampen the enthusiasm and sustainability of an EBP. Upper management's belief in the ACT model and the support of one particular champion (i.e., the Clinical Director) was identified as the primary reason for continuing to provide ACT services despite the significant challenges imposed by the DMH regulations. The DMH regulations alone were insufficient to overturn implementation on the North ACT team in the short-term, but may threaten the sustainability of ACT over time at Thresholds if belief in the model no longer outweighs the challenges.

The DMH regulations and lack of guidance/flexibility on the part of DMH coupled with the unique challenge of conflicting stipulations from two different funding sources resulted in the inability of the Homeless Outreach team to continue to implement ACT. This highlights the importance of agencies examining all the principles of their funding sources prior to implementing a change to their services. Additionally, if DMH desires to promote the implementation of an EBP such as ACT, support in terms of adequate funding and a partnership with the agencies to assist them with overcoming barriers must be in place. While the current study only examined the implementation of ACT, many of the findings were consistent with previous studies of EBP implementation and are likely to generalize.

Limitations

There are several limitations to the study. Importantly, the research represents a case study on the experience of one agency's implementation of ACT in accordance with state standards. Therefore, the results may not be representative of all teams attempting to implement ACT services and causal inferences cannot be drawn from a single case study. Additionally, the small sample size, both in terms of number of teams and number of staff on each team, limited the ability to interpret quantitative analyses. Qualitative interviews were able to provide a rich description of the process. However, it is likely that other CMHCs and different states would suggest distinct strategies and barriers to implementation of a policy change concerning the definition of ACT services. A multi-site study would have aided in the ability to generalize to other agencies. Moreover, while many key informants were interviewed at the agency and the quality of the interviews was judged to be excellent, an ideal study would have also collected data at the state level as well as the consumer level to gain the full perspective of the policy change. Nonetheless, because the data are longitudinal (occurring at 6 months and 14 months post-implementation) and conducted in a naturalistic setting, the level of ecological validity is improved.

There are also several unique limitations to the nature of qualitative methods that the researcher attempted to minimize. First, even with in-depth interviews, the feelings, experiences, thoughts, and opinions expressed by the individual are never representative of the whole picture (Onwuegbuzie & Leech, 2007). In order to obtain a more accurate description of the whole picture the interviewer asked follow-up questions to help ensure a sufficient number of words and ideas were attained from the interviewee.

Second, the validity of interviews and interpretation can come into question with qualitative methods. The researcher used triangulation of both the data (i.e., interviewed more than one person per team) and the investigator (i.e., more than one researcher assisted in developing the coding) and participated in member checking in order to ensure more opinions were obtained and the interpretation of these opinions was accurate.

A further limitation with qualitative research is that there always exists a power differential between the interviewer and the interviewee that may influence the manner in which the interviewee responds (Mays & Pope, 2000). In this study the interviewees may have felt that they had to provide certain, "correct" answers. To improve the comprehensiveness of the qualitative research the interviews were triangulated (Mays & Pope, 2000) by interviewing staff members from four levels of the agency: upper management, middle management, the Team Leader, and the front line staff.

When analyzing the qualitative interviews, the methodology of dichotomizing whether the staff members reported the codes (i.e., reported or not reported) also represented a limitation. This methodology alone is inadequate due to the fact it does not consider the quality or intensity of the statement but rather just that it was mentioned. Consequently, strict reliance on the percentage of staff members reporting a particular theme is not an appropriate method for determining what impacted the implementation. The researcher analyzed the data using a second method in which each transcript was read without the coding marked and a paragraph was written on the essence of each transcript. The summary paragraphs from each transcript were combined to deduce the main conclusions of the study. The concepts that emerged from this second methodology were combined with the conclusions produced by the percentage of staff members

reporting the themes in an effort to better ensure that the story of the implementation was well represented.

Future Directions

Panzano and colleagues (2005) have found all phases of the decision and implementation process are important in influencing whether an EBP is successfully incorporated into everyday practice. The current study focused on the implementation process. Future research should continue to examine all phases of implementation including the decision to adopt the practice and the maintenance phase. For instance, once high fidelity services are implemented, it is important to understand how to maintain high fidelity over time.

Additionally, the *re*-implementation of EBPs is an area that requires further research as fidelity to EBPs can decrease over time. Studies that demonstrate how higher fidelity can be achieved from existing, low fidelity services would be beneficial to assist with quality improvement at mental health centers.

Thirdly, implementation of EBPs, such as ACT, should continue to be examined in various settings and using both internal and external purveyor models. The current study differed from the majority of previous implementation studies in that an internal purveyor model (i.e., the agency was not provided with outside assistance) was examined. However, because ACT was not a novel practice being implemented at Thresholds, this familiarity with the service likely influenced the actions of the agency during implementation (e.g., no fidelity monitoring). Given that the vast majority of agencies do not have access to external assistance, future research should continue to

examine barriers and facilitators to using an internal purveyor model in agencies where the practice being implemented is novel.

The current study also attempted to employ a mixed-method approach to studying the process of implementation. However, small sample sizes and substantial missing data limited the utility of the quantitative measures. Given that quantitative measures are typically quicker and easier to administer, larger scale studies of implementation using a mixed-method approach are needed to examine whether quantitative measures can provide utility in assessing the process in addition to the outcome.

While not an intended or expected focus of the study, the results found that demanding productivity standards greatly contributed to burnout. Because line staff and those in management positions had a difference in opinion regarding whether the required number of direct service hours were reasonable, a study to determine the optimal productivity standard is warranted. If agencies were aware of at what point does burnout begin, standards could be set that maximum performance while reducing burnout and staff turnover.

Finally, studies are warranted to continue to examine the relationship between high fidelity ACT and consumer outcomes given that "usual care" changes over time (Fiander et al., 2003). As McHugo and colleagues (1998) point out, many usual care services have begun to incorporate some principles of ACT. In the present case study, CST is not an EBP but yet the teams have many components that are characteristic of ACT teams (e.g., team approach and regular staff meetings). It is important to determine whether the efforts to implement high fidelity ACT services are justified in terms of improved consumer outcomes over ACT-like teams (e.g., the CST teams). A comparison

of consumer outcomes for ACT and CST teams controlling for level of symptom severity would be contribute to this knowledge base. Future research should also continue to examine which aspects of ACT are most related to improved consumer outcomes.

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TABLES

Table 1. Comparison of ACT and CST Team Requirements under Rule 132 in Illinois

ACT Team	CST Team
1:10 staff to persons served ratio	**1:18** staff to persons served ratio
Serves narrower range of people (LOCUS >4), i.e., only consumers with the most severe symptomatology and severe impairments in functioning can be served by ACT	Serves broader range of persons, i.e., intended to serve consumers with moderate symptomatology and moderate impairments in functioning but not restricted from serving consumers who would qualify for ACT based on LOCUS score
Requires at least 6.0 FTE staff	**Requires** at least 3.0 FTE staff
Requires Licensed Team Leader	Licensed Team Leader not required
Requires M.D., R.N., on team	M.D., R.N. not required on team
Requires Consumer in recovery to be a staff member on the team	Consumer in recovery preferred but not required to be a staff member on the team
Requires Substance abuse specialist	Substance abuse specialist not required
Requires Rehabilitative/vocational specialist	Rehabilitative/vocational specialist not required
Requires 24/7 crisis intervention	May use auxiliary crisis center

Table 2. Comparison of What Constitutes Full ACT Compliance on the DACTS versus Rule 132

Items	DACTS	Rule 132
Small caseload:	1:10 or smaller	1:10 or smaller
Team approach:	At least 90% of consumers have contact with 1+ staff in 2-week period	
Frequency of team meetings:	At least 4x weekly, review all consumers	At least 4x weekly
Team Leader provides services:	10hrs+ of direct service weekly	Team Leader must be licensed clinician and have contact with consumers
Continuity of staff:	Less than 20% turnover in past 2 yrs	
Staff capacity:	95% capacity over past 12 months	
Psychiatrist:	1.0 FTE per 100 consumers	10 hrs/wk for every 60 consumers
Nurse:	2.0 FTE RN per 100 consumers	1 full-time registered nurse required
SA specialist:	2.0 FTE per 100 consumers	At least 1staff member shall have special SA training and/or experience treating clients with co-occurring SA disorders
Voc specialist:	1.0 FTE who works with SE program or 2.0 FTE per 100 consumers	At least 1 staff member has training in vocational rehabilitation
***Sufficient staffing:**	Minimum of 10.0 FTE staff	Minimum of 6.0 FTE staff
Admission criteria:	Actively recruits and uses explicit admission criteria	Explicit eligibility criteria plus approval by DHS
Intake rate:	6 or less per month for past 6 months	
Full responsibility for treatment:	90% or more consumers receive all services from ACT team	ACT team expected to provide an array of services
Responsibility for crisis services:	Consumers have direct access to cell phones or pager carried by staff	Crisis services available 24/7 and provided by the team
Responsibility for hospital admission:	95% or more of admits have team involvement	
Responsibility for hospital discharge:	95% or more of discharges have team involvement	
Time-unlimited services:	5% graduation rate or less (excluding dropouts)	
Community-based services:	80%+ contacts out of office	75%+ contacts out of office
No dropout policy:	5% annual dropout rate or less	
Assertive engagement:	Well thought out strategies, uses street outreach and legal mechanisms	

Intensity of service:	Face-to-face minutes 120/wk/client minimum (average)	
Frequency of contact:	Face-to-face contacts 4/wk/client minimum (average)	Contacts 3/wk/client minimum (average)
Work with support system:	4+ contacts to support system per client per month	
Individualized SA treatment:	Clients with SA disorders spend on average 24+ minutes/wk in formal tx	
Dual disorder treatment groups:	50% consumers with DD attend group meetings monthly	
***Consumers on team:**	Employed as full-time clinicians with full professional status	At least 1 staff member is also a consumer

*These items were added after the DACTS was published and are not included in the calculation for DACTS scoring.

Table 3. Internal Consistency Coefficients (Cronbach's Alpha) for the EBPAS

	Requirements	Appeal	Openness	Divergence	Total Score
Time 1 (N=15)	0.97	0.69	0.88	0.72	0.85
Time 2 (N=16)	0.91	0.88	0.82	0.81	0.80
Average	0.94	0.78	0.85	0.76	0.82

Table 4. Internal Consistency Coefficients (Cronbach's Alpha) for the National EBP Implementation Project Scales

	Personal Feelings About ACT	
	Total Score (9 items)	Personal support for ACT (4 items)
Time 1 (N=11)	0.78	0.83
	Workplace Aspects	
	Total Score (10 items)	Agency-wide support for ACT (7 items)
Time 1 (N=11)	0.95	0.95
	Conditions	
	Total Score (5 items)	
Time 1 (N=11)	0.39	
Time 2 (N=16)	0.58	
Average	0.49	

Table 5. Internal Consistency Coefficients (Cronbach's alpha) for the MLQ Leadership Factors

	Time 1	Time 2
Staff Ratings of Middle Management Leaders		
Transformational Leadership		
Inspirational Motivation	.81, n=9	.90, n=13
Individual Consideration	.77, n=8	.89, n=14
Intellectual Stimulation	.94, n=9	.94, n=13
Idealized Influence (behavior)	.93, n=9	.73, n=13
Idealized Influence (attributed)	.91, n=9	.86, n=13
Transactional Leadership		
Contingent Reward	.77, n=9	.85, n=11
Active Management-by-Exception	.76, n=8	.93, n=13
Passive/Avoidant Leadership		
Laissez-Faire	.81, n=9	.41, n=14
Passive Management-by-Exception	.87, n=9	.85, n=13
Staff Ratings of Team Leader		
	Time 1	Time 2
Transformational Leadership		
Inspirational Motivation	.20, n=9	.91, n=12
Individual Consideration	.75, n=9	.80, n=14
Intellectual Stimulation	.84, n=9	.86, n=14
Idealized Influence (behavior)	.89, n=9	.79, n=13
Idealized Influence (attributed)	.58, n=9	.89, n=13
Transactional Leadership		
Contingent Reward	.55, n=9	.87, n=10
Active Management-by-Exception	.69, n=9	.85, n=13
Passive/Avoidant Leadership		
Laissez-Faire	.74, n=9	.73, n=14
Passive Management-by-Exception	.86, n=9	.90, n=14

Table 6. Analysis Guide for Quantitative Measures

Instruments	Total Score Analyzed	Subscales Analyzed	Individual Items Analyzed
DACTS	X		
EBPAS	X	X	
MLQ		X	
ACT Feelings		X	X
Workplace Aspects		X	X
Conditions That Help or Hinder			X

Table 7. Comprehensive List of Initial Content Codes used to Code the Interviews

Barriers/ Dislikes	Facilitators/ Likes
1. Team Leader has to be licensed	1. Little or no change to services
2. Nurse required on team	2. Commitment of upper management to ACT
3. Have to provide all services/cannot refer out	3. Leadership/support of middle management
4. Strict rule on staff vacancies	4. Leadership/support of Team Leader
5. Pay grade difficult to attract/retain qualified staff	5. Leadership/support of teammates
6. Inability to fit all in 8 hour day	6. *Support from DMH
7. More paperwork	7. Good communication
8. Cannot bill for travel	8. Slow process of change/ Preparation began early
9. Consumers influence: not home/do not want long visits/refuse services	9. Passage of time
10. Pressure for billing	10. ACT model valued
11. Perception job is in danger	11. Likes having specialized positions
12. Decreased quality	12.* Lower caseload
13. Lack of support/upper management does not understand demands of job	13. *Agency monitors fidelity
14. DMH: No input from staff/do not understand demands	14. Trainings
15. DMH: financial concerns	15. Higher quality/positive aspects of changes
16. Staff turnover	
17. Too many changes at once	
18. ASO challenges/difficult process to authorize	
19. Staff Burnout	
20. Not enough referrals/intakes	
21. Not enough supervision	
22. Not enough training	
23. Difficult to learn new billing system	
24. Lack of communication	
25. ACT model requirements (e.g., weekend shifts)	
26. ACT model not flexible	
27. Clientele too severe	

Note. Following the coding process, "Too Many Changes at Once" informed the identification of 3 themes not listed in this table: “Ambiguity of Rule 132,” “Implementation Overload,” and “Conflicting Regulations from Funding Sources.” "Lack of Communication" was broken down into “Ambiguity of Rule 132,” “Lack of Communication by Thresholds” (which did not emerge to the level of inclusion in the report), and “Lack of Guidance from DMH.” The codes/themes that emerged from breaking these original codes down are used in the remaining tables and discussions. *Indicates codes that were not reported to a level for inclusion in the report.

Table 8. Qualitative Themes that Emerged in the Study

	Common to Environment or Implementation of Rule 132 in General	**Unique to ACT Implementation in Accordance with Rule 132 at Thresholds**
Barriers	-Perceived Negative Impact of FFS -Ambiguity of Rules -Lack of Guidance from DMH -Difficulties with ASO	-DMH Regulations Concerning ACT -Negative Staff Attitudes re: ACT -Implementation Overload -Lack of Resources -Staff Turnover -Misalignment of Requirements from Funding Sources (unique to Homeless Outreach team)
Facilitators	-Leadership -Familiarity with Type of Service being Implemented -Positive Staff Attitudes Regarding Changes in General -Communication and Preparation for Changes -Passage of Time (Time 2)	-Management's Commitment to Implementing ACT -Positive Staff Attitude Regarding ACT Model (unique to North ACT team)

Table 9. Barriers Common to the Three Teams and the Original Codes that Informed Them

Common Barriers
Negative Impact of FFS -Inability to fit all in 8 hour day -Cannot bill for travel -More paperwork -Consumers influence: not home/do not want long visits -Pressure for billing/management priority is billing -Perception management does not care/understand demands of job -DMH: financial concerns (result in upper management pressure for billing) -Perception job is in danger (in context of productivity standards and state financial situation) -Decreased quality -Staff burnout **Ambiguity of Rule 132** -Too many changes at once/doing too much at once -Lack of communication **Lack of guidance from DMH** -Lack of communication **Difficulties with the managed care organization ("ASO")** -ASO challenges/difficult process for service authorization -Lack of communication -Lack of guidance from DMH -Staff burnout

Note. The higher level common barriers are bolded and the originally conceived codes that informed the interpretation are listed beneath. The list of original codes used by the two raters can be found in Table 7.

Table 10. Barriers Specific to ACT Implementation and the Original Codes that Informed Them

ACT-Specific Barriers
DMH Regulations -Team Leader has to be licensed **-Staff turnover (particularly in key positions like Team Leader)** -More paperwork (Homeless Outreach due to lack of Team Leader) -Not enough supervision (due to lack of Team Leader) -Burnout -Pay grade difficult to attract/retain qualified staff -Nurse required on the team -Staff turnover -Pay grade difficult to attract/retain qualified staff -Strict rule on staff vacancies -Staff turnover -Pay grade difficult to attract/retain qualified staff -Have to provide ALL services/cannot refer out -Not enough training: higher skills -Decreased quality **-Lack of resources (e.g., time to develop groups, group therapy, training)** -Decreased quality -Consumer influence: refuse services -Not enough referrals/intakes (Homeless Outreach team) **Implementation Overload** -Too many changes at once/doing too much at once -Lack of communication -Staff burnout **Negative Staff Attitudes regarding ACT Model** -Dislike model requirements (e.g., weekend shifts) -Perceive that model is not flexible -Decreased quality -Dislikes working with SMI populations **Conflicting Regulations of Funding Sources (Homeless Outreach)** -Too many changes at once/doing too much at once -Lack of communication -Not enough referrals/intakes

Note. The higher level ACT-specific barriers are bolded and the originally conceived codes that informed the interpretation are listed beneath. The list of original codes used by the two raters can be found in Table 7.

Table 11. Facilitators and the Original Codes that Informed Them

Common Facilitators (Across all Teams)	ACT-specific Facilitators
Positive Staff Attitude regarding Rule 132 -Higher quality of services/positive aspects of changes **Leadership** -Leadership/support from middle management -Leadership/support from Team Leader -Leadership/support from teammates -Good communication (in the context of being able to voice opinions to leaders) **Good Communication and Preparation** -Good communication (in the context of being well-informed of the changes) -Slow process of change/preparation began early **Familiarity with Services** -Little or no change to services **Passage of Time** (Time 2)	**Positive Staff Attitude regarding ACT** (unique to North ACT team) -ACT model valued -Benefit to specialized positions -Higher quality (in relation to ACT) **Upper Management Commitment to ACT** -Upper management support/commitment to ACT

Note. Themes are bolded with the original codes that were used to inform them listed beneath. The list of original codes used by the two raters can be found in Table 7.

Table 12. Objective Changes as a Result of Fee-For-Service (FFS)

Grant-based funding (Prior to Rule 132)	**FFS funding (established by Rule 132)**
Service agency negotiates yearly contract with DMH for services provided and receives monthly installments on contract	1. Service agencies have an annual contract with a maximum allowable amount (i.e., cap on reimbursement) 2. Practitioners must bill for specific service categories
Staff members do not have productivity standards	Practitioners must meet specific productivity standards for direct service provision
For documentation purposes, all ACT services were coded in a single category, without distinction between types of services	Services must be itemized for billing/ staff required to learn nuances of each code
No strictly followed rule on when billing and notes are due	Billing and notes must be completed within 72 hours
Can bill for travel time if consumer's possessions (e.g., medications) are in the car	Cannot bill for travel/ reimbursement limited to time spent with consumer

Table 13. ACT Fidelity Across Teams and Time Periods

	Time 1			
	Human Resources	Organizational Boundaries	Nature of Services	Total Fidelity Score
North ACT	4.45	4.57	3.90	4.29
Homeless Outreach	4.09	4.14	3.50	3.89
CST	3.45	3.57	3.20	3.39
	Time 2			
	Human Resources	Organizational Boundaries	Nature of Services	Total Fidelity Score
North ACT	4.73	4.71	4.00	4.46
Homeless Outreach	3.82	3.71	3.30	3.61
CST	3.45	3.71	3.40	3.50

Note. ACT fidelity ranges from 1 to 5, with scores of 4.0 and above indicating high fidelity to the model.

Table 14. EBPAS Mean Scores Across Teams and Time Periods

	Requirements Mean (SD)	Appeal Mean (SD)	Openness Mean (SD)	Divergence Mean (SD)	Total Score Mean (SD)
Time 1					
North ACT, N=6	2.5 (1.1)	2.7 (0.6)	2.4 (1.0)	2.0 (0.9)	2.4 (0.5)
Homeless Outreach, N=5	2.6 (1.1)	3.0 (0.7)	2.7 (0.6)	2.8 (0.8)	2.8 (0.6)
CST, N=4	3.0 (0.3)	3.3 (0.4)	2.8 (0.5)	3.0 (0.4)	3.0 (0.3)
Time 2					
North ACT, N=5	2.9 (0.6)	2.9 (0.2)	2.2 (0.5)	2.1 (0.8)	2.5 (0.6)
Homeless Outreach, N=6	2.8 (1.0)	2.7 (0.9)	2.7 (0.7)	3.0 (0.9)	2.8 (0.5)
CST, N=5	2.7 (0.7)	3.2 (0.8)	2.9 (0.7)	2.2 (0.7)	2.7 (0.6)

Note. The 15 EBPAS items are rated from 0 (not at all) to 4 (to a very great extent), with higher scores indicating more positive attitudes toward EBPs and manualized treatments in general.

Table 15. Comparison of the Two Teams that Attempted ACT Implementation on the ACT Feelings Scale at Time 1

Item	North ACT, N=6, Mean (SD)	Homeless Outreach, N=5, Mean (SD)
1. Understand the ACT model	3.3 (0.8)	4.4 (0.6)
2. ACT provides significant advantage	2.5 (1.2)	2.6 (0.9)
3. Personally committed to implementation	3.5 (0.8)	4.0 (0.7)
4. Motivated to implement ACT	3.8 (0.4)	4.0 (0.7)
5. ACT is consistent with personal philosophy	3.2 (1.0)	4.0 (0.7)
6. ACT is consistent with services at workplace	3.2 (0.8)	3.4 (1.3)
7. ACT required significant change in daily practice	3.2 (1.2)	2.2 (1.1)
8. ACT required significant change in care provided	2.7 (1.0)	1.8 (0.5)
9. Important that ACT is based on research	3.3 (1.0)	3.4 (1.5)
Personal Feelings Subscale (items 2, 3, 4, 5)	3.3 (0.7)	3.7 (0.7)

Note. The ACT Feelings scale items are rated from 1 to 5 with higher scores generally indicating more positive attitude toward the ACT model and implementation. Items 7 and 8 assess degree of change to their daily practice and care provided to the consumers as a result of implementing ACT. Therefore, higher scores on these two items suggest a greater level of change was required.

Table 16. Comparison of the North ACT Team's Ratings on the ACT Feelings Scale over Time

Item	Time 1, N=6, Mean (SD)	Time 2, N=5, Mean (SD)
1. Understand the ACT model	3.3 (0.8)	3.6 (0.6)
2. ACT provides significant advantage	2.5 (1.2)	3.0 (0.7)
3. Personally committed to implementation	3.5 (0.8)	3.8 (0.8)
4. Motivated to implement ACT	3.8 (0.4)	3.8 (0.5)
5. ACT is consistent with personal philosophy	3.2 (1.0)	4.2 (0.5)
6. ACT is consistent with services at workplace	3.2 (0.8)	4.2 (0.8)
7. ACT required significant change in daily practice	3.2 (1.2)	3.4 (1.1)
8. ACT required significant change in care provided	2.7 (1.0)	3.0 (0.7)
9. Important that ACT is based on research	3.3 (1.0)	3.6 (0.9)
Personal Feelings Subscale (items 2, 3, 4, 5)	3.3 (0.7)	3.7 (0.4)

Note. The ACT Feelings scale items are rated from 1 to 5 with higher scores generally indicating more positive attitude toward the ACT model and implementation. However, items 7 and 8 assess degree of change to their daily practice and care provided to the consumers as a result of implementing ACT. Higher scores on these two items suggest a greater level of change was required.

Table 17. Comparison of the Two Teams that Attempted ACT Implementation on the Workplace Aspects Scale at Time 1

Item	North ACT, N=6, Mean (SD)	Homeless Outreach, N=5, Mean (SD)
1. The agency is committed to implementing ACT	3.8 (1.0)	3.8 (0.8)
2. Upper management is supportive of implementing ACT	3.7 (1.2)	3.8 (0.8)
3. My supervisor is supportive of implementing ACT	4.0 (1.1)	4.2 (0.5)
4. My colleagues support implementing ACT	3.5 (1.2)	3.4 (1.1)
5. I support implementing ACT	4.0 (0.6)	4.0 (0.7)
6. There is enough support to maintain implementation	3.3 (0.8)	3.0 (1.2)
7. There is consensus to continue providing ACT	3.5 (0.8)	3.0 (1.2)
8. People are committed to practicing ACT	3.5 (0.8)	3.2 (0.8)
9. It has been easy to implement ACT	2.5 (1.2)	2.0 (0.0)
10. ACT provides a greater benefit to consumers	3.2 (1.5)	2.4 (1.1)
Agency-wide Support for ACT Subscale (items 1-4 and 6-8)	3.6 (0.9)	3.5 (0.9)

Note. The Workplace Aspects scale items are rated from 1 to 5 with higher scores indicating a more positive outcome.

Table 18. Comparison of the North ACT Team's Ratings on the Workplace Aspects Scale over Time

Item	Time 1, N=6, Mean (SD)	Time 2, N=5, Mean (SD)
1. The agency is committed to implementing ACT	3.8 (1.0)	4.2 (0.5)
2. Upper management is supportive of implementing ACT	3.7 (1.2)	3.8 (0.5)
3. My supervisor is supportive of implementing ACT	4.0 (1.1)	4.2 (0.5)
4. My colleagues support implementing ACT	3.5 (1.2)	4.2 (0.5)
5. I support implementing ACT	4.0 (0.6)	3.6 (0.6)
6. There is enough support to maintain implementation	3.3 (0.8)	4.0 (0.7)
7. There is consensus to continue providing ACT	3.5 (0.8)	4.2 (0.5)
8. People are committed to practicing ACT	3.5 (0.8)	4.2 (0.5)
9. It has been easy to implement ACT	2.5 (1.2)	2.4 (0.6)
10. ACT provides a greater benefit to consumers	3.2 (1.5)	3.4 (0.6)
Agency-wide Support for ACT Subscale (items 1-4 and 6-8)	3.6 (0.9)	4.1 (0.3)

Note. The Workplace Aspects scale items are rated from 1 to 5 with higher scores indicating a more positive outcome.

Table 19. Ratings on the Conditions Scale over Time by Team

Item	North ACT		Homeless Outreach		CST	
	Time 1, N=6, Mean (SD)	Time 2, N=5, Mean (SD)	Time 1, N=5, Mean (SD)	Time 2, N=6, Mean (SD)	Time 1, N=4, Mean (SD)	Time 2, N=5, Mean (SD)
1. Training and supervision are adequate	2.8 (1.3)	2.2 (1.1)	2.6 (1.3)	4.0 (0.6)	4.3 (0.5)	4.6 (0.6)
2. Funding mechanisms support the service	3.0 (0.9)	2.6 (1.1)	2.4 (1.5)	3.3 (1.2)	3.3 (1.0)	2.4 (1.1)
3. Staff are given feedback on consumer outcomes	2.5 (0.8)	3.2 (0.8)	1.6 (0.6)	3.3 (1.5)	3.3 (1.5)	2.8 (1.3)
4. Staff are skeptical regarding the added value	3.0 (0.6)	2.8 (0.5)	3.6 (1.1)	3.0 (0.9)	1.7 (1.0)	3.0 (1.0)
5. There is intense work pressure on staff	3.5 (1.5)	3.6 (1.5)	3.6 (1.1)	3.8 (1.0)	4.2 (1.0)	3.6 (1.7)

Note. The Conditions scale items are rated from 1 (strongly disagree) to 5 (strongly agree) with higher scores on items 1, 2, and 3 indicating a factor that facilitates the service. However, higher scores on items 4 and 5 suggest factors that may hinder the practice of the service. The type of service refers to ACT for the North ACT team at both time points, ACT for the Homeless Outreach team at Time 1, but CST at Time 2, and CST at both time points for the CST team.

Table 20. Leadership Classification of Individuals Rated With the MLQ and Outcomes of Leadership at Time 1

	North ACT		Homeless Outreach		CST	
	Team Leader	Middle Management, N=3, Mean (SD)	Team Leader, N=5, Mean (SD)	Middle Management, N=3, Mean (SD)	Team Leader	Middle Management, N=3, Mean (SD)
Transformational Leadership	-----	**3.1 (0.4)**	**2.4 (0.5)**	**2.3 (1.3)**	-----	**3.5 (0.4)**
Inspirational Motivation	-----	2.8 (0.1)	2.6 (0.4)	2.7 (1.0)	-----	3.4 (0.6)
Intellectual Stimulation	-----	3.1 (1.0)	2.2 (0.9)	2.2 (1.2)	-----	3.2 (0.8)
Individualized Consideration	-----	3.3 (0.7)	2.2 (0.8)	2.1 (1.3)	-----	3.8 (0.3)
Idealized Attributes	-----	3.1 (0.5)	2.5 (0.7)	2.2 (1.2)	-----	3.7 (0.1)
Idealized Behaviors	-----	3.1 (0.6)	2.5 (0.5)	2.3 (1.6)	-----	3.4 (0.6)
Transactional Leadership	-----	**2.5 (0.3)**	**2.8 (0.4)**	**2.3 (0.8)**	-----	**2.9 (1.0)**
Contingent Reward	-----	3.3 (0.7)	3.1 (0.5)	2.5 (1.1)	-----	3.9 (0.1)
Management-by-Exception (Active)	-----	1.8 (0.3)	2.5 (0.7)	2.0 (0.7)	-----	1.8 (1.9)
Passive/Avoidant Leadership	-----	**1.4 (1.0)**	**.53 (0.1)**	**.25 (0.3)**	-----	**.08 (0.1)**
Management-by-Exception (Passive)	-----	1.4 (1.3)	.75 (0.2)	.25 (0.3)	-----	.17 (0.3)
Laissez-Faire	-----	1.3 (0.8)	.30 (0.3)	.25 (0.4)	-----	0 (.00)
Outcomes of Leadership						
Effectiveness	-----	2.6 (0.6)	2.8 (0.3)	2.6 (1.4)	-----	3.8 (0.3)
Satisfaction	-----	2.8 (0.3)	2.9 (0.4)	3.0 (1.0)	-----	3.8 (0.3)
Extra Effort	-----	2.4 (0.5)	2.2 (0.6)	2.2 (1.8)	-----	3.1 (0.7)

Note. The MLQ is 45 items rated on a scale from 0 (not at all) to 4 (frequently, if not always). The Program Manager (i.e., middle management) was the same individual for the North ACT and CST teams. Substantial missing data prohibited the calculation of Team Leader ratings for the North ACT and CST teams. The Team Leader ratings for the Homeless Outreach team were based on interactions with the Program Manager who was the acting Team Leader at Time 1, while middle management ratings were based on interactions with the West Regional Manager.

Table 21. Leadership Classification of Individuals Rated With the MLQ and Outcomes of Leadership at Time 2

	North ACT		Homeless Outreach		CST	
	Team Leader, N=4, Mean (SD)	Middle Management, N=4, Mean (SD)	Team Leader, N=6, Mean (SD)	Middle Management, N=6, Mean (SD)	Team Leader, N=4, Mean (SD)	Middle Management, N=4, Mean (SD)
Transformational Leadership	**3.0 (0.4)**	**2.6 (0.8)**	**2.2 (1.0)**	**2.3 (1.0)**	**3.3 (0.6)**	**3.6 (0.3)**
Inspirational Motivation	3.3 (0.3)	2.8 (0.9)	2.2 (1.3)	2.5 (1.1)	3.3 (0.7)	3.1 (0.9)
Intellectual Stimulation	2.8 (0.2)	2.4 (1.0)	2.2 (1.0)	2.1 (1.2)	3.3 (1.0)	3.8 (0.2)
Individualized Consideration	2.6 (0.7)	2.6 (1.2)	2.0 (0.9)	2.1 (1.1)	3.3 (1.0)	3.9 (0.1)
Idealized Attributes	3.2 (0.7)	2.9 (0.6)	2.2 (0.8)	2.8 (0.9)	3.3 (1.0)	3.6 (0.3)
Idealized Behaviors	3.1 (0.7)	2.4 (0.4)	2.2 (1.2)	2.3 (1.1)	3.1 (0.3)	3.4 (0.1)
Transactional Leadership	**2.8 (0.3)**	**2.7 (0.4)**	**1.5 (0.7)**	**2.1 (0.7)**	**2.7 (0.6)**	**2.0 (0.4)**
Contingent Reward	3.2 (0.4)	2.8 (0.1)	2.3 (1.1)	2.8 (0.8)	3.7 (0.5)	3.7 (0.5)
Management-by-Exception (Active)	2.4 (0.4)	2.5 (0.8)	.75 (0.6)	1.3 (1.1)	1.7 (1.6)	.25 (0.4)
Passive/Avoidant Leadership	**1.0 (1.1)**	**1.2 (1.0)**	**.65 (0.9)**	**.58 (0.6)**	**.25 (0.1)**	**.16 (0.2)**
Management-by-Exception (Passive)	1.1 (1.3)	1.4 (1.3)	.75 (1.1)	.79 (0.8)	.38 (0.3)	.31 (0.4)
Laissez-Faire	.94 (.1.0)	.94 (0.8)	.54 (0.8)	.38 (0.4)	.13 (0.1)	0 (0.0)
Outcomes of Leadership						
Effectiveness	3.2 (0.4)	2.7 (0.7)	2.6 (0.6)	2.6 (0.6)	3.4 (0.8)	3.8 (0.4)
Satisfaction	2.9 (0.6)	3.3 (0.9)	3.1 (0.5)	3.1 (0.6)	3.4 (1.3)	4.0 (0.0)
Extra Effort	2.9 (0.8)	2.7 (0.6)	2.0 (0.9)	2.4 (1.0)	2.8 (1.4)	3.7 (0.5)

Note. The MLQ is 45 items rated on a scale from 0 (not at all) to 4 (frequently, if not always). The Program Manager (i.e., middle management) was the same individual for the North ACT and CST teams.

Table 22. Perceived Barriers and Negative Factors across Teams at Time 1 and Time 2

	Time 1				Time 2			
Codes	**North ACT** Team Members (N=6)	**Homeless Outreach** Team Members (N=4)	**CST Team** Team Members (N=4)	**Management** Middle/Upper (N=2)	**North ACT** Team Members (N=5)	**Homeless Outreach** Team Members (N=3)	**CST Team** Team Members (N=2)	**Management** Middle/Upper (N=2)
Inability to fit all in 8 hr day	5 (83%)	4 (100%)	3 (75%)	0	5 (100%)	2 (67%)	2 (100%)	0
More paperwork	3 (50%)	3 (75%)	2 (50%)	2 (100%)	3 (60%)	2 (67%)	1 (50%)	2 (100%)
Can't bill for travel	1 (17%)	2 (50%)	1 (25%)	1 (50%)	0	0	0	0
Pressure for billing	4 (67%)	3 (75%)	3 (75%)	1 (50%)	4 (80%)	2 (67%)	2 (100%)	2 (100%)
Perception job is in danger	1 (17%)	1 (25%)	2 (50%)	0	3 (60%)	2 (67%)	1 (50%)	2 (100%)
Decreased quality	3 (50%)	3 (75%)	1 (25%)	1 (50%)	3 (60%)	1 (33%)	1 (50%)	1 (50%)
Upper management not understanding of demands	5 (83%)	2 (50%)	1 (25%)	0	3 (60%)	1 (33%)	0	1 (50%)
Ambiguity of Rule 132	3 (50%)	1 (25%)	3 (75%)	2 (100%)	2 (40%)	1 (33%)	0	1 (50%)
Implementation overload	1 (17%)	2 (50%)	0	1 (50%)	0	0	0	2 (100%)
ASO/ Authorization process	1 (17%)	1 (25%)	0	1 (50%)	1 (20%)	0	0	2 (100%)
Burnout	2 (33%)	2 (50%)	1 (25%)	1 (50%)	5 (100%)	2 (67%)	1 (50%)	2 (100%)
No training on higher skills	1 (17%)	3 (75%)	1 (25%)	1 (50%)	1 (20%)	0	0	0
No training on ACT model	1 (17%)	0	N/A	0	1 (20%)	N/A	N/A	1 (50%)
Team Leader has to be licensed	2 (33%)	4 (100%)	N/A	2 (100%)	0	N/A	N/A	1 (50%)
Nurse required on team	2 (33%)	0	N/A	1 (50%)	0	N/A	N/A	1 (50%)
Strict rules on staff vacancies	1 (17%)	0	N/A	2 (100%)	0	N/A	N/A	2 (100%)
Provide all services	4 (67%)	3 (75%)	N/A	2 (100%)	2 (40%)	N/A	N/A	2 (100%)
Pay grade low to attract qualified staff	2 (33%)	3 (75%)	N/A	2 (100%)	1 (20%)	N/A	N/A	2 (100%)
Lack of resources	4 (67%)	2 (50%)	0	1 (50%)	3 (60%)	0	0	2 (100%)

Staff turnover	4 (67%)	4 (100%)	0	2 (100%)	5 (100%)	1 (33%)	0	2 (100%)
Not enough supervision	0	3 (75%)	0	0	0	0	0	0
Not enough referrals/New clients	0	3 (75%)	0	2 (100%)	0	0	0	0
Conflicting regulations from funding sources	N/A	2 (50%)	N/A	2 (100%)	N/A	N/A	N/A	N/A
DMH: No input from staff/ Do not understand demands	3 (50%)	3 (75%)	0	1 (50%)	1 (20%)	0	0	1 (50%)
DMH: Financial concerns	2 (33%)	0	0	2 (100%)	3 (60%)	2 (67%)	0	2 (100%)
DMH: Lack of guidance on Rule 132	2 (33%)	0	0	1 (50%)	1 (20%)	0	0	1 (50%)
ACT job requirements (e.g., weekend shifts)	0	1 (25%)	N/A	1 (50%)	0	N/A	N/A	0
Clientele too Severe	0	1 (25%)	N/A	0	0	N/A	N/A	0
ACT model not Flexible (e.g., mandated # of visits, alternate who sees consumers)	3 (50%)	1 (25%)	N/A	1 (50%)	2 (40%)	N/A	N/A	0

Note. "Team Members" refers to line staff and Team Leaders. The West Program Manager who was acting Team Leader for the Homeless Outreach team at Time 1 is represented under "Management." At Time 2, two of the staff on the North ACT team were hired after the Time 1 interviews. Additionally, the Homeless Outreach team was providing CST services at Time 2 and had a new Team Leader who is included in the analyses.

Table 23. Comparison of Line Staff and those in Leadership Positions on Barriers and Perceived Negative Factors at Time 1 and Time 2

Codes	Time 1		Time 2	
	Line Staff (N=12)	Leaders (N=4)	Line Staff (N=7)	Leaders (N=5)
Inability to fit all in an 8 hr day	10 (83%)	2 (50%)	6 (86%)	3 (60%)
More paperwork	7 (58%)	3 (75%)	4 (57%)	4 (80%)
Can't bill for travel	3 (25%)	2 (50%)	0	0
Pressure for billing	8 (67%)	3 (75%)	5 (71%)	5 (100%)
Perception job is in danger	4 (33%)	0	4 (57%)	4 (80%)
Decreased quality	7 (58%)	1 (25%)	5 (71%)	1 (20%)
Upper mgmt. not understanding	7 (58%)	1 (25%)	3 (43%)	2 (40%)
Ambiguity of Rule 132	5 (42%)	4 (100%)	0	3 (60%)
Implementation overload	3 (25%)	1 (25%)	0	2 (40%)
ASO/ Authorization process	1 (8%)	2 (50%)	0	3 (60%)
Burnout	4 (33%)	2 (50%)	5 (71%)	3 (60%)
No training on higher skills	5 (42%)	1 (25%)	1 (14%)	0
No training on ACT model**	1 (8%)	0	1 (14%)	1 (20%)
Team Leader has to be licensed**	5 (42%)	3 (75%)	0	1 (20%)
Nurse required on team**	1 (8%)	2 (50%)	0	1 (20%)
Strict rules on staff vacancies**	0	3 (75%)	0	2 (40%)
Provide all services**	7 (58%)	2 (50%)	2 (29%)	2 (40%)
Pay grade low to attract qualified staff	3 (25%)	3 (75%)	1 (14%)	3 (60%)
Lack of resources	4 (33%)	2 (50%)	2 (29%)	3 (60%)
Staff turnover	7 (58%)	3 (75%)	5 (71%)	3 (60%)
Not enough supervision	3 (25%)	0	0	0
Not enough referrals/New clients	3 (25%)	2 (50%)	0	0
Conflicting rules from funding sources	2 (17%)	2 (50%)	N/A	N/A
DMH: No input from staff	5 (42%)	2 (50%)	0	2 (40%)
DMH: Financial concerns	1 (8%)	3 (75%)	3 (43%)	4 (80%)
DMH: Lack of guidance on Rule 132	1 (8%)	2 (50%)	0	1 (20%)
ACT job requirements**	1 (8%)	1 (25%)	0	0
Clientele too Severe	1 (8%)	0	0	0
ACT model not Flexible**	3 (25%)	2 (50%)	2 (29%)	0

Note. "Leaders" refers to those staff members who are in leadership positions and includes Team Leaders, middle management (e.g., Program Managers and Assistant Program Managers), and upper management (i.e., Clinical Director).
**Indicates themes that are specific to ACT. At Time 1 there were 9 line staff and 3 individuals from management who were involved with an ACT team, while 4 line staff and 3 of management were involved with ACT at Time 2.

Table 24. Perceived Facilitators and Positive Factors across Teams at Time 1 and Time 2

	Time 1				Time 2			
Codes	**North ACT** Team Members (N=6)	**Homeless Outreach** Team Members (N=4)	**CST Team** Team Members (N=4)	**Management** Middle/Upper (N=2)	**North ACT** Team Members (N=5)	**Homeless Outreach** Team Members (N=3)	**CST Team** Team Members (N=2)	**Management** Middle/Upper (N=2)
Familiarity with services	4 (67%)	4 (100%)	4 (100%)	2 (100%)	3 (60%)	3 (100%)	2 (100%)	2 (100%)
Positive aspects of changes	3 (50%)	1 (25%)	3 (75%)	2 (100%)	1 (20%)	2 (67%)	2 (100%)	2 (100%)
Values ACT model	6 (100%)	0	N/A	2 (100%)	4 (80%)	N/A	N/A	1 (50%)
Leadership from Team Leader	5 (83%)	1 (25%)	3 (75%)	0	5 (100%)	3 (100%)	2 (100%)	2 (100%)
Leadership from teammates	4 (67%)	1 (25%)	3 (75%)	0	5 (100%)	1 (33%)	2 (100%)	0
Leadership from middle mgmt.	5 (83%)	1 (25%)	4 (100%)	2 (100%)	5 (100%)	3 (100%)	2 (100%)	2 (100%)
Upper mgmt. committed to ACT	4 (67%)	2 (50%)	N/A	2 (100%)	5 (100%)	N/A	N/A	2 (100%)
Communication re: changes	4 (67%)	3 (75%)	1 (25%)	2 (100%)	0	0	1 (50%)	0
Began preparations early	3 (50%)	1 (25%)	2 (50%)	2 (100%)	1 (20%)	0	1 (50%)	0
Passage of time/practice	0	0	2 (50%)	0	2 (40%)	0	2 (100%)	1 (50%)

Note. "Team Members" refers to line staff and Team Leaders. The West Program Manager who was acting Team Leader for the Homeless Outreach team at Time 1 is represented under "Management." At Time 2, two of the staff on the North ACT team were hired after the Time 1 interviews. Additionally, the Homeless Outreach team was providing CST services at Time 2 and had a new Team Leader who is included in the analyses as well.

Table 25. Comparison of Line Staff and those in Leadership Positions on Facilitators and Positive Factors at Time 1 and Time 2

Codes	Time 1		Time 2	
	Line Staff (N=12)	Leaders (N=4)	Line Staff (N=7)	Leaders (N=5)
Familiarity with services	11 (92%)	3 (75%)	6 (86%)	4 (80%)
Positive aspects of changes	5 (42%)	4 (100%)	3 (43%)	4 (80%)
Values ACT model**	5 (42%)	3 (75%)	3 (43%)	2 (40%)
Leadership from Team Leader	7 (58%)	2 (50%)	7 (100%)	5 (100%)
Leadership from teammates	6 (50%)	3 (75%)	6 (86%)	2 (40%)
Leadership from middle mgmt.	8 (67%)	4 (100%)	7 (100%)	5 (100%)
Upper mgmt. committed to ACT**	5 (42%)	3 (75%)	4 (57%)	3 (60%)
Communication from agency re: changes	6 (50%)	4 (100%)	0	1 (25%)
Began preparations early	5 (42%)	3 (75%)	2 (29%)	0
Passage of time/practice	1 (8%)	1 (25%)	2 (29%)	3 (60%)

Note. "Leaders" refers to those in leadership positions and includes Team Leaders, middle management (e.g., Program Managers and Assistant Program Managers), and upper management (i.e., Clinical Director).

**Indicates themes that are specific to ACT. At Time 1 there were 9 line staff and 3 individuals from management who were involved with an ACT team, while 4 line staff and 3 of management were involved with ACT at Time 2.

FIGURES

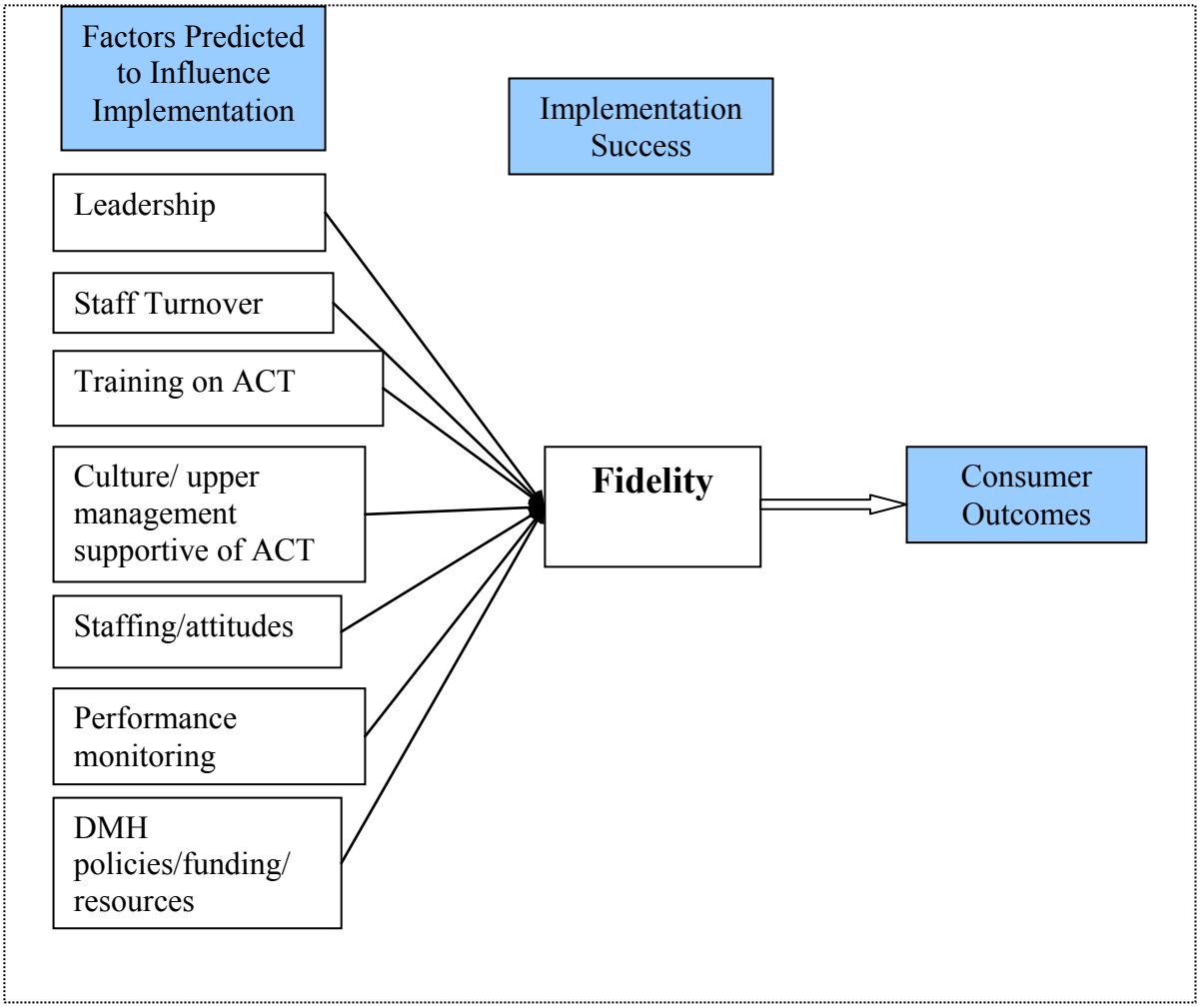

Figure 1. Hypothesized Factors that Influence ACT Implementation

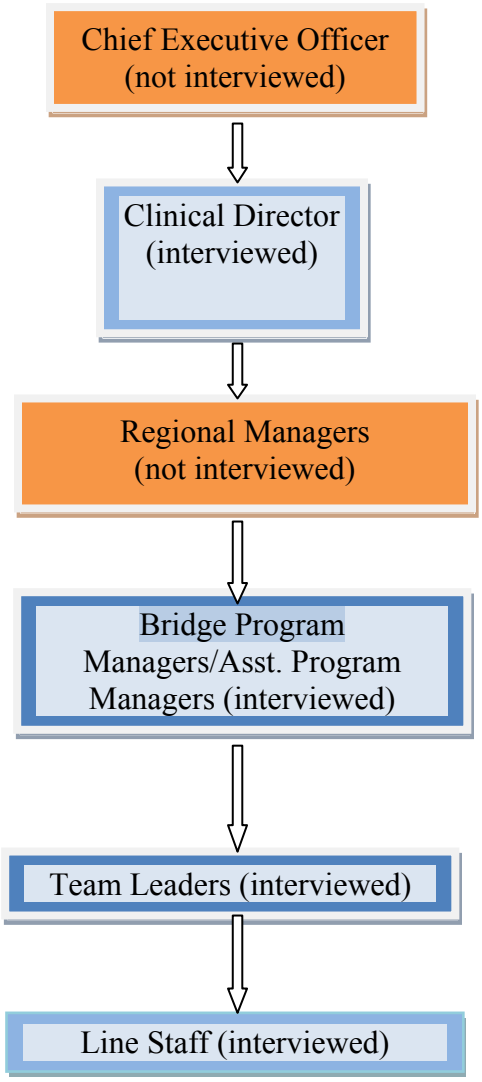

Figure 2. Organizational Positions Related to the Service Delivery Teams Represented in the Study

Note. The Clinical Director managed 5 Regional Managers, who themselves managed various programs in addition to overseeing the Bridge Programs in that region (e.g., housing).

APPENDICES

Appendix A. Evidence-Based Practice Attitudes Scale (EBPAS)

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy, treatment, or intervention refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured or predetermined way. Indicate the extent to which you agree with each item using the following scale:

0	**1**	**2**	**3**	**4**
Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent

Item	**Subscale**	**Question**
1.	3	I like to use new types of therapy/interventions to help my clients.
2.	3	I am willing to try new types of therapy/interventions even if I have to follow a treatment manual.
3.	4	I know better than academic researchers how to care for my clients.
4.	3	I am willing to use new and different types of therapy/interventions developed by researchers.
5.	4	Research based treatments/interventions are not clinically useful.
6.	4	Clinical experience is more important than using manualized therapy/interventions.
7.	4	I would not use manualized therapy/interventions.
8.	3	I would try a new therapy/intervention even if it were very different from what I am used to doing.
		For questions 9–15: If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:
9.	2	it was intuitively appealing?
10.	2	it "made sense" to you?
11.	1	it was required by your supervisor?
12.	1	it was required by your agency?
13.	1	it was required by your state?
14.	2	it was being used by colleagues who were happy with it?
15.	2	you felt you had enough training to use it correctly?

Note: Subscale 1 = Requirements; 2 = Appeal; 3 = Openness; 4 = Divergence

Appendix B. National EBP Implementation Project Scales

"How I feel personally about ACT"

Circle the number that expresses how you feel about each statement:

1= strongly disagree, 2= disagree, 3= unsure, 4= agree, 5= strongly agree

1. I understand the ACT model completely:	1	2	3	4	5
2. ACT provided me with a significant advantage over what we were previously providing:	1	2	3	4	5
3. I am committed to the implementation:	1	2	3	4	5
4. I am motivated to implement ACT:	1	2	3	4	5
5. ACT is consistent with my philosophy and mission of care:	1	2	3	4	5
6. The methods and techniques of ACT are consistent with the general mode of providing services at my workplace	1	2	3	4	5
7. Implementing ACT has required significant change in my daily practice:	1	2	3	4	5
8. Implementing ACT has required me to make a great deal of change in how I provided consumer care:	1	2	3	4	5
9. It is important to me that ACT is based on scientific research:	1	2	3	4	5

"Aspects of Implementing ACT in my Workplace"

Circle the number that expresses how you feel about each statement:

1= strongly disagree, 2= disagree, 3= unsure, 4= agree, 5= strongly agree

1. The agency is committed to implementing ACT	1	2	3	4	5
2. Upper management is supportive of implementing ACT	1	2	3	4	5
3. My supervisor is supportive of implementing ACT	1	2	3	4	5
4. My colleagues generally support implementing ACT	1	2	3	4	5
5. I support implementing ACT	1	2	3	4	5
6. There is enough support for ACT to help maintain implementation	1	2	3	4	5
7. There is consensus to continue providing ACT	1	2	3	4	5
8. People are committed to practicing ACT	1	2	3	4	5
9. It has been easy to implement ACT	1	2	3	4	5
10. Since implementing ACT I have noticed greater benefits for the consumer	1	2	3	4	5

"Conditions that Can Help or Hinder the Implementation of a Practice" (modified to read ACT or CST instead of EBP)

Circle the number that expresses how you feel about each statement:

1= strongly disagree, 2= disagree, 3= unsure, 4= agree, 5= strongly agree

1. Training and supervision are adequate to allow me to feel competent in providing ACT services	1	2	3	4	5
2. Funding mechanisms support ACT	1	2	3	4	5
3. Staff are given feedback about consumer outcomes to inform whether ACT is an improvement	1	2	3	4	5
4. Staff are skeptical about the added value of ACT	1	2	3	4	5
5. There is intense work pressure on staff carrying out ACT	1	2	3	4	5

Appendix C. Multifactor Leadership Questionnaire

Multifactor Leadership Questionnaire (MLQ) Rater Form (5x-Short)

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

THE PERSON I AM RATING…

1. Provides me with assistance in exchange for my efforts…….0 1 2 3 4
10. Instills pride in me for being associated with him/her……0 1 2 3 4
24. Keeps track of all mistakes…….0 1 2 3 4
28. Avoids making decisions……0 1 2 3 4
44. Increases my willingness to try harder……...0 1 2 3 4

Note. The MLQ consists of 45 items. Due to copyrighting only a subset of 5 items could be included here.

VITA

VITA

Jenna Lynn Godfrey

EDUCATION

2010 **Doctor of Philosophy**
Clinical Rehabilitation Psychology (APA Accredited)
Indiana University-Purdue University Indianapolis
Indianapolis, IN

Dissertation: Re-Implementing Assertive Community Treatment: One Agency's Challenge of Meeting State Standards
Chair: Gary Bond, Ph.D.

2006 **Master of Science**
Clinical Rehabilitation Psychology (APA Accredited)
Indiana University-Purdue University Indianapolis
Indianapolis, IN

Thesis: The Relationship Between Level of Functioning and Quality of Life in Elderly Individuals with Severe Mental Illness
Chairs: Gary Bond, Ph.D. and Jovier Evans, Ph.D.

2002 **Bachelor of Science**
Psychology
Indiana University, Bloomington, IN
Honors in Psychology, High Distinction, and *Phi Beta Kappa*

CLINICAL EXPERIENCE

2009-2010 **Pre-doctoral Psychology Intern**
Durham VA Medical Center, Durham, North Carolina
Director: Loretta Braxton, Ph.D.
Supervisors: Jeffrey White, Ph.D.; Tracey Carson, Ph.D.; Mary Becker, Ph.D.; Jack Edinger, Ph.D.; Patrick Calhoun, Ph.D.; Carolina Clancy, Ph.D.

Completed an internship at the Durham VA Medical Center that followed a scientist-practitioner philosophy and provided broad-based, generalist training in clinical assessment, psychotherapy, consultation, research, and clinical supervision. Provided individual and group therapies and worked closely with a diverse group of veterans who were struggling with medical and psychological health problems. Researched and administered evidence-based practices for PTSD and other mental disorders. Served as a member of several multidisciplinary teams and provided consultation to other disciplines, e.g. psychiatry and nursing. Rotations included: Outpatient Mental Health, Rehabilitation Psychology, PTSD Clinic, and Medical Psychology.

Spring 2008 **Practicum Student**
University Hospital Psychiatry Clinic, Indianapolis, IN
Supervisor: Jeff Lightfoot, Ph.D.

Developed advanced cognitive behavioral skills by counseling individuals with bipolar disorder, depression, obsessive-compulsive disorder, generalized anxiety disorder, and personality disorders. Conducted intake assessments and provided outpatient individual cognitive behavioral therapy.

Spring 2007 **Practicum Student**
Adult and Child Community Mental Health Center
Pathway's Clubhouse, Indianapolis, IN
Supervisors: Jim Dilger, MSW, LSW and John Guare, Ph.D.

Assisted in the implementation of an evidence-based practice (Illness Management and Recovery; IMR) serving adults with severe mental illness. Provided individual, group, and milieu therapy as well as vocational skills training, computer and educational assistance, and health interventions (e.g. led members in exercise programs). Group coordinator for the weekly Wellness group (typically 5-7 individuals in attendance). Administered manualized IMR treatment and tracked consumer outcomes. Supervised two Peer Specialists who were administering IMR on a weekly basis. Taught basic therapy skills to the Peer Specialists in addition to IMR skills, which includes aspects of motivational interviewing, cognitive behavioral therapy, and psychoeducation. Created psychoeducational materials that were distributed to clubhouse members and their families.

Spring 2006 **Practicum Student**
Alzheimer's Research and Training Center
Department of Psychiatry, Indiana University School of Medicine
Supervisor: Dan Rexroth, Psy.D.

Conducted neuropsychological testing on 22 middle-aged to older adults and 1 pre-operative young adult. One assessment was inpatient. The population included culturally and economically diverse adult outpatients suffering neurological and cognitive deficits resulting from dementia, traumatic brain injury, stroke, and other disease. Attended biweekly case conferences that examined unusual cases. Administered measures of personality, symptomatology, intelligence, achievement, cognitive functioning, memory, and executive functioning. Wrote integrated reports of psychological, neurological, and cognitive findings for referring physicians, presented at a case conference, and attended a brain slicing that determined accuracy of diagnosis.

Fall 2005 **Practicum Student**
Larue Carter Memorial Hospital, Indianapolis, IN
Supervisor: Melissa Ertl, Ph.D.

Developed skills in individual, milieu, and group therapy working with adolescent girls at an inpatient, state psychiatric hospital. All of the 18 girls on the unit had past sexual abuse and conduct disorders. Designed and implemented Healthy Relationships Group and co-led four other ongoing psychotherapy groups: Medication Management/Education, Coping Skills: MR and cognitively impaired, Coping Skills: advanced, and substance abuse education. Provided weekly individual therapy to three girls dealing primarily with anger and grief. Family therapy was provided for one girl and her mother. Participated in assessment, treatment planning, and weekly multidisciplinary rounds with psychiatrists, psychologists, social workers, and nurses. Administered, scored, wrote the report and explained findings of the Woodcock Johnson III to one adolescent girl.

2005-2006 **Practicum Student**
Roudebush VA Medical Center, Indianapolis, IN
Supervisor: Paul Lysaker, Ph.D.

Developed cognitive behavioral and general therapeutic skills by providing outpatient individual and group therapy to veterans with severe mental illness. Provided individual therapy to men with schizophrenia, poly-substance abuse, and an individual with terminal cancer who was suffering from severe depression. Two males with schizophrenia and the male suffering from depression were long-term psychotherapy clients (12+months). Provided family therapy on three occasions. In addition, conducted neuropsychological assessments on two inpatient males. Led two open groups in Day Treatment (now PRRC) on a weekly basis: general processing group and a current events group. Led an Integrated Dual Disorders Treatment (IDDT) group for four weeks.

2003-2004 **Pre-Practicum Student**
IUPUI Counseling and Psychological Services
Supervisors: Laura Matthews, Ph.D. and John McGrew, Ph.D.

Developed general therapeutic skills by conducting intake assessments and providing individual counseling to students at Indiana University Purdue University Indianapolis (IUPUI). All sessions were either video-taped or viewed directly by a supervisor and processed afterwards.

Summer 2002 **Mental Health Aide**
Woodlands Rehabilitation Center, Cassopolis, MI
Supervisor: Sandra Levine, Ph.D.

Provided in-home care and assistance to families who have adolescents with developmental disabilities. Worked with a boy who had autism and another boy who had fetal alcohol syndrome. Provided training in life skills and family counseling.

Summer 2001 **Mental Health Aide**
Woodlands Rehabilitation Center, Cassopolis, MI
Supervisor: Sandra Levine, Ph.D.

Worked with developmentally disabled adults at a sheltered workshop and co-led groups to teach daily living skills (e.g. money management, cooking, current events). The adults at this facility were of diverse ethnicities and represented a wide range of ages.

RESEARCH EXPERIENCE

2007-2010 **Research Coordinator**
Dissertation Research, Thresholds Rehabilitation Center, Chicago, IL and IUPUI
Chair: Gary Bond, Ph.D.

"Re-Implementing Assertive Community Treatment: One Agency's Challenge of Meeting State Standards."

Abstract: Assertive Community Treatment (ACT) is a widely implemented evidence-based practice for consumers with severe mental illness. However, fidelity to the model is variable and program drift, in which programs decrease in fidelity over time, can occur. Given substantial variability in fidelity and program drift in evidence-based practices, a study to examine how to *re*-implement ACT to high fidelity on established teams was warranted. The present study examined three teams providing moderate fidelity services prior to a state-wide policy change to the definition of ACT. Two of the teams attempted to implement ACT in accordance with state standards, while the third team served as a quasi-control for factors related to other state policy changes, such as a change to the funding mechanism. The implementation effort was examined using qualitative and

quantitative measures over a 14-month period at a large, psychosocial rehabilitation center. Themes that were common across all three teams included the perceived negative impact of fee-for-service, ambiguity of stipulations and lack of guidance from the Department of Mental Health (DMH), difficulties with the managed care organization, importance of leadership within the agency, and familiarity with the services. Perceived barriers specific to the implementation of ACT standards included DMH stipulations, staff turnover, lack of resources, and implementation overload, i.e., too many changes at once. One team also had the significant barrier of a misalignment of requirements between two funding sources. Staff attitudes represented both a facilitator and a barrier to ACT implementation, while management being supportive of ACT was viewed as a major facilitator. One of the two teams seeking ACT status was rated at high fidelity within 6 months and maintained high fidelity throughout the study. The other team seeking ACT status never achieved high fidelity and decertified from ACT status after 6 months. The agency's focus on productivity standards during the implementation effort hampered fidelity on the two teams seeking ACT status and greatly contributed to burnout on all three teams. The team achieving ACT status overcame the barriers in the short-term; however, DMH requirements may have threatened the long-term sustainability of ACT at the agency.

2008-2009 **Visiting Scientist**
Global Health Outcomes Research, Neuroscience Platform,
Eli Lilly and Company, Indianapolis, IN

Served as the Global Health Outcomes Research Scientist for Zyprexa (olanzapine) as well as pre-market neuroscience molecules. I managed several large-scale research projects, gained experience with randomized control trials, presented research at APA, and authored one manuscript investigating factors that influence adherence to antipsychotic medication. Additionally, represented health outcomes' interests on various multidisciplinary teams with individuals throughout the world and learned how to effectively work in a diverse team setting.

2004-2008 **Research Assistant**
ACT Center of Indiana, Indianapolis, IN
Supervisor: Michelle P. Salyers, Ph.D.

Conducted research on evidence-based practices for individuals with severe mental illness with a particular emphasis on implementation and outcomes. Served as project manager on four main studies (described below) and performed supportive tasks such as grant writing, IRB submission, and database creation on several other projects. Additionally, gained experience assessing program fidelity (assertive community treatment and illness management and recovery) and provided consultation to mental health providers on how to improve services.

State-wide Implementation of Illness Management and Recovery. This was a 4-year SAMHSA-funded project to examine the process of IMR implementation

and consumer outcomes in 7 mental health centers across Indiana. We examined the fidelity of implementation every six months and changes in illness self-management, hope, and satisfaction with services over a period of 2 years. For this project I conducted fidelity assessments, managed the data collection and analysis, and I am a co-author on the manuscript detailing the implementation effort and consumer outcomes.

Validation of the Illness Management and Recovery Scales. This project examined the psychometric properties of the Illness Management and Recovery (IMR) Scales (consumer and clinician versions). For this project I managed the data collection and analysis, presented the findings at a conference, and I am a co-author on the publication. The IMR Scales were found to have good psychometric properties and can be useful in determining effectiveness of the IMR program and treatment planning (e.g. assist with the formulation of goals) with consumers with severe mental illness.

Implementation of Illness Management and Recovery at Thresholds. Thresholds, a large psychosocial rehabilitation center in Chicago, implemented Illness Management and Recovery throughout their agency. We helped Thresholds track the implementation process and consumer outcomes over a 2 year period. For this project I managed data collection and analysis. Additionally, I am a co-author on the submitted manuscript.

Outcomes-based Supervision on Assertive Community Treatment Teams. We provided training to ACT team leaders throughout the state on how to effectively implement outcomes-based supervision. Outcomes-based supervision involves using outcome data (e.g. employment, days hospitalized, etc.) to assess strengths and weaknesses in order to develop goals and a performance plan designed to improve consumer outcomes. This project studied the impact on consumer outcomes up to 2 years after training and determined the extent to which goals and strategies developed in the training were carried out. My responsibilities included interviewing the team leaders at follow-up, managing data collection and analysis, and presenting the findings during a 90-minute workshop at the Assertive Community Treatment Association conference.

2007 **Summer Intern and Consultant**
Eli Lilly and Company, Indianapolis, IN
Supervisor: Amy Duhig, Ph.D.

Learned the mechanisms behind research in the pharmaceutical industry and completed an extensive literature review on the various consequences (e.g. medical, psychological, social, etc.) of heavy drinking. Collaborated with the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to present evidence that a reduction of heavy drinking should be a viable alternative to an 'abstinence only' endpoint in clinical trials.

8/2003-5/2004 **Research Assistant**
Indiana University Purdue University Indianapolis (IUPUI)
Supervisor: Jovier Evans, Ph.D.

Examined level of functioning, quality of life, and neuropsychological measures in older adults with severe mental illness. Administered diagnostic measures (e.g. SCID) as well as measures of symptomatology, mental status, cognitive functioning, memory, intelligence, executive functioning, quality of life, activities of daily living, and instrumental activities of daily living. This research culminated in my Masters thesis and a fellow graduate student's dissertation.

2003-2006 **Research Coordinator**
Masters Thesis Research, IUPUI
Co-chairs: Jovier Evans, Ph.D. and Gary Bond, Ph.D.

"The relationship between level of functioning and quality of life in elderly individuals with severe mental illness" examined older adults with severe mental illness residing in both assisted care and independent living to determine the correlation between functioning and quality of life. We also examined the possibility of independent living serving as a mediating variable between functioning and quality of life. A total of 46 consumers completed the study. The results suggest functioning was not related to either objective or subjective indicators of quality of life. Global subjective quality of life was largely influenced by satisfaction within the various life domains and depressive symptoms. Living arrangement was highly related to satisfaction with housing and this correlation was statistically greater than the relationship with the other life domains save satisfaction with finances. Support is provided for the use of interventions aimed at securing independent living, such as Supported Housing, in order to positively impact satisfaction with life.

2000- 2003 **Undergraduate Research Assistant**
Indiana University, Bloomington, IN
Supervisor: William Hetrick, Ph.D.

Examined the etiology of schizophrenia through EEG testing, neuropsychological instruments, diagnostic measures, and structured interviews. Gained experience administering diagnostic measures, symptom rating measures, mental status exams, neuropsychological instruments, tests of malingering, and personality measures. Conducted interviews and administered measures to both community samples and individuals with schizophrenia.

> *Assessment of Perceptual Anomalies.* Proposed, designed, and carried out an honors thesis. The study found a measure of sensory gating (the Sensory Gating Inventory) was significantly related to a measure of perceptual anomalies (the Structured Interview for Assessing Perceptual Anomalies), providing some support for the sensory gating hypothesis of schizophrenia. Responsibilities

included designing the study, administering, scoring, and interpreting the measures, analyzing the data, and presenting the findings at an honors banquet.

Compatibility of Traditional and Computerized Administrations of Neurocognitive Assessments. Administered 12 common neurocognitive assessments in both traditional paper-and-pencil format and computerized format to a community sample. We found comparable results between the two methods of administration with less time required and a reduced risk of administrator error with the computerized format. Duties included administering, scoring, and interpreting the measures, analyzing the data, and presenting at the International Neuropsychological Society Conference.

Neurocognitive Deficiencies in Individuals with Schizophrenia. This study examined the performance of individuals with schizophrenia on several neurocognitive instruments. My responsibilities were to administer a battery of instruments to approximately 35 individuals with schizophrenia, score the instruments, and enter the data into a database for analysis. Data analysis was not completed at the time I left the lab.

PUBLICATIONS

Liu-Seifert, H., Osuntokun, O., **Godfrey, J.L.,** Feldman, P. (2010). Patients' perspectives on antipsychotic treatments and their associations with clinical outcomes. *Patient Preference and Adherence* 2010 (4): 369 – 377. DOI 10.2147/PPA.S12461

Tsai, J., Bond, G., Salyers, M.P., **Godfrey, J.L.,** Davis, K. (2010). Housing preferences and choices among adults with mental illness and substance use disorders: A qualitative study. *Community Mental Health Journal* 46 (4): 381-388.

Godfrey, J.L., Detke, H.C, Montgomery, W.S., Zhao, F., McDonnell, D. (2009). [Published Abstract]. Quality of life and patient reported outcomes: Comparisons of individuals with schizophrenia treated with oral and long-acting injectable formulations of olanzapine. *Value in Health* 12(7).

Liu-Seifert, H., Osuntokun, O., **Godfrey, J.L.,** Feldman, P. (2009). [Published Abstract] Reasons for adherence to antipsychotic treatment: The patient's perspective. *World Journal of Biological Psychiatry* 10 (suppl. 1).

Salyers, M.P., **Godfrey, J.L.,** McGuire, A.B., Gearhart, T., Rollins, A.L., Boyle, C. (2009). Implementing illness management and recovery to consumers with severe mental illness. *Psychiatric Services* 60: 483-490

Salyers, M.P., **Godfrey, J.L.,** Mueser, K.T., Labriola, S. (2007). Measuring illness management outcomes: A psychometric study of clinician and consumer rating scales for illness self management and recovery. *Community Mental Health Journal 43*: 459-481.

SUBMITTED MANUSCRIPTS

Wilkniss, S., **Godfrey, J.L.,** Sniderman, L., Salyers, M.P. (in review). Implementation and consumer outcomes of Illness Management and Recovery at a community mental health center. Community Mental Health Journal.

Spath, M., **Godfrey, J.L.,** Bell, L. (in review). Fostering collaboration: An interdisciplinary educational project. Journal of Nursing Education.

PRESENTATIONS

Godfrey, J.L., Detke, H.C, Montgomery, W.S., Zhao, F., McDonnell, D. (October 2009).
Quality of Life and Patient Reported Outcomes: Comparisons of Individuals with Schizophrenia Treated with Oral and Long-Acting Injectable Formulations of Olanzapine. Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 12th Annual European Congress. Paris, France.

Liu-Seifert, H., Osuntokun, O., **Godfrey, J.L.,** Feldman, P. (June 28-July 2, 2009). *Reasons for*
Adherence to Antipsychotic Treatment: The Patient's Perspective. Poster presentation at the 9th World Congress of Biological Psychiatry. Paris, France.

Liu-Seifert, H., Osuntokun, O., **Godfrey, J.L.,** Feldman, P. (May 2009). *Reasons for Adherence*
to Antipsychotic Treatment: The Patient's Perspective. Poster presentation at the American Psychiatric Association (APA) Annual Meeting. San Francisco, California.

Taylor, A., Spath, M., **Godfrey, J.,** Dehn, J., Barnett, M., and Bell, L. (October 2007). *Communication with Families in Healthcare Transitions: Ethical Concerns arising from Conflicting Personal, Societal and Professional Values.* Poster presentation at the International Conference on Communication in Healthcare. Charleston, South Carolina.

Godfrey, J., Salyers, M.P**.,** Mueser, K.T., Labriola, S. (February 2006). *Psychometrics of a Recovery Scale.* Paper presentation at the Sixteenth Annual Conference on State Mental Health Agency Services Research, Program Evaluation, and Policy. Baltimore, Maryland.

Brenner, C.A., **Godfrey, J.,** Sandman, C.A., O'Halloran, J.P., Hetrick, W.P. (February 2003). *Compatibility of Traditional and Computerized Administrations of 12 Common Neurocognitive Assessments.* Poster presentation at the International Neuropsychological Society (INS) Conference. Honolulu, Hawaii.

OTHER PROFESSIONAL ACTIVITIES

Godfrey, J. and Rollins, A. (Feb 2008 and July 2008). *Illness Management and Recovery: Consumer Outcomes and Implications for Program Improvement.* Was invited to make presentations to clinicians and senior staff at Adult and Child Community Mental Health Center regarding their outcomes from the SAMHSA-funded study and next steps for improving services. Indianapolis, Indiana.

Godfrey, J., Salyers, M.P., McClow, D. (May 2007). *Outcomes-Based Supervision on ACT Teams.* Co-led a 90 minute workshop at the Assertive Community Treatment Association (ACTA) Conference. Grand Rapids, Michigan. Detailed the logistics of how to implement Outcomes-based supervision on assertive community treatment teams. Outcomes-based supervision involves using outcome data (e.g. employment, days hospitalized, etc.) to assess strengths and weaknesses in order to develop goals and a performance plan. Presented data on how developing strategies to improve consumer outcomes can provide beneficial results to consumers.

Godfrey, J. (May 2006). *Illness Management and Recovery: Overview and Development of a Recovery Scale.* Was invited to make a presentation to the Mental Health Statistics Improvement Program (MHSIP) Midwest Users Group regarding the IMR program and how to use the IMR Scale to improve services. Indianapolis, Indiana.

AWARDS AND FELLOWSHIPS

2010-2011	Psychosocial Rehabilitation Fellowship, Palo Alto VA Medical Center
2008-2009	Visiting Scientist Fellowship, Eli Lilly and Co., Indianapolis, IN
2003	Research Investment Fund Fellowship Recipient, IUPUI, Indianapolis, IN
2001	*Phi Beta Kappa*, Indiana University, Bloomington, IN
2001	Mortar Board, Indiana University, Bloomington, IN
2001	Golden Key Honour Society, Treasurer, Indiana University, Bloomington, IN
2001	*Psi Chi*, Indiana University, Bloomington, IN
2001	Honors College Undergraduate Grant ($600), Indiana University, Bloomington, IN
2001	Undergraduate Research and Creative Activity Partnership Award ($1500), Indiana University, Bloomington, IN

TEACHING EXPERIENCE

Spring 2009 **Course Instructor,** Abnormal Psychology, Department of Psychology, IUPUI, Indianapolis, IN

Developed and delivered lectures to undergraduate students on the various classifications of mental illness.

Spring 2007 **Course Instructor**, Psychology as a Social Science, Department of Psychology, IUPUI, Indianapolis, IN
Supervisor: Lisa Ehrmann, Ph.D.

Developed and delivered lectures to undergraduate students in an introductory Psychology course.