Role of Context, Resources, and Target Population in the Fidelity of Critical Time Intervention

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Objective: The goal of this study was to understand departures from a model program, critical time intervention (CTI), when used with a population of men with mental illness who were leaving prison, a new population for the intervention.

Methods: A fidelity study was conducted with the *CTI Fidelity Scale Manual,* and six program staff participated in semistructured interviews. Thematic analysis of interviews supplemented information on departures from the model.

Results: The overall fidelity score indicated a well-implemented program, but low scores on early engagement, early linking with community resources, monitoring the transfer of services from CTI to community services, and nine-month follow-up were related to the context of the prison setting, the population of men leaving prison, and environmental resources.

Conclusions: The setting in which evidence-based practices are applied, the environmental resources available, and the target population may affect program fidelity.

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Evidence-based practices are being applied increasingly in regard to individuals with mental illness who are involved with the criminal justice system (1) and yet whose outcomes have been mixed (2). Adopting evidence-based interventions for this population may be difficult because of individuals' complex needs and circumstances (3). In addition, forensic settings, impoverished communities, and characteristics of the target population itself may also impede the effectiveness of evidence-based practices for this population. This report examines the impact of context, resources, and target population on the implementation of critical time intervention (CTI) for men with mental illness who are leaving prison.

In addition to improving clinical outcomes, evidence-based practices adapted for use with detainees also seek to improve public safety through the reduction of recidivism, parole violations, or shortened lengths of incarceration; implementation thus often leads to adaptations of the original practice (1). For example, assertive community treatment's transition to forensic assertive community treatment often includes additional elements, including a probation officer on the team, a supervised residential component, or residential substance abuse treatment (4), which aim to improve criminal outcomes in addition to the improved psychiatric conditions associated with the original model. These adaptations typically address differences in the target population (that is, substance use or criminogenic factors) but overlook contextual and environmental conditions that may also affect the capacity of the intervention toward favorable individual and public safety outcomes.

One concern about adaptations of evidence-based practices for persons with criminal justice involvement is that they may undermine the fidelity of a confirmed practice (1). The challenge is to balance fidelity of the original, developed model that has acquired the evidence base (5) with the need to adapt the model for a real-world setting to accommodate a public safety perspective. CTI, developed to help vulnerable individuals through critical periods of transition and most commonly applied to the transition to the community from homeless shelters and hospitals, is the most recent evidence-based practice applied to the context of community reentry by former detainees (6). This study, embedded in a larger randomized controlled study examining the effectiveness of CTI for men leaving prison, examined challenges to CTI program fidelity.

METHODS

CTI emphasizes periods of transition from shelters or institutions to the community and is characterized by engagement prior to transition, the provision of emotional and practical support, and sustainable linkage to services, family, and friends (7). CTI is a nine-month, time-limited intervention comprising three phases: transition to the community, try-out, and transfer of care. The first phase focuses

on active, supportive linkages to community resources, the second phase evaluates the linkages and fine-tunes linkages and support systems as needed, and the third phase formally transfers responsibility for coordination of support to other providers (7). CTI has been shown to be a cost-effective measure for reducing homelessness among persons with serious mental illness (8) and has been adopted for other settings, including psychiatric hospitals, and other populations, including veterans and families (7).

The fidelity study was conducted with the *CTI Fidelity Scale Manual* (9) during the third year of the five-year randomized controlled trial. This was a one-time event, and staff members were provided feedback. [The specific procedures and complete results for the fidelity study, including a table of scores on each construct, are available in an online supplement.] In addition to using the fidelity measure, which included chart reviews, attendance at team meetings, interviews with supervisory staff, and accompanying case managers on community visits, expanded semistructured interviews were conducted with all program staff. The six staff members (two previous case managers, two current case managers, one supervisor, and one psychiatrist) involved in the program were interviewed about the training they received on the model, their understanding of the model, how it worked with this population, changes they would make to the model, and additional resources needed.

The fidelity assessment is organized into three major categories: components (compliance fidelity), structure (context fidelity), and quality (competence fidelity). Low-scoring items occurred in the components and quality categories, indicating possible departures from model implementation. The low-scoring competence fidelity items stemmed from problems with documentation (online supplement) and were eliminated from further analysis, given that the low-scoring items on compliance fidelity constitute the crux of departures from the model program in this setting with this population. Two researchers used the remaining items as guides in identifying statements in the interview data and meeting notes. Using thematic analysis methods (10), we then coded these excerpts for content concerning barriers or difficulties with implementing particular aspects of the model. Themes were generated from codes for items from interviews, meeting notes, and progress notes that focused on problems with implementing these aspects of the model. Finally, themes were reviewed against the data set for accuracy and representation.

Camden County, New Jersey, was the study site, and the setting itself is a critical factor in characterizing the potential challenges to model implementation. Camden City, within the county limits, is among the poorest in the nation; the city's rates of unemployment, crime, and high school dropout are the highest in the country (11). Its infrastructure has been decimated by generations of migration, deindustrialization, real estate speculation, and violence. Thus key community factors that support an intervention are not reliably present in Camden communities (12).

RESULTS

Compliance fidelity items with moderate to low scores not attributed to documentation errors included early engagement, early linking, monitoring of phase 3, and nine-month follow-up, and they highlight potential implementation problem areas. Difficulties in these areas stemmed from the prison context, the lack of community resources, and the population of men leaving prison and were reflected in the interviews, progress notes, and treatment team meetings. Because the study included only one supervisor and psychiatrist, we collectively identify them as "supervisory staff" in this section to protect their identities.

Early engagement, including pre-CTI engagement of consumers, is a hallmark of CTI and is necessary in building the foundation for aiding in the transition from institutional settings. One of the problems encountered by the treatment team was that mental health care consumers were inaccessible before their release from prison because of their somewhat remote locations. Participants could come from any one of six facilities, all over an hour away from Camden. As related by a member of the supervisory staff: "We can't go to the prison any time we want, and the distance to get to the different prisons [is far]. So it's different from having a case manager who is on site working with individuals who are at a shelter. Before they even transition into the community, they would have been . . . engaged . . . more closely . . . . A lot of times most of our clients, we'll see them just once before they get discharged into the community."

In addition to location challenges, there were also barriers at the prisons. Staff reported that they were not allowed to leave any papers with inmates, making it difficult to provide contact information so inmates would know how to get in touch with staff upon release. The context of the prison setting provided both logistical and tangible barriers to early engagement.

A critical component of early linking is escorting individuals from the institution to the community. Because of the distances of the prisons from the agency and unreliability of information surrounding release dates and times, staff did not escort consumers from prison. Instead the consumer was instructed to contact the team upon release. Many ex-inmates did not contact the team promptly upon discharge, which prevented the other components of early linking (59% compliance) from occurring. Of the 18 cases reviewed on this construct, the team had no contact with four individuals, did not escort ten consumers to residence or first mental health appointment, and did not hold a joint meeting with family or other providers for nine cases during the three-month assessment frame. A discussion of "missing cases" was often part of team meetings, because up to 20% of cases discussed in team meetings concerned how to locate individuals. Of inmates who made contact upon release, the team met with

them promptly and fulfilled the early-linking components of CTI.

Early linking was also difficult because of state and city policies and practices that contributed to low compliance with joint meetings with providers. For instance, in New Jersey, individuals convicted of misdemeanor or felony drug convictions are denied general assistance (GA) through public aid, which affected almost 40% of individuals in the study. City practices that make access to shelter services, behavioral health care, or transitional housing dependent on having GA made many of these services inaccessible to those denied GA, as a case manager explained: "If you have a [drug] distribution charge, then [the] only thing you can get is food stamps. . . . Then if you don't have the benefits, you cannot go to a day program. You cannot go to an [intensive outpatient program]. You cannot go to a program [that] can give you medication. So there's a significant barrier there."

This limit on resources challenged the way case managers approached their work and resulted in some readjustments during the study, which included telling men with drug convictions about the limits on resources before their release and redoubling efforts to reunite consumers with families who may be able to provide tangible resources.

Although the team understood the three phases associated with CTI and the type and level of case manager activity associated with each phase, it was difficult to establish all linkages within the first three months because of the high level of need, barriers to resources, and time spent on engagement postrelease. Therefore, the final phase was rarely a monitoring phase (1% compliance), given that case managers were still meeting with consumers and primary linkages more than once every three weeks, which was reflected in progress notes, team meetings, and interviews with staff. One case manager commented, "I always kept the phase in mind because the ultimate goal evolves from self-reliance. . . . I was more . . . focused on the individuals' needs because, you know, we're trying to keep them out of prison. So if they're in that third phase and they still are addressing the things that maybe should have been [addressed] by the second phase—should have been completed, you know—you still have [to] address them and take each case by case."

Although case managers made diligent efforts to locate consumers postrelease, they were often unsuccessful in these efforts. Therefore, the compliance with nine-month follow-up was low because some individuals never received the minimal amount of services (seven months) and were not in contact with case managers at nine months postrelease (64% compliance).

The barriers to early engagement, the lack of resources in this community, and the many needs of this population contributed to the team's recommending that they needed more than nine months to complete this transitional intervention. As one of the supervisory staff members stated, "[What] I would say is maybe nine months is a little bit short for this group. . . . You have individuals in CTI who have significant mental illness, criminal histories with all of the components, so nine months probably [is] a little [short] for them. . . . I would say minimum [of] a year, but ideally 18 months, probably.

DISCUSSION

Contextual and environmental influences of the prison setting, the local resources, and the population affected CTI implementation. Pre-CTI engagement is especially difficult when the institutions are physically isolated and not easily negotiated by outsiders. Although Jarrett and colleagues (13) found that a prison-based CTI case manager permitted more time for engagement and planning than a community-based CTI case manager, a prison-based case manager may encounter difficulties in advocating for individuals and accessing appropriate community services. A community-based case manager with greater access to the prison could optimize pre-engagement while also developing and maintaining community resources. In environments where access to community resources is limited or inaccessible based on the economic, social, and political conditions, case managers need to work harder to leverage community and family supports. Although not used in this study, community advisory boards could be established to help to identify potential barriers to reentry, establish buy-in from community providers, and broaden access to community supports.

Time spent on engagement and location of individuals during the first phase coupled with the high needs of this population led to the extension of phases and to providing linkages via CTI instead of the community well into the final phase. These barriers to early engagement led consumers and providers to form working relationships "on the ground" and to extend continuous, active engagement well into the final phase of CTI. Adding a peer component to CTI for this population could facilitate engagement. Finally, linkages may be conceptualized more properly as a continuous activity, with times of greater or lesser intensity. Further research on the range of strategies in making linkages could be a rich area for further creativity and research. The results of this study provide insight about which components of this model program may be more difficult to implement under restrictive, underresourced environments with a transient population. However, a limitation of the study was that these findings are not yet linked to outcome data on CTI, so it is difficult to say whether they influenced the effectiveness of this intervention in this context.

It is not unusual for interventions to experience some drift as they become widely disseminated and implemented. As CTI is applied to a wider array of populations, corresponding research practices need to take into account both the context and complexity of systems in which the intervention will operate (14). Incorporating a more systematic approach to implementation of evidence-based practices that is sensitive to the many dimensions that affect implementation (15) is a necessary next step for CTI dissemination.

For example, in this study characteristics of the outer context (the social and political environment at local and state levels) posed significant constraints on the process of procuring resources for consumers, and the practitioners adapted to these constraints by modifying phase length and early linking functions.

CONCLUSIONS

Problems with the implementation of evidence-based practices are perhaps unavoidable as they are applied to new contexts and populations, especially in settings with limited resources, which are endemic among certain populations, such as those leaving jail or prison.

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