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Program Planning and Staff Competencies for Forensic Assertive Community Treatment: ACT-eligible versus FACT-eligible Consumers¹

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Abstract

Purpose—Forensic assertive community treatment (FACT) is a recent adaptation of the assertive community treatment (ACT) model; however, more information is needed about how FACT and ACT consumers differ and how FACT should be modified to accommodate these differences.

Methods—Linked, multisystem administrative data from King County, Washington were used to compare the demographic, clinical and criminal justice characteristics of ACT- and FACT-eligible consumers.

Results—FACT consumers were more likely to be male, persons of color and had more complex clinical profiles. Also, some FACT consumers were incarcerated for sex offenses and over half had violent offenses.

Conclusions—Traditionally, ACT teams avoid serving consumers with personality disorders, violent consumers and sex offenders; however, given increased use of mandated outpatient treatment and mental health courts, FACT teams may have less discretion to choose whom they serve. The addition of clinical interventions and other modifications may be particularly important for FACT teams.

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Keywords

severe mental illness; criminal justice system; assertive community treatment; forensic assertive community treatment; program planning

Assertive community treatment (ACT) is an evidence-based practice for persons with severe mental illness (Dixon, 2000; Phillips, Burns, Edgar, Mueser, Linkins, & Rosenheck, 2001; Stein & Test, 1980) and is a multi-disciplinary, team-based approach with a small (1:10) staff-to-consumer ratio, 24/7 hour staff availability, and aggressive outreach (Bond, Drake, Mueser, & Latimer, 2001). ACT is best viewed as a platform for delivering services such as medication management, vocational rehabilitation, housing, and psychosocial interventions (Stein & Santos, 1998) and is one of the most widely studied interventions for persons with mental illness (Bond et al., 2001, Burns & Santos, 1995; Dixon, 2000; Marshall & Lockwood, 1999).

ACT has gone through a variety of adaptations and applications over the last 30 years, including urban and rural adaptations (Becker, Meisler, Stormer, & Brondino, 1999; Calsyn, Morse, Klinkenberg, Trusty, & Allen, 1998; et al., 1998; Dixon, Friedman, & Lehman, 1993; Lehman, Dixon, Kernan, DeForge, & Postrado, 1997), outreach to homeless persons (Dixon, Krauss, Kernan, Lehman, & DeForge, 1995) and adaptations for persons with mental illness and co-occurring substance use disorders (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998). More recently, a number of ACT teams around the country have expanded their focus to prevent recidivism among justice-involved consumers (i.e., forensic assertive community treatment [FACT] teams) (Cuddeback, Morrissey, & Cusack, 2008; Cuddeback, Morrissey, Cusack, & Meyer, 2009; Cusack, Morrissey, Cuddeback, Prins, & Williams, 2010; Lamberti, Weisman, & Faden, 2004; McCoy, Roberts, Hanrahan, Clay, & Luchins, 2001; Morrissey, Meyer, & Cuddeback, 2007).

The evidence that FACT, however, can reduce recidivism among justice-involved persons with severe mental illness is promising but a number of gaps in the literature remain (California Department of Corrections and Rehabilitation, 2005; Cusack, Morrissey, Cuddeback, Prins & Williams, 2010; Lamberti, Weisman, Schwarzkopf, Price, Ashton, & Trompeter, 2001; McCoy, Roberts, Hanrahan, Clay, & Luchins, 2004). In particular, ACT, unlike FACT, has well-established eligibility criteria and much is known about its service structure and expected outcomes. In the aforementioned studies of FACT, however, a variety of eligibility criteria were used (see Cuddeback et al., 2008) which is problematic because without a standard eligibility criteria FACT teams could have difficulty knowing how to adjust staffing, training and competencies in order to best meet the needs of their consumers. Moreover, understanding how ACT- and FACT-eligible consumers might differ on demographic and clinical characteristics is particularly important given the rapid dissemination of FACT, especially for program administrators and front-line service providers of justice-involved consumers.

For example, there is evidence that justice-involved consumers, in general, are more likely to be male, persons of color, homeless and have co-occurring substance use disorders and greater psychological disability (Fisher, Packer, Grisso, McDermeit, & Brown, 2000; Theriot & Segal, 2005). Moreover, there is evidence that justice-involved consumers are more likely to have one or more general medical problems compared to consumers who are not justice-involved (Cuddeback, Scheyett, Pettus-Davis, & Morrissey, 2010). To date, however, there have been no explicit comparisons of ACT and FACT consumers on demographic, clinical and criminal justice characteristics and this is an important gap in our knowledge. How are the characteristics of FACT consumers different from ACT consumers

and how might these differences drive FACT program staffing and training needs? Here, to address this gap in our knowledge, administrative data from multiple systems from King County, Washington are used to identify ACT- and FACT-eligible consumers and compare their demographic, clinical, and criminal justice characteristics.

Method

Design

An observational study design was used to compare the demographic, clinical, and criminal justice characteristics of FACT-eligible and ACT-eligible consumers. This study used 5.5 years (July 1, 1993 through December 31, 1998) of linked, administrative data from multiple public sectors in King County, Washington. Data from county mental health, county jail, local and state hospitals, local substance abuse treatment providers, and Medicaid were used to identify FACT- and ACT-eligible consumers and examine their demographic, clinical and criminal justice characteristics.

The data used in this study were partially identified in that they contained birth dates and service utilization dates. However, the data for this study were prepared by a third party who received identified data from multiple public systems, linked these data via a common set of personal identifiers, assigned dummy identifiers to each unique individual in the data set, and then stripped the linked files of all personal identifiers before providing them to the research team. This study and its parent study (see below) went through three separate review boards to ensure that the identities and confidentiality of subjects were protected.

The study protocol was reviewed for human subjects' protection by the Institutional Review Boards at the University of North Carolina at Chapel Hill, the University of Washington and Washington State Department of Social and Health Services Research and Data Analysis Division.

Sample

The data used in this study were collected as part of a larger study (Domino, Norton, Morrissey, & Thakur, 2004) and contain a census of all King County, Washington mental health, Medicaid, and jail users between July 1993 and December 1998. Data were linked in order to classify individuals into one of seven mutually-exclusive groups: jail only, Medicaid only, county mental health only, jail/Medicaid, jail/county mental health, Medicaid/county mental health, and jail/Medicaid/county mental health. Then, samples from each of these seven groups were drawn. A total sample size of 44,539 unique individuals was obtained.

Defining ACT-eligible and FACT-eligible consumers—First, among the larger sample of 44,539, a sub-sample of persons with severe and persistent mental illness, defined as persons having a diagnosis of schizophrenia, mood disorders (with a few exceptions such as single episode depression), delusional disorder, or other psychosis not otherwise specified and who were receiving Supplemental Security Income (SSI) and/or Social Security Disability Income (SSDI) at any point during the study period was identified (N = 1,453). Then, persons who were eligible for ACT, defined as having a severe mental illness and having three or more psychiatric hospitalizations within a one-year period were identified (Cuddeback, Morrissey, & Meyer, 2006). FACT eligibility was defined as having a severe mental illness and having three or more jail detentions within a one-year period (Cuddeback et al., 2008).

Measures

For each ACT- or FACT-eligible consumer, data on age in years, gender, race (white, black/other) were collected. In addition, an indicator of whether an individual was ever homeless during the 5.5-year study (coded 0 for No and 1 for Yes) was created. Dummy variables (coded 0 for No and 1 for Yes) were created for the following diagnoses: schizophrenia, affective disorder, psychotic disorder (NOS), delusional disorder, panic disorder, obsessive-compulsive disorder, generalized anxiety disorder, antisocial personality disorder, and posttraumatic stress disorder. Also, a dummy variable was created to indicate the presence of a co-occurring mental health and substance abuse disorder. Diagnostic data came from a variety of sources, including Medicaid records, community behavioral health records, and hospital records. In general, the diagnoses were provided by medical doctors, psychiatrists and trained mental health professionals.

Criminal offenses were enumerated from booking and admission data from the local jail. Criminal offenses were classified into one of the following seven categories: crimes against another person, drug offenses, minor offenses, property offenses, sex crimes and violent crimes. Then, criminal offenses were further categorized as non-violent misdemeanors, violent misdemeanors, non-violent felonies and violent felonies.

Data Analysis

For all of the analyses below, ACT or FACT eligibility status (coded as 0 for ACT-eligible and 1 for FACT-eligible) was the dichotomous independent variable. To examine differences in age between these groups, an independent-groups *t* test was used. To examine differences with regard to the remaining demographic and clinical indicators (all of which were coded as dichotomous variables), a series of chi-square tests were conducted and odds ratios with 95% confidence intervals were computed.

Results

Over the 5.5 year study, 33,293 county mental health users were enumerated of which approximately 4.4% (*N* = 1,453) were identified as having a severe and persistent mental illness. Of those with a severe and persistent mental illness, 45.0% (*n* = 654) met the eligibility criteria for ACT and 44.1% (*n* = 641) met the eligibility criteria for FACT. Among those who were identified as FACT-eligible, 14% (*n* = 89) were eligible for both ACT and FACT and were counted as FACT-eligible consumers.

As shown in Table 1, compared to ACT-eligible consumers, FACT-eligible consumers were more likely to be African American or other persons of color (43% vs. 30% for FACT and ACT, respectively) and male (74% vs. 48% for FACT and ACT, respectively). Also, compared to ACT-eligible consumers, FACT-eligible consumers were more likely to have experienced at least one episode of homelessness (46% vs. 19% for FACT and ACT, respectively). Also, although not shown in Table 1, ACT-eligible consumers were slightly older (*M* = 34.36, *SD* = 9.66) than FACT-eligible consumers (*M* = 33.00, *SD* = 8.67) and this difference was statistically significant ($t(929) = 2.41, p = .02$, unequal variances assumed).

Also shown in Table 1, FACT-eligible consumers were more likely to have a diagnosis of schizophrenia (74% vs. 66% for FACT and ACT, respectively), psychotic disorder (NOS) (48.67% vs. 29.07% for FACT and ACT, respectively), and antisocial personality disorder (20% vs. 6% for FACT and ACT, respectively). In addition, FACT-eligible consumers were more likely to be diagnosed with co-occurring substance abuse and mental illness (74% vs. 65% for FACT and ACT, respectively).

ACT-eligible consumers were more likely than FACT-eligible consumers to have a diagnosis of affective disorder (52% vs. 74% for FACT and ACT, respectively), panic disorder (8.62% vs. 3.43% for ACT and FACT, respectively) and posttraumatic stress disorder (12.94% vs. 6.55% for ACT and FACT, respectively).

The percentages of each group's criminal offenses for six crime categories are shown in Table 1. Across all six crime categories, FACT-eligible consumers were significantly more likely to have criminal offenses compared to ACT-eligible consumers. For both groups, minor crimes were the most common offense types (97% and 20% for FACT and ACT, respectively), followed by property crimes (73% and 9% for FACT and ACT, respectively), violent crimes (60% and 9% for FACT and ACT, respectively), crimes against another person (33% and 3% for FACT and ACT, respectively), drug crimes (30% and 1% for FACT and ACT, respectively), and sexual offenses (2% and 0.2% for FACT and ACT, respectively). Also shown in Table 1, FACT-eligible consumers were more likely to be detained due to a violent felony (52% vs. 8% for FACT and ACT, respectively) compared to ACT-eligible consumers.

Discussion

This study used linked administrative data to compare the demographic, clinical and criminal justice characteristics of FACT- and ACT-eligible consumers and contributes to the growing literature about FACT. Specifically, this study makes an explicit comparison of ACT- and FACT-eligible consumers and provides important information for communities that are developing new FACT teams or retooling existing ACT teams to serve justice-involved consumers.

Clearly, sampling location matters. Expectedly, the FACT sample closely mirrors the demographic characteristics of many local jails (i.e., disproportionate representation of males and persons of color); however, these findings have implications for program planning in that FACT program administrators should consider including more males and persons of color among FACT staff to more closely match the characteristics of FACT consumers. Also, with respect to training needs, given the higher proportions of persons of color among FACT consumers, training around issues of cultural competence may be particularly important.

Furthermore, in light of evidence that justice-involved consumers have more general medical problems compared to consumers with no criminal justice histories (Cuddeback et al., 2010), it is likely that FACT consumers will require careful screening for medical problems and greater collaboration with the primary care system, which has important implications for nurses and other medical professionals on FACT teams. Currently, there are a handful of strategies for integrating primary care and mental health treatment (Druss, Rohrbaugh, Levinson, & Rosenheck, 2001; Lorig, Sobel, Stewart, Brown, Bandura, Ritter et al., 1999); however, there is little information in the published literature about how these integration strategies need to be modified, if at all, to fit within the ACT model.

Compared to ACT consumers, FACT consumers were more likely to have diagnoses that suggest more profound impairments (i.e., more likely to have schizophrenia and co-occurring substance use disorders) and were more likely to have had experienced homelessness. Also, although high for both groups, the higher prevalence of co-occurring mental health and substance abuse disorders is notable and suggests that FACT teams must have specialized substance abuse treatment competencies, such as Integrated Dual Disorder Treatment ([IDDT] Drake et al., 1998) or Motivational Interviewing ([MI] Barrowclough, Haddock, Tarrier, Lewis, Moring, O'Brien et al., 2001; Miller & Rollnick, 1991).

FACT consumers were more likely to be diagnosed with antisocial personality disorders and this is particularly important for FACT teams to know in light of evidence that schizophrenia and antisocial personality disorder combine to create a number of challenges, such as increased homelessness, greater psychosis, higher rates of police contact and persistent criminality, increased violent and suicidal behaviors, and increased substance abuse (Gandhi, Tyrer, Evans, McGee, Lamont, & Harrison-Read, 2001; Hodgins & Cote, 1993; Moran, Walsh, Tyrer, Burns, Creed, & Fahy, 2003a; Moran, Walsh, Tyrer, Burns, Creed, & Fahy, 2003b; Moran &

Hodgins, 2004; Mueser, Drake, Ackerson, Alterman, Miles, & Noordsy, 1997; Mueser, Rosenberg, Drake, Miles, Wolford, Vidaver, & Carrieri, 1999; Tengstrom & Hodgins, 2002) and this is of particular concern given limited evidence that ACT is not particularly effective for consumers with personality disorders (Weisbrod, 1983). Traditionally, ACT teams have avoided consumers who have personality disorders, violent consumers and sex offenders with severe mental illness; however, as the use of mandated outpatient treatment (Monahan, Bonnie, Appelbaum, Hyde, Steadman, & Swartz, 2001) and mental health courts (Steadman, Davidson, & Brown, 2001) increases FACT teams may have less discretion to be selective about the consumers they serve. Moreover, the prevalence of antisocial personality disorders among the FACT consumers in this study could suggest that FACT staff need to be deliberate about assessing for antisocial personality disorder and may need specialized training around engaging and treating persons with severe mental illness with comorbid antisocial personality disorders. Effective interventions for antisocial personality disorder in the general population are limited, to date. However, treatments for prosocial skills and community housing and placements that support prosocial behaviors and limit opportunities to engage in crime or engage with people who are associated with crime are important (Moran & Hodgins, 2004).

Additionally, the presence of antisocial personality disorders could mean that engaging FACT consumers will be more difficult and will take more time and effort, which has implications for teams that have productivity and billing expectations to meet. Specifically, for most teams, particularly those dependent on Medicaid billing for sustainability, time spent trying to engage and enroll a hard-to-engage consumer is non-billable time and this could create pressure to shorten the engagement process and give up on consumers who need help the most (i.e., those who cycle in and out of local jails and hospitals). Flexible funding and sustainability plans that can accommodate slow caseload build-up and significant non-billable time could be particularly important for FACT teams, especially newly established teams.

It was no surprise that FACT consumers, compared to their ACT counterparts, were more likely to have committed crimes in all crime categories given the FACT sample was drawn from a local jail. However, the findings illuminate a number of key points. For example, over half of the FACT consumers were detained in jail for a violent offense. Much has been written about the link between mental illness and violence (Swartz, Swanson, Hiday, Borum, Wagner, & Burns, 1998; Walsh, Buchanan, & Fahy, 2002) but the findings here should not be interpreted in the context of this debate in that the sample in this study represents a very specific sub-population of persons with severe mental illness (i.e., those who were detained in a local jail). The point here is that FACT teams may need to be especially adept at recognizing and defusing potentially violent situations and may need clear policies to protect their safety and the safety of those they serve (i.e., travel in pairs, be accompanied by law enforcement under certain circumstances). These issues are salient for traditional ACT teams; however, FACT teams may need a heightened sense of awareness around the safety of staff and their consumers.

It is notable that a small percentage of the FACT consumers were detained in jail for sex offenses. Sex offenders with severe mental illness are a particularly complex population (Harris, Fisher, Veysey, Ragusa, & Lurigio, 2010) and may be particularly hard to serve given ever-tightening sex offender laws (Levenson, D'Amora, & Hern, 2007) and the multiple stigmas these individuals face. More information may be needed as to how ACT should be adapted to serve sex offenders with severe mental illness and this is an area for future research.

Strengths and Limitations

Strengths of this study include the use of a unique, linked administrative data set to identify and compare large population-based samples of ACT- and FACT-eligible consumers. Plus, this study is unique in that presents findings from a direct comparison of the demographic, clinical, and criminal justice characteristics of ACT- and FACT-eligible consumers for the purposes of helping communities understand better the characteristics and differences between these populations and the potential challenges and training needs inherent with serving them.

This study also has limitations. For example, none of the ACT- or FACT-eligible consumers in this study were actually enrolled in ACT or FACT programs at the time these data were collected; rather, available administrative data were used to simulate, in principle, how ACT and FACT consumers might differ if selected for their respective teams using standardized eligibility criteria. The use of standardized eligibility criteria is important in that ACT and FACT teams should target the most profoundly needy among persons with severe mental illness for services and providing services to those who do not meet established eligibility criteria could potentially waste scarce and valuable ACT and FACT resources and overserve consumers who could function just as well with less intensive services. More research is needed to understand the demographic, clinical and criminal justice characteristics of FACT consumers when standard eligibility criteria are applied. Nevertheless, to some extent, the FACT consumers in this study represent an exemplar caseload (i.e., high percentages of males, persons of color, psychotic disorders, co-occurring disorders and homelessness) to which the caseloads of real FACT teams could be compared.

The data used in this study are old and may not capture changes or trends in the demographic, clinical or criminal justice characteristics among persons with severe mental illness. However, it is unlikely that the profiles of ACT and FACT consumers have changed so much over the last several years that the profiles of ACT and FACT consumers presented here are markedly different than the profiles of more contemporary consumers. Moreover, a standard definition of severe and persistent mental illness was used to identify both study groups and this definition has been in existence since the early 1980s. Also, it is arguable that the gender and racial/ethnic constitution of our nation's jails have remained relatively stable over the last several years (i.e., misdemeanants, mostly males, disproportionately persons of color).

The data used in the paper are unique such that single and multiple system users can be tracked longitudinally. Linked data such as these are rare and the data used in this study may be the best available to answer questions about the demographic and clinical similarities and dissimilarities of FACT- and ACT-eligible consumers. Nevertheless, more research is needed with the consumers of ACT and FACT teams in order to replicate and validate the findings presented here and understand the demographic and clinical characteristics of FACT consumers for FACT program planning and staff training purposes.

Furthermore, data about the psychiatric and medical diagnoses enumerated in this study came from a variety of sources, including Medicaid records, community behavioral health

records, and hospital records. In general, the diagnoses were provided by medical doctors, psychiatrists and trained mental health professionals. Unfortunately little is known about the validity and reliability of these diagnoses. The limitations of administrative data such as these used in this study are well known and the data used in this study may contain errors, inaccuracies or omissions that affected the results in unknown ways. Lastly, caution generalizing the findings from one large urban community in the Pacific Northwest is warranted.

Conclusion

FACT teams must be staffed appropriately and equipped to deal effectively with the challenges presented by FACT consumers. Traditionally, ACT teams have avoided serving consumers with personality disorders and those who have committed violent and/or sex offenses; however, FACT teams may no longer have this discretion. Is ACT prepared for these new challenges? Future research should continue to explore the needs of FACT consumers and the development of best practices towards helping consumers of FACT remain stable in their communities and free from involvement with the criminal justice system.

References

- Barrowclough C, Haddock G, Tarrier N, Lewis SW, Moring J, O'Brien R, Schofield N, McGovern J. Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *American Journal of Psychiatry*. 2001; 158(10):1706–1713. [PubMed: 11579006]
- Becker RE, Meisler N, Stormer G, Brondino MJ. Employment outcomes for clients with severe mental illness in a PACT model replication. *Psychiatric Services*. 1999; 50(1):104–106. [PubMed: 9890590]
- Bond GR, Drake RE, Mueser KT, Latimer E. Assertive community treatment for people with severe mental illness: Critical ingredients and impact on patients. *Disease Management and Health Outcomes*. 2001; 9(3):141–159.
- Burns BJ, Santos AB. Assertive community treatment: An update of randomized trials. *Psychiatric Services*. 1995; 46(7):669–675. [PubMed: 7552556]
- California Department of Corrections and Rehabilitation. Mentally Ill Offender Crime Reduction Grant program: Overview of statewide evaluation findings. 2005. Retrieved March 23, 2005, from http://www.cdcr.ca.gov/DivisionsBoards/CSA/docs/miocrg_report_presentation.pdf
- Calsyn RJ, Morse GA, Klinkenberg WD, Trusty ML, Allen G. The impact of Assertive Community Treatment on the social relationships of people who are homeless and mentally ill. *Community Mental Health Journal*. 1998; 34(6):579–593. [PubMed: 9833199]
- Cuddeback GS, Morrissey JP, Meyer PS. How many assertive community treatment teams do we need? Results from a large, urban community. *Psychiatric Services*. 2006; 57(12):1803–1806. [PubMed: 17158499]
- Cuddeback GS, Morrissey JP, Kusack KJ. How many forensic assertive community treatment teams do we need? *Psychiatric Services*. 2008; 59(2):205–208. [PubMed: 18245167]
- Cuddeback GS, Morrissey JP, Cusack KJ, Meyer PS. Challenges to developing Forensic Assertive Community Treatment teams. *American Journal of Psychiatric Rehabilitation*. 2009; 22(3):225–246.
- Cuddeback GS, Scheyett AM, Pettus-Davis C, Morrissey JP. General medical problems of incarcerated persons with severe and persistent mental illness: A population-based study. *Psychiatric Services*. 2010; 61(1):45–49. [PubMed: 20044417]
- Cusack, KJ.; Morrissey, JP.; Cuddeback, GS.; Williams, D.; Prins, A. Criminal Justice Involvement, Behavioral Health Service Use, and Costs of Forensic Assertive Community Treatment: A Randomized Trial. *Community Mental Health Journal*. 2010. (published on line March 10, 2010: <http://www.springerlink.com/content/pq700r821t1rlq50/fulltext.pdf>

- Dixon LB, Friedman N, Lehman AF. Compliance of homeless mentally ill persons with assertive community treatment. *Hospital and Community Psychiatry*. 1983; 44:581–583. [PubMed: 8514308]
- Dixon LB, Krauss N, Kernan E, Lehman AF, DeForge BR. Modifying the PACT model to serve homeless persons with severe mental illness. *Psychiatric Services*. 1995; 46(7):684–688. [PubMed: 7552559]
- Dixon L. Assertive community treatment: Twenty-five years of gold. *Psychiatric Services*. 2000; 51(6):759–765. [PubMed: 10828107]
- Domino ME, Norton EC, Morrissey JP, Thakur N. Cost shifting to jails after a changed to managed mental health care. *Health Services Research*. 2004; 39(5):1379–1401. [PubMed: 15333114]
- Drake RE, Mercer-McFadden C, Mueser KT, McHugo GJ, Bond GR. Review of integrated mental health and substance abuse treatment for patients with dual disorders. *Schizophrenia Bulletin*. 1998; 24(4):589–608. [PubMed: 9853791]
- Druss BG, Rohrbaugh RM, Levinson CM, Rosenheck RA. Integrated medical care for patients with serious psychiatric illness. *Archives of General Psychiatry*. 2001; 58(9):861–868. [PubMed: 11545670]
- Fisher WH, Packer IK, Grisso T, McDermeit M, Brown J. From case management to court clinic: Examining forensic system involvement of persons with severe mental illness. *Mental Health Services Research*. 2000; 2(1):41–49. [PubMed: 11254069]
- Gandhi N, Tyrer P, Evans K, McGee A, Lamont A, Harrison-Read P. A randomised controlled trial of community-oriented and hospital oriented care for discharged psychiatric patients: influence of personality disorder on police contacts. *Journal of Personality Disorders*. 2001; 15(1):94–102. [PubMed: 11236818]
- Harris AJ, Fisher W, Veysey BM, Ragusa LM, Lurigio AJ. Sex offending and serious mental illness: Directions for policy and research. *Criminal Justice and Behavior*. 2010; 37(5):596–612.
- Hodgins S, Cote G. Major mental disorder and antisocial personality disorder: A criminal combination. *Bulletin of the American Academy of Psychiatry and Law*. 1993; 21(2):155–160.
- Lamberti JS, Weisman RL, Schwarzkopf SB, Price N, Ashton RM, Trumpeter J. The mentally ill in jails and prisons: Towards an integrated model of prevention. *Psychiatric Quarterly*. 2001; 72(1):63–77. [PubMed: 11293202]
- Lamberti JS, Weisman R, Faden DI. Forensic assertive community treatment: Preventing incarceration of adults with severe mental illness. *Psychiatric Services*. 2004; 55(11):1285–1293. [PubMed: 15534018]
- Lehman AF, Dixon LB, Kernan E, DeForge BR, Postrado LT. A randomized trial of assertive community treatment for homeless persons with severe mental illness. *Archives of General Psychiatry*. 1997; 54(11):1038–1043. [PubMed: 9366661]
- Levenson JS, D'Amora DA, Hern AL. Megan's Law and its impact on community re-entry for sex offenders. *Behavioral Sciences & the Law*. 2007; 25(4):587–602. [PubMed: 17620324]
- Lorig KR, Sobel DS, Stewart AL, Brown BW, Bandura A, Ritter P, Gonzalez VM, Laurent DD, Holman H. Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization: a randomized trial. *Medical Care*. 1999; 37(1):5–14. [PubMed: 10413387]
- Marshall M, Lockwood A. Assertive community treatment for people with severe mental disorders. *Cochrane Database of Systematic Reviews*. 1998; 2:Art. No.: CD001089.
- McCoy ML, Roberts DL, Hanrahan P, Clay R, Luchins JD. Jail linkage Assertive Community Treatment services for individuals with mental illnesses. *Psychiatric Rehabilitation Journal*. 2004; 27(3):243–250. [PubMed: 14982331]
- Miller, WR.; Rollnick, S. *Motivational Interviewing: Preparing People to Change Addictive Behavior*. New York: Guilford; 1991.
- Monahan J, Bonnie RJ, Appelbaum PS, Hyde PS, Steadman HJ, Swartz MS. Mandated community treatment: Beyond outpatient commitment. *Psychiatric Services*. 2001; 52(9):1198–1205. [PubMed: 11533393]
- Moran P, Walsh E, Tyrer P, Burns T, Creed F, Fahy T. Does co-morbid personality disorder increase the risk of suicidal behavior in psychosis? *Acta Psychiatrica Scandinavica*. 2003a; 107(6):441–448.

- Moran P, Walsh E, Tyrer P, Burns T, Creed F, Fahy T. Impact of comorbid personality disorder on violence in psychosis. *British Journal of Psychiatry*. 2003b; 182:129–134. [PubMed: 12562740]
- Moran P, Hodgins S. The correlates of comorbid antisocial personality disorder in schizophrenia. *Schizophrenia Bulletin*. 2004; 30(4):791–802. [PubMed: 15954191]
- Morrissey JP, Meyer PS, Cuddeback GS. Extending Assertive Community Treatment to criminal justice settings: Origins, current evidence, and future directions. *Community Mental Health Journal*. 2007; 43(5):527–544. [PubMed: 17587178]
- Mueser KT, Drake RE, Ackerson TH, Alterman AI, Miles KM, Noordsy DL. Antisocial personality disorder, conduct disorder, and substance abuse in schizophrenia. *Journal of Abnormal Psychology*. 1997; 106:473–477. [PubMed: 9241949]
- Mueser KT, Rosenberg SD, Drake RE, Miles KM, Wolford G, Vidaver R, Carrieri K. Conduct disorder, antisocial personality disorder and substance use disorders in schizophrenia and major affective disorders. *Journal of Studies on Alcohol*. 1999; 60(2):278–284. [PubMed: 10091967]
- Phillips SD, Burns BJ, Edgar ER, Mueser KT, Linkins KW, Rosenheck RA, Drake RE, McDonel Herr EC. Moving assertive community treatment into standard practice. *Psychiatric Services*. 2001; 52(6):771–779. [PubMed: 11376224]
- Steadman HJ, Davidson S, Brown C. Mental health courts: Their promise and unanswered questions. *Psychiatric Services*. 2001; 52(4):457–458. [PubMed: 11274488]
- Moran P, Hodgins S. The correlates of comorbid antisocial personality disorder in schizophrenia. *Schizophrenia Bulletin*. 2004; 30(4):791–802. [PubMed: 15954191]
- Stein, LL.; Santos, AB. *Assertive Community Treatment of persons with severe mental illness*. New York: Norton; 1998.
- Swartz MS, Swanson JW, Hiday VA, Borum R, Wagner HR, Burns BJ. Violence and severe mental illness: The effects of substance abuse and nonadherence to medication. *American Journal of Psychiatry*. 1998; 155(2):226–231. [PubMed: 9464202]
- Tengstrom A, Hodgins S. Criminal behavior of forensic and general psychiatric patients with schizophrenia: are they different? *Acta Psychiatrica Scandinavica*. 2002; 106(Suppl 412):62–66. [PubMed: 12100349]
- Theriot MT, Segal SP. Involvement with the criminal justice system among new clients at outpatient mental health agencies. *Psychiatric Services*. 2005; 56(2):179–185. [PubMed: 15703345]
- Walsh E, Buchanan A, Fahy T. Violence and schizophrenia: Examining the evidence. *British Journal of Psychiatry*. 2002; 180(6):490–495. [PubMed: 12042226]
- Weisbrod BA. A guide to benefit-cost analysis, as seen through a controlled experiment in treating the mentally ill. *Journal of Health Politics, Policy and Law*. 1983; 7(4):808–845.

Table 1
Demographic, Clinical and Criminal Justice Characteristics of FACT and ACT Consumers

Indicator	FACT Consumers (n = 641)	ACT Consumers (n = 654)	OR (95% CI)
Race ^d	%(n)	%(n)	
White ***	56.88% (364)	69.70% (454)	1.74 (1.39, 2.19)
Black/Other	43.13% (276)	30.30% (197)	
Gender			
Male ***	73.95% (474)	47.61% (311)	.32 (.25, .40)
Homeless ***	46.49% (298)	19.36% (127)	3.62 (2.82, 4.63)
Diagnosis			
Schizophrenia ***	74.41% (477)	65.83% (430)	1.51 (1.19, 1.92)
Mood Disorders ***	51.95% (333)	73.71% (482)	.39 (.31, .49)
Delusional Disorder	3.12% (20)	2.62% (17)	-
Psychotic Disorder NOS ***	48.67% (312)	29.07% (190)	2.31 (1.84, 2.91)
Panic Disorder ***	3.43% (22)	8.62% (56)	.38 (.23, .62)
Obsessive-Compulsive Disorder ***	5.54% (36)	1.25% (8)	.22 (.10, .47)
Anxiety Disorder	1.56% (10)	2.31% (15)	-
Antisocial Personality Disorder ***	19.81% (127)	6.29% (41)	3.68 (2.54, 5.33)
Posttraumatic Stress Disorder ***	6.55% (42)	12.94% (85)	.47 (.32, .69)
Co-occurring Substance Use Disorder ***	74.41% (477)	64.58% (422)	1.60 (1.26, 2.03)
Offense Type ***			
Crimes against person	32.92% (211)	3.06% (20)	15.55 (9.67, 24.99)
Drug	29.80% (191)	1.38% (9)	30.41 (15.42, 59.98)
Minor	97.04% (622)	20.34% (133)	128.18 (78.16, 210.19)
Property	72.54% (465)	9.18% (60)	26.14 (19.04, 35.90)
Sexual	2.03% (13)	.15% (1)	13.51 (1.76, 103.59)

Indicator	FACT Consumers (n = 641)	ACT Consumers (n = 654)	OR (95% CI)
Violent	59.75% (383)	9.02% (59)	14.96 (10.97, 20.42)
Crime Severity ***			
Violent felony	52.11% (334)	7.5% (49)	13.43 (9.66, 18.67)
Non-violent felony	66.61% (427)	6.27% (41)	29.82 (20.88, 42.58)
Violent misdemeanor	20.44% (131)	2.45% (16)	10.24 (6.01, 17.43)
Non-violent misdemeanor	97.50% (625)	20.80% (136)	148.71 (87.43, 252.88)

Notes:

^aSample sizes for race do not sum to total sample sizes due to missing data.

*** p < .001. Percentages for diagnosis, offense type and crime severity sum to greater than 100% due to multiple diagnoses and offenses. Odds ratios are presented for statistically significant differences only.