Assertive Community Treatment (ACT) in a Rural Canadian Community: Client Characteristics, Client Satisfaction, and Service Effectiveness

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ABSTRACT

This study describes an assertive community treatment (ACT) model in a rural Canadian location and examines characteristics of ACT service users, their degree of satisfaction with ACT, and whether their engagement with ACT resulted in reduced reliance on acute psychiatric services and hospital emergency room use. Chart audits were used to collect demographic and clinical participant data, including days of psychiatric admission and emergency room (ER) visits. Twenty-nine ACT clients agreed to participate. The majority of participants (82.8%) were male and had been diagnosed with schizophrenia or a schizoaffective disorder (65.5%). There was a high rate of concurrent substance abuse (75.9%). The average number of readmission days was reduced from 14 to 0 ($p < 0.05$) following engagement with ACT, and the average number of visits to ERs was reduced from 3 to 1 ($p < 0.05$). Participants reported overall high satisfaction with ACT services. Study implications for policy and practice are discussed along with future research recommendations.

Keywords: assertive community treatment, rural practice, service satisfaction

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RÉSUMÉ

Cette étude décrit un modèle de suivi intensif dans la communauté (*assertive community treatment* ou ACT) dans un milieu rural canadien. Elle examine les caractéristiques des utilisateurs et utilisatrices de l'ACT et leur niveau de satisfaction à propos de l'ACT, et évalue l'utilisation réduite ou non des soins intensifs psychiatriques et des salles d'urgence en conséquence de leur participation aux services de l'ACT. On a recueilli les données démographiques et cliniques à propos des participants et participantes, incluant les jours d'admission psychiatrique et les visites aux salles d'urgence, au moyen des vérifications des dossiers. Vingt-neuf clients et clientes de l'ACT ont accepté de participer. Une majorité des participants et participantes étaient de sexe masculin (82,8%) et avaient un diagnostic de schizophrénie ou d'un trouble schizo-affectif (65,5%). Il y avait un taux élevé d'abus concurrent d'alcool ou d'autres drogues (75,9%). Après la participation aux services de l'ACT, le nombre moyen de jours de réadmission a été réduit de 14 à 0 ($p < 0,05$) et le nombre moyen de visites aux salles d'urgence a été réduit de 3 à 1 ($p < 0,05$). En général, les participants et participantes ont indiqué un niveau élevé de satisfaction à propos des services de l'ACT. Les conséquences de l'étude pour les politiques et les pratiques ainsi que pour la recherche ultérieure sont abordées.

Mots clés : suivi intensif dans la communauté (*assertive community treatment*), pratique dans un milieu rural, satisfaction à propos des services

The current study explored an Assertive Community Treatment (ACT) program in a rural Canadian community. ACT involves intensive community mental health care and is a critical aspect of the national framework for mental health in Canada (Burge, 2009). It focuses on individuals with persistent and severe mental illness who have not benefited from traditional mental health care (Salyers, Rollins, Clendenning, McGuire, & Kim, 2011). Research highlights mental health problems as a growing concern, and community-based approaches offer promising potential to support people in need (Aargaard & Muller-Nielsen, 2011; Centers for Disease Control, n.d.).

The study focused on three main objectives: (a) investigate the outcomes around client reliance on acute psychiatric services and ER utilization, (b) examine the overall characteristics of the ACT team's clients, and (c) assess client satisfaction with ACT delivery.

Assertive Community Treatment Model

ACT is a team approach, based in the community and designed to provide comprehensive psychiatric care, rehabilitation, and support to people with serious and persistent mental illness (Bond, Drake, Mueser, & Latimer, 2001). To avoid fragmented services ACT is offered by a single team of professionals whose expertise spans social work, rehabilitation, counselling, nursing, and psychiatry. ACT focuses on several key goals: facilitating medication adherence, minimizing relapse, enhancing quality of life, improving social and vocational functioning, promoting independent living skills, reducing caregiver burden, and facilitating community tenure and engagement (Martin et al., 2005). ACT provides multiple services, including case management, assessment, psychiatric services, employment and housing assistance, family support and education, and substance abuse services, ideally available 24 hours per day, 365 days per year (see Allness & Knoedler, 2003). The ACT approach is grounded in several core principles,

including: (a) ACT team is the primary provider of services, (b) services are provided outside the office in the client's actual context, (c) services are highly individualized, (d) services are offered in a proactive and assertive manner, (e) services are long-term (Bond et al., 2001; Phillips et al., 2001), and (f) family and support systems are involved in treatment and support as much as possible (Lang, Davidson, Bailey, & Levine, 1999).

The ACT program under investigation in the current study had undergone an evaluation of model fidelity using the Dartmouth Assertive Community Treatment Scale (DACTS), which is considered the standard for assessing a program's adherence to the critical elements inherent in ACT service delivery (see Monroe-DeVita, Teague, & Moser, 2011 for a description of the processes and standards of assessment). Findings from that evaluation suggested a high degree of model fidelity (Barrett & Parsons, 2011).

ACT benefits. Research has suggested that the ACT program can be effective at reducing hospitalization and increasing housing stability, and is less expensive than traditional care (Aargaard & Muller-Nielsen, 2011; Bond et al., 2001; Salyers et al., 2011; Sono et al., 2012). To date, however, there are no empirical reviews of ACT teams in Newfoundland and Labrador, the setting of this study, and less research is available on the nature and effectiveness of ACT services in rural parts of the country.

ACT clients typically have co-existing diagnoses such as depression and co-existing social problems such as poverty (Parker, 2004; Phillips et al., 2001). Recent research has begun to explore the potential implications of offering ACT to such populations. King et al. (2009) reported on an ACT team in Ontario that works specifically with dually diagnosed individuals. They found that the service resulted in significantly reduced days of hospitalization for the clients. It has been estimated that at least half of individuals with severe mental illness also have a co-occurring substance abuse disorder (Fletcher, Cunningham, Calsyn, Morse, & Klinkenberg, 2008). Worsened outcomes for those concurrently diagnosed individuals are well documented (Fletcher et al., 2008; Kortrijk, Mulder, Roosenschoon, & Wiersma, 2010). In their 2011 review of 33 assertive outreach programs in northeast England, Carpenter, Luce, and Wooff reported poorer outcomes (e.g., increased hospital admissions) for concurrently diagnosed individuals. Co-existing diagnoses and difficult social circumstances (e.g., social determinants of health) were common among participants in the current study and were thus a major focus of the research.

ACT client satisfaction. The literature suggests that client satisfaction is a growing area of interest for ACT stakeholders, service-providers, and researchers (Aargaard & Muller-Nielsen, 2011; Ito et al., 2011; Kidd et al, 2011). Killaspy (2007) noted that with the shift toward service delivery models in the community, there must be greater consideration for outcomes such as client satisfaction. Some studies have demonstrated that ACT clients report greater general satisfaction with their care than those who receive other types of services (Barrett et al., 2010). For example, Aargaard and Muller-Nielsen administered the Client Satisfaction Questionnaire (CSQ) and found that satisfaction was significantly higher among ACT clients than among clients of standard healthcare services. Redko, Durbin, Wasylenski, and Krupa (2004) explored client satisfaction with ACT programs in Ontario and found "a reasonable degree of satisfaction" (p.285). Since the ACT model increasingly represents a standard for treating individuals in Newfoundland, understanding the degree of satisfaction of clients served is critical.

METHODOLOGY

Setting and Participants

Data collection took place in a rural community in Newfoundland and Labrador. The study received provincial Health Research Ethics Approval and approval from the local health authority. Purposeful sampling (Creswell, 2007) was used to identify ACT team clients as potential participants. Of the 43 eligible ACT clients, four individuals were not able to participate due to personal reasons. Of the remaining 39 clients, 29 agreed to participate in this study (74% participation rate). No participation incentives were offered.

Procedures and Measures

ACT team members made first contact with potential participants regarding the research. Researchers subsequently facilitated the informed consent process with participants. Participants were informed that the study would involve having the researcher review their medical records for specific information that was listed on the consent form, and they were asked to complete an anonymous questionnaire about their satisfaction with ACT service delivery. The entire process took approximately 10–20 minutes per participant.

A chart audit was used to collect demographic information (e.g., age, sex) and clinical variables (e.g., psychiatric diagnosis). Each participant's psychiatric admission and ER visit history was examined during two periods of time: pre–ACT engagement and post–ACT engagement.

Client satisfaction was measured using the "Community Mental Health Evaluation Initiative (CMHEI) satisfaction with program" scale (see Redko et al., 2004, for measure and psychometric properties). The questionnaire includes seven global items that measure satisfaction rated on a four-point Likert scale. The questionnaire also contained three open-ended questions: What have you *liked best* about your experience with this program? What have you *liked least* about your experience with this program? If you could *change anything* about this program what would it be?

Data Analysis

Demographic and clinical variables. Measures of central tendency and dispersion were used to describe study variables. Given the non-normative distribution of the sample, non-parametric statistics (Wilcoxon signed rank test) were used to examine outcome variables related to psychiatric-admission and ER-visit histories.

Client satisfaction. Individual and group mean scores for the seven Likert-rated client satisfaction questions were computed. On a four-point Likert scale, higher scores indicated a higher degree of satisfaction with the program.

The open-ended participant responses that addressed client satisfaction were read multiple times by the primary author (Creswell, 2007). Consistent with a content analysis framework, individual responses were coded to help make sense of the data and to identify specific thematic areas (Redko et al., 2004). Codes were often taken directly from participant responses (Creswell, 2007). Responses were reread and codes further reduced to minimize overlap and redundancy (Creswell, 2007). These codes were then collapsed into nine

themes, or categories, for analysis. Once the analysis was completed by hand, participant responses, along with their respective codes and themes, were copied into an electronic table. This allowed for faster searches through the data set with the "Ctrl + F" tool in Microsoft Word. Major overlap was identified with the participant open-ended question categories developed by Redko et al., and thus category labels and descriptions are highly consistent with their findings.

RESULTS

Participants

Study participant characteristics are summarized in Table 1 and participant clinical variables are reported in Table 2

Table 1
Demographic Characteristics

Variable	*n* (%)
Sex	
Male	24 (82.8)
Female	5 (17.2)
Age in years	
Median (range)	43 (20–66)
Education	
Less than high school	6 (20.7)
Some high school	12 (41.4)
High school	7 (24.1)
Some postsecondary	4 (13.8)
Marital status	
Single	23 (79.3)
Married	1 (3.4)
Divorced	4 (13.9)
Not specified	1 (3.4)
Employment status	
Employed	–
Unemployed	24 (82.8)
Disability	1 (3.4)
Other	4 (13.9)
Annual income ($)	
10,000–19,999	23 (79.9)
20,000–29,000	4 (13.9)
30,000–39,000	2 (6.9)

Table 2
Clinical Variables

Variable	*n* (%)[1]
ACT admission time[2] (mean ± *SD*)	26 ± 12
Primary diagnosis	
Schizophrenia	14 (48.3)
Schizoaffective disorder	5 (17.2)
Bipolar disorder	9 (31)
Depression	1 (3.4)
Concurrent	
Personality	3 (10.3)
Substance abuse	
Present	16 (55.2)
Past (remission)	6 (20.7)
Cognitive deficits	4 (13.8)
GAF[3]	
At admission: median (range)	59 (39–68)
Most recent: median (range)	68 (55–77)

[1] $N = 29$
[2] In months
[3] Global Assessment of Functioning score. Possible scores range from 1 to 100, with higher scores indicating better functioning.

Psychiatric Hospitalization and ER Visits

Outcome variables in the current study were days of psychiatric hospitalizations and number of visits to ERs pre- and post-ACT team engagement. Results from a Wilcoxon test indicated that the median number of days of psychiatric hospital admission post–ACT engagement period was significantly lower than the median number of days of psychiatric hospital admissions pre–ACT engagement, $z = -3.24$, $p < 0.05$, $r = 0.43$. Similarly, a Wilcoxon test was conducted to determine whether the number of ER visits had reduced significantly since ACT team involvement. Results confirmed a significant difference, $z = -2.89$, $p < 0.05$, $r = 0.38$ (see Table 3). χ^2 analyses of participant characteristics did not yield significant findings. Small sample size inhibited further outcome analysis.

Client Satisfaction

On a four-point scale, the mean score for participants on the Program Satisfaction Scale was 3.4 (*SD* = 0.6), suggesting a high degree of satisfaction with ACT service delivery. The question with the smallest gap between Low and High responses was related to emotional support or interpersonal relationships with the ACT team (see Table 4).

Table 3
Medians and Interquartile Range for Pre– and Post–ACT Engagement Times

	Median	Interquartile Range
Acute psychiatric hospitalization (days)		
Pre–ACT admission	14.0	2.0–52.0
Post–ACT admission	0.0	0–0
ER visits (number of visits)		
Pre–ACT admission	3.0	1.0–8.5
Post–ACT admission	1.0	0–4.0

Table 4
CMHEI Satisfaction with Program Scale Likert Questions

	Low[1]	High[2]
1. Overall, how satisfied are you with the program?	10.0%	90.0%
2. To what extent is the help offered at this program relevant to your needs?	10.0%	90.0%
3. Would you recommend this program to other people needing help?	6.7%	93.3%
4. Do you get enough support from this program when you need it?	13.3%	86.7%
5. Do you have enough say about the help you receive from this program?	13.3%	86.7%
6. Do people in this program really understand what you need?	30.0%	70.0%
7. Do you get too much support from this program?[3]	82.7%	17.2%

[1] *not at all* or *some of the time* (response = 1 or 2)
[2] *quite often* or *all of the time* (response = 3 or 4)
[3] Note that a high rating of satisfaction is actually negative for question 7.

As described above, participant open-ended responses were categorized by the researchers. *Emotional support* was related to feeling understood by the ACT team and spoke to the quality of the helping relationship. *Interaction* was related to the client's interaction with team members and their experience with the unique, ACT-sanctioned approaches to service delivery. *Instrumental support* consisted primarily of comments related to transportation, as well as assistance with employment, getting groceries, and running other errands. Some participants appreciated the team's help with *medication* adherence. The *activities* or social engagements category included areas such as how ACT had connected them with established social organizations in the community. *Availability* was a category that could have been grouped under *interaction*. It was made a separate category because of the strong language used by participants to address the team's availability.

DISCUSSION

Psychiatric Hospitalization and ER Visits

Reductions in days of hospitalization and ER visits, measured pre- and post-engagement with the team, clearly demonstrate the importance of this service. This decline in acute psychiatric service usage is consistent with ACT literature (Bond et al., 2001; Carpenter et al., 2011; Monroe-DeVita et al., 2011) and is demonstrated here in a rural Canadian context in Newfoundland and Labrador.

Psychiatric hospitalization is a commonly studied outcome variable. It is important, though, to note that psychiatric admission may not be exclusively negative, particularly early in ACT engagement. The ACT team in the current study noted that admission for treatment, especially early in service engagement, was often a valuable part of a client's engagement with services. Indeed, a Dutch study found that even involuntary admission, in the context of assertive outreach, was associated with client improvements and motivation (Carpenter et al., 2011). To further highlight this point, more than half of the current study participants had been engaged with the ACT team for a minimum of 30 months, and yet all readmissions were contained to the first 12 months of ACT engagement.

ACT Client Characteristics

Participants in this study shared many demographic and clinical characteristics with ACT clients from other ACT sites (e.g., Deuchar et al., 2008).

Unemployment. A 0% employment rate was reported in this study. Some studies have reported ACT employment near 50% (Gold et al., 2012), with others reporting ranges from 5% to 20% of service users (Deuchar et al., 2008). In rural Newfoundland and Labrador, there are limited opportunities for employment. Provincial unemployment rates in February 2013 were 13%, compared to 7.3% nationally (Newfoundland and Labrador Statistics Agency, 2013), with rural parts of the province being higher (Antle, 2011). Although provincial and federal funding for supported employment is consistent with the ACT model for employment, obtaining funding for a person diagnosed with a mental illness can be difficult.

There are also additional systemic barriers to employment; for example, most ACT clients take expensive medications. Clients on government support may harbour some degree of fear that giving up any of that support could result in loss of benefits to afford medications.

Dual diagnoses. Traditional treatment systems are often poorly equipped to help people with both substance abuse and other mental illness diagnoses (Fletcher et al., 2008), and thus clients often visit one agency for mental health treatment and another agency for substance abuse treatment. ACT addresses this discontinuity in care and attends to the concerns of both severe mental illness and substance abuse. Clients dually diagnosed with substance abuse disorders are prone to hospitalizations (Kortrijk et al., 2010), and this was apparent in the current study. Since most of their clients are dually diagnosed with mental illness and substance use disorders, ACT teams are expected to adhere closely to a dual disorder (DD) treatment model. DD is a recovery-oriented approach that encourages a non-confrontational stage-wise treatment model, a model that focuses on the client's treatment needs and stage of readiness for change.

Since the ACT model emphasizes the development of a personal sense of empowerment in the recovery process (Bond et al., 2001), it may be worthwhile to further consider harm reduction as an important component of substance abuse treatment with this population (Laker, 2007; Little & Franskoviak, 2010).

Client satisfaction. Participants reported a relatively high degree of satisfaction with ACT services, with a mean score on the Program Satisfaction Scale of 3.4 (*SD* = 0.6). Redko et al. (2004) reported a mean score of 2.9 (*SD* = 0.7) on their Program Satisfaction Scale for participants in Ontario, Canada. Consistent with an underlying philosophy that the therapeutic relationship is central to ACT, participants' feedback on ACT services was largely discussed in the context of interpersonal relationships with ACT members. While some participants were less satisfied with certain aspects of a team-based approach (e.g., working with different clinicians), most were extremely satisfied with the elements inherent in a team-delivered service (e.g., medication reminders, access to different specialists). Consistent with the unique geographical issues of this site, many participants discussed their satisfaction and dissatisfaction in relation to the transportation support they received.

When answering what they would like to change about their ACT service, a subgroup of participants lobbied for greater community awareness. Some participants stated their willingness to offer their time to help the ACT team, possibly through peer initiatives.

Study Limitations

The study sample size was small despite having a high participation rate. Furthermore, the study took place at one ACT site in Newfoundland and Labrador, and therefore findings are not necessarily applicable to other contexts. There was no comparison group in this study, and so it is not possible to determine whether reported outcomes were directly associated with participant engagement with ACT. In addition, there were some outliers within the data, and thus caution needs to be exercised in its interpretation.

CONCLUSION

ACT models can be powerful, community-based, approaches to helping people with significant mental health issues. The current study has highlighted an effective and appreciated ACT team in a rural Canadian community. Although the study has some limitations, its findings are encouraging and lend themselves to existing literature, which associates higher model fidelity with improved client outcomes related to acute psychiatric services. The study highlights characteristics of service users in Newfoundland and offers suggestions on how ACT services can best support the varied needs of those with severe and persistent mental illness.

REFERENCES

Aagaard, J., & Müller-Nielsen, K. (2011). Clinical outcome of assertive community treatment (ACT) in a rural area in Denmark: A case-control study with a 2-year follow up. *Nordic Journal of Psychiatry, 65*, 299–305.

Allness, D. J., & Knoedler, W. H. (2003). *The PACT model of community-based treatment for persons with severe and persistent mental illnesses: A manual for PACT start-up*. Arlington, VA: National Alliance for the Mentally Ill (NAMI).

Antle, R. (2011, September/October). Sharing the wealth. *Atlantic Business Magazine, 22*(5), 57–58.

Barrett, B., & Parsons, P. (2011). *Central Health ACT fidelity DACTS summary*. Grand Falls–Windsor, NL: Authors.

Barrett, B. M., Young, S., Teague, G. B., Winarski, J. T., Moore, K. A., & Ochshorn, E. (2010). Recovery orientation of treatment, consumer empowerment, and satisfaction with services: A meditational model. *Psychiatric Rehabilitation Journal, 34*, 153–156. doi:10.2975/34.2.2010.153.156

Bond, G. R., Drake, R. E., Mueser, K. T., & Latimer, E. (2001). Assertive community treatment for people with severe mental illness: Critical ingredients and impact on patients. *Disease Management and Health Outcomes, 9*, 141–159. doi:1173-8790/01/0003-0141

Burge, P. (2009). Assertive community treatment teams and adults with intellectual disabilities. *Journal on Developmental Disabilities, 15*(3), 96–102.

Carpenter, J., Luce, A., & Wooff, D. (2011). Predictors of outcomes of assertive outreach teams: A 3-year follow-up study in North East England. *Social Psychiatry and Psychiatric Epidemiology, 46*, 463–471. doi:10.1007/s00127-010-0211-5

Centers for Disease Control and Prevention (CDC). (n.d.). An estimated 1 in 10 U.S. adults report depression. Retrieved from http://www.cdc.gov/features/dsdepression/

Creswell, J. W. (2007). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River Creek, NJ: Prentice Hall.

Deuchar, N., Saunders, K., Vanderpyl, J., Doub, T. W., Marquart, J. M., Lurie, S. . . . Humberstone, V. (2008). International comparative ACT study process and data: How ACT teams compare in Toronto, Birmingham, Nashville and Auckland. *International Journal of Leadership in Public Services, 4*(1), 41–58. doi:10.1108/17479886200800011

Fletcher, T. D., Cunningham, J. L., Calsyn, R. J, Morse, G. A., & Klinkenberg, W. D. (2008). Evaluation of treatment programs for dual disorder individuals modeling longitudinal and mediation effects. *Administration and Policy in Mental Health, 35*, 319–336. doi:10.1007/s10488-008-0170-2

Gold, P. B., Jones, D. R., Macias, C., Bickman, L, Hargreaves, W. A., & Frey, J. (2012). A four-year retrospective study of Assertive Community Treatment: Change to more frequent, briefer client contact. *Bulletin of the Menninger Clinic, 76*, 314–328. doi:10.1521/bumc.2012.76.4.314

Ito, J., Oshima, I., Nishio, M., Sono, T., Suzuki, Y. Horiuchi, K., Niekawa, N. . . . Tsukada, K. (2011). The effect of assertive community treatment in Japan. *Acta Psychiatrica Scandinavica, 123*, 398–401. doi:10.1111/j.1600-0447.2010.01636.x

Kidd, S. A., George, L., O'Connell, M., Sylvestre, J., Kirkpatrick, H., Browne, G. . . . Davidson, L. (2011). Recovery-oriented service provision and clinical outcomes in assertive community treatment. *Psychiatric Rehabilitation Journal, 34*, 194–201. doi:10.2975/34.3.2011.194.201

Killaspy, H. (2007). Assertive community treatment in psychiatry. *British Medical Journal, 335*(7615), 311–312. doi:10.1136/bmj.39293.687674.AD

King, R., Jordan, A., Mazurek, E., Earle, K., Earle, E., & Runham, A. (2009). Assertive community treatment—dually diagnosed: The hyphen was the easy part. *Mental Health Aspects of Developmental Disabilities, 12*(1), 1–7.

Kortrijk, H. E., Mulder, C. L., Roosenschoon, B. J., & Wiersma, D. (2010). Treatment outcome in patients receiving assertive community treatment. *Community Mental Health Journal, 46*, 330–336. doi:10.1007/s10597-009-9257-9

Laker, C. J. (2007) How reliable is the current evidence looking at the efficacy of harm reduction and motivational interviewing interventions in the treatment of patients with a dual diagnosis? *Journal of Psychiatric and Mental Health Nursing*, *14*(8), 720–726.

Lang, M. A., Davidson, L., Bailey, P. L., & Levine, M. S. (1999). Clinicians' and clients' perspectives on the impact of assertive community treatment. *Psychiatric Services, 50*, 1331–1340.

Little, J., & Franskoviak, P. (2010). So glad you came! Harm reduction therapy in community settings. *Journal of Clinical Psychology: In Session, 66*, 175–188. doi:10.1002/jclp.20673

Martin, G., Costello, H., Leese, M., Slade, M, Bouras, N., Higgins, S., & Holt, G. (2005). An exploratory study of assertive community treatment for people with intellectual disability and psychiatric disorders: Conceptual, clinical, and service issues. *Journal of Intellectual Disability Research, 49*, 516–524. doi: 10.1111/j.1365-2788.2005.00709.x

Monroe-DeVita, M., Teague, G. B., & Moser, L. L. (2011). The TMACT: A new tool for measuring fidelity to assertive community treatment. *Journal of the American Psychiatric Nurses Association, 17*(1), 17–29. doi:10.1177/1078390310394658

Newfoundland and Labrador Statistics Agency. (2013). Labour force flash sheet: Labour force data for the month of February 2013 [Data file]. Retrieved from: http://www.stats.gov.nl.ca/

Parker, G. F. (2004). Outcomes of assertive community treatment in an NGRI conditional release program. *Journal of the American Academy of Psychiatry and the Law, 32*, 291–303.

Phillips, S. D., Burns, B. J., Edgar, E. R., Mueser, K. T., Linkins, K. W., Rosenheck, R. A. . . . McDonel Herr, E. C. (2001). Moving assertive community treatment into standard practice. *Psychiatric Services, 52*, 771–779.

Redko, C., Durbin, J., Wasylenski, D., & Krupa, T. (2004). Participant perspectives on satisfaction with assertive community treatment. *Psychiatric Rehabilitation Journal, 27*, 283– 286. doi:10.2975/27.2004.283.286

Salyers, M. P., Rollins, A. L., Clendenning, D., McGuire, A. B., & Kim, E. (2011). Impact of illness management and recovery programs on hospital and emergency room use by Medicaid enrollees. *Psychiatric Services, 62*, 509–515. doi:10.1176/appi.ps.62.5.509

Sono, T., Oshima, I., Ito, J., Nishio, M., Suzuki, Y., Horiuchi, K., Niekawa, N., Ogawa, M. . . . Tsukada, K. (2012). Family support in assertive community treatment: An analysis of client outcomes. *Community Mental Health Journal, 48*, 463–470. doi:10.1007/s10597-011-9444-3