Evaluation of a Rural-Based Community Aged Intensive Recovery Program for Older Adults With Severe Mental Illness

ABSTRACT
Community Aged Intensive Recovery (CAIR) programs are an integral part of Aged Persons Mental Health Services (APMHS); however, no study has investigated whether a rural-based intensive program benefits older clients with severe mental illness. The current sample comprised 119 older adults who were being managed by a CAIR program from July 2011 to June 2013. Three key results were found: (a) approximately three quarters of clients admitted to the CAIR program remained treated in the community; (b) the program assisted in significantly reducing the level of psychiatric symptom severity from CAIR entry to CAIR exit; and (c) the APMHS team with the CAIR program had a lower psychiatric inpatient rate compared to the APMHS team without the program. The current study highlights the importance of delivering effective rural-based CAIR programs to older adults experiencing severe mental illness. [Journal of Psychosocial Nursing and Mental Health Services, 53(9), 17-21.]

Paul Sadler, MAPS, CCLP; and Andrea McIlvena, RN, CMHN

In recognition of the aging population and increasing pressure on Aged Persons Mental Health Services (APMHS), psychiatric teams have designed intensive community treatment programs to improve outcomes for older adults with severe mental illness. These intensive community-based programs involve multidisciplinary teams that implement targeted psychiatric crisis management strategies to address severe symptoms of mental illness (Stobbe et al., 2014). One of the primary purposes of an intensive mental health program is to treat acutely unwell older clients in the community and provide them with an alternative to inpatient treatment (Burns et al., 2007; Stobbe, Mulder, Roosenschoon, Depla, & Kroon, 2010). These programs are particularly pertinent in rural and remote
settings because inpatient psychiatric beds are often less accessible (Miller & Brewerton, 2009). Although increasing research has been devoted toward implementing and testing this intensive model of psychiatric care (Pratt, Van Citters, Mueser, & Bartel, 2008; Stobbe et al., 2014; Wilberforce et al., 2011), few studies have investigated the effectiveness of a Community Aged Intensive Recovery (CAIR) program for acutely unwell older adults residing in rural or remote settings.

Mental health services are beginning to explore whether intensive community recovery programs benefit older adults with severe mental illness. Stobbe et al. (2014) recently conducted a randomized controlled trial in the Netherlands that suggested an intensive treatment program assisted older adults in better engaging with the service compared to clients who received treatment as usual. Additional international studies in the United States (Marshall & Lockwood, 2000), the United Kingdom (Wilberforce et al., 2011), and Australia (Miller & Brewerton, 2009) have also found promising results from intensive community programs, including reductions in hospital admissions, better quality of life, and improvements in psychiatric symptoms. Although these studies have conducted an initial evaluation of this intensive community-based model of care, no study has specifically explored the progress of a rural-based CAIR program or tested whether there are significant differences between APMHS with and without a CAIR program within the same hospital catchment area. Consequently, an up-to-date study is warranted to evaluate recent outcomes of this initiative, specifically for a rural community setting.

The current study established three central aims and hypotheses to evaluate the recent progress of a rural-based CAIR program. The first aim was to investigate whether the CAIR program assisted clients presenting with acute mental illnesses to be treated in the community as opposed to an inpatient psychiatric hospital. It was expected that the CAIR program would reduce the risk of requiring inpatient admission by treating most clients in the community. The second aim involved exploring whether the CAIR program assisted with reducing psychiatric symptom severity. It was expected that the level of psychiatric symptoms would reduce from CAIR entry to exit. Finally, the study aimed to investigate whether there were differences in inpatient psychiatric admission rates between an APMHS with and without the CAIR program in the same hospital catchment area. It was expected that the APMHS team with the CAIR program would have less inpatient admissions compared to the APMHS team without it.

**METHOD**

**Participants**

The sample comprised 119 older adults from South Gippsland, Victoria, Australia who were managed by an APMHS CAIR program from July 2011 to June 2013. Clients were age 52 to 91 (mean age = 73 years) and included 75 (63%) females and 44 (37%) males. Clients were being treated for a range of psychiatric disorders, including major depressive disorder (35%), dementia with behavioral disturbances (18%), schizophrenia (15%), bipolar affective disorder (13%), delirium (7%), delusional disorder (5%), schizoaffective disorder (4%), or an anxiety disorder (3%). Most clients were married/de-facto (45%), 30% were widowed, and 25% were divorced or single. Sixty-seven percent of clients had a carer present. Clients’ living statuses were equally distributed among living with a spouse/family (39%), in a residential aged care facility (28%), or alone (33%). Eighty-four percent of clients were on aged care or disability pensions and 81% were retired/unemployed. Most clients had completed secondary school (39%) or vocational training (22%), as opposed to 7% who completed only a primary school level of education and 8% who completed only a tertiary level of education. The majority of the sample was born in Australia (86%).

**Materials**

Data were gathered from the Latrobe Regional Hospital administration records. A psychometric measure was also used, which included the Health of the Nation Outcome Scale 65+ (HoNOS-65; Burns et al., 1999). The HoNOS-65 is a clinician-rated assessment tool that measures psychiatric symptom severity for older adults presenting with a mental illness (Burns et al., 1999). It contains 12 items on a Likert scale, ranging from 0 = no problem to 4 = severe to very severe problem. For example, one of the items asks whether the client has problems with nonaccidental self-injury. Scores range from 0 to 48, with higher scores representing a higher level of psychiatric symptom severity. This scale is commonly used throughout APMHS in Victoria (Miller & Brewerton, 2009).

**Procedure**

Written permission was granted from Latrobe Regional Hospital to conduct the current study. The program evaluated was further approved and supported by Latrobe Regional Hospital. Informed consent was verbally obtained and each client/carer was provided with the service’s brochure and an opportunity to sign their management plan.

The CAIR program delivers acute person-centered mental health care to older clients in the community as an alternative to inpatient psychiatric treatment and provides potential early discharge follow up from psychiatric inpatient care. It also includes a
multidisciplinary team and functions on an outpatient basis 7 days per week from 9 a.m. to 5 p.m. The team operates with an integrated approach, meaning all clinicians have the capacity to work with CAIR clients and become the primary contact for the client, family, carer, and general practitioner (GP) if clinically indicated during the acute phase of treatment.

CAIR program inclusion criteria include: (a) being a current registered client with APMHS; (b) being assessed as moderate to high risk to self or others; (c) requiring a higher level of clinical input (e.g., two or more face-to-face appointments per week); (d) possibly being a current patient in a local, rural-based hospital; (e) having potential for inpatient admission without intensive, community-based intervention; (f) having agreement of and between GP, client/carers, and other key supports; and (g) residing within the hospital catchment area.

A central triage phone contact staffed by psychiatric nurses is the single point of entry to the APMHS, meaning anyone in the community (e.g., GP, carer) can call the APMHS via triage to register a psychiatric referral. The decision to refer a client to the CAIR program is ascertained upon initial intake assessment and/or during daily APMHS clinical review meetings. Clients are considered for CAIR if they are experiencing significant psychiatric risk factors or deemed at risk of requiring a psychiatric inpatient admission. The CAIR program complements the delivery and quality of the APMHS by allowing more frequent contact with clients and carers to manage psychiatric risks and implement acute-focused treatment plans. Weekly psychiatrist outpatient appointments are available as clinically required. When risk factors are reduced and functional improvement is observed, the team discusses the potential for discharging the client from the CAIR program back to APMHS continuing care treatment options. Design of the CAIR program is similar to other intensive programs that have been implemented internationally (e.g., Marshall & Lockwood, 2000; Pratt et al., 2008; Stobbe et al., 2010). The

Figure illustrates a client flow chart of the rural-based CAIR program.

Data Analysis
Data were entered using SPSS for Windows® version 19 and screened
to ensure that statistical analyses could be completed (Tabachnick & Fidell, 2001). Fourteen HoNOS-65 values were missing. These missing values were replaced with the series mean (Tabachnick & Fidell, 2001). Frequency, descriptive, and t test analyses were conducted to investigate hypotheses.

RESULTS

Of the 119 clients who were admitted to the CAIR program, 87 (73%) remained treated in the community and 32 (27%) were admitted to a psychiatric inpatient unit. Clients were in the CAIR program for an average of 24 days. Of the 32 clients who required psychiatric inpatient admission, the average length of stay in the inpatient ward was 36 days.

The CAIR program assisted in reducing clients’ level of psychiatric symptom severity from admission to discharge. The mean HoNOS-65 score for CAIR admission was 22.04 (SD = 7.15) and the mean score for discharge was 17.68 (SD = 8.05); t test analyses revealed a significant difference between CAIR admission and discharge HoNOS-65 scores (t = 23.94 [df = 118], p < 0.001).

As expected, the APMHS team with the CAIR program had less inpatient admissions compared to the APMHS team without the program (n = 53 versus n = 67, respectively). More specifically, of the 224 clients who were referred to the APMHS team with the CAIR program from July 2012 to June 2013, 24 (10%) were admitted to a psychiatric facility. Of the 142 clients who were referred to the APMHS team without the CAIR program during the same period, 44 (30%) were admitted to a psychiatric facility.

DISCUSSION

The purpose of the current study was to conduct a preliminary evaluation of a rural-based APMHS CAIR program. Three hypotheses were tested and supported. First, approximately three quarters of clients admitted to the CAIR program remained treated in the community. Second, the CAIR program assisted in significantly reducing the level of psychiatric symptom severity from CAIR admission to CAIR discharge. Third, the APMHS team with the CAIR program had a lower inpatient rate compared to the APMHS team without the program.

CAIR programs are particularly important for delivering effective psychiatric services to acutely unwell older adults in rural and remote community settings.

Results from the preliminary evaluation have important clinical and service delivery implications. The current study found that most clients treated with the CAIR program remained treated in the community, supporting previous research highlighting that the intensive recovery program promotes person-centered care, encourages collaborative treatment, and reduces the negative consequences associated with admitting older adult clients to a psychiatric hospital (Burns et al., 2007; Pratt et al., 2008; Stobbe et al., 2014). Maintaining clients’ connections to their family, carers, and community empowers them to remain in a familiar/local environment and has the potential to reduce stigma of mental illness (Miller & Brewerton, 2009). Therefore, having an intensive care function imbedded in APMHS promotes a more effective continuum of care.

LIMITATIONS

Although the current study provided preliminary evidence that supports the delivery of a rural-based CAIR program, the results should be viewed in light of some limitations. It is difficult to compare the current findings to other studies due to the rural-based nature of the sample, APMHS-/CAIR-integrated team approach, and proximity variation between the psychiatric inpatient facility and community teams. A second limitation involved the lack of a comparison CAIR or alternative treatment group. In addition, only one psychometric measure was used in the current data analysis (i.e., HoNOS-65) due to inconsistent data collection of additional outcome measures (e.g., Carer Stress Index, Geriatric Depression Scale). Using only one psychometric measure limited the ability to test more specific outcomes of the CAIR program.

CONCLUSION

The current study added important evidence that supports the implementation of CAIR programs for older adults experiencing severe mental illness in rural settings. The continuum of care is maintained from acute to recovery phase through an integrated CAIR program within APMHS. It is suggested that aged psychiatric services explore the potential for extra resources being implemented throughout rural catchment areas in assisting improved client outcomes and decreasing inpatient admission and occupancy rates. Further investigation...
Aging Matters

is required to differentiate outcomes between psychiatric diagnoses, presence or absence of carers, and carer stress implications.

REFERENCES


Mr. Sadler is Clinical Psychologist, and Ms. McIlvena is Mental Health Nurse and Team Leader, Latrobe Regional Hospital's South West Gippsland Aged Persons Mental Health Service, Wonthaggi Hospital, Wonthaggi, Victoria, Australia.

Ms. McIlvena is the team leader of the Community Aged Intensive Recovery (CAIR) program, and Paul Sadler consults within Latrobe Regional Hospital’s Aged Persons Mental Health Service. The authors acknowledge the late Associate Professor Bruce Osborne (Psychogeriatrician) who pioneered and introduced the CAIR program to rural Victoria, Australia. The authors thank Latrobe Regional Hospital for supporting the CAIR program as well as the clients and their carers for participating. The authors also acknowledge the skill and dedication of each mental health practitioner who works in community rural aged psychiatry.

Address correspondence to Paul Sadler, MAPS, CCLP, Clinical Psychologist, Latrobe Regional Hospital’s South West Aged Persons Mental Health Service, Wonthaggi Hospital, Graham Street, Wonthaggi, Victoria, Australia, 3995; e-mail: psadler@lrh.com.au.

doi:10.3928/02793695-20150622-03