Promoting recovery via an integrated model of care to deliver a bed-based, mental health prevention and recovery centre

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Abstract

Objective: This research was conducted in order to explore the experience of care and outcomes for people entering a bed-based step-up/step-down Prevention and Recovery Centre (PARC).

Methods: An audit of files for PARC participants in 2010 collected demographic (age, gender, and marital, housing, employment and education/training status) and clinical measures (length of stay, entry and exit outcome measures, psychiatric hospital use). Participants were also invited to a feedback group to discuss their PARC experience.

Results: In 2010, 118 people entered PARC. Most were single and unemployed and 35% were in temporary housing or homeless. In the six months following PARC exit, participants spent significantly less time in psychiatric hospital than in the six months prior to entry ($p<0.001$). Significant reductions in clinician-rated difficulties were documented at exit ($p<0.001$). For 40 episodes of care with self-report measures at entry and exit, significant reductions in difficulties with relating to self/others ($p=0.004$), daily living/role functioning ($p=0.006$), and depression/anxiety ($p=0.019$) were seen. Twelve participants attended a feedback group. Positive aspects of PARC included: supportive and caring staff; help with practical issues or community access; therapeutic activities and learning about health; and socialization opportunities.

Conclusions: A step-up/step-down PARC can facilitate recovery for people with mental illness through promoting independence and illness self-management.

Keywords: step-up/step-down care, mental health service, recovery-focused, integrated care

In Australia, a community model of mental health care has evolved from the closure of long-stay psychiatric hospitals.[1] Hospital-based psychiatric units offer the primary response for people experiencing acute symptoms, and outpatient clinics or outreach services support people in the community. Ensuring effective transitioning of people between hospital-based and community care is an ongoing challenge. Discharged patients who are not sufficiently well or returning to a stable environment are more likely to experience symptom relapse.[2] Lengthy admissions (some lasting several months) are also often experienced. This can result in role disruption and community disconnection potentially impacting on ability to live independently.[3] Failure to effectively support the return to community living can result in rehospitalization.[4]

Providing a potential bridge between acute and community psychiatric care, sub-acute or step-up/step-down units have been established. Advocates for such stepped-care models have argued that offering an

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array of intervention options with different intensities (and requiring different costs) broadens the access to mental health care that is tailored to peoples' needs.[5]

Most models offer 24-hour multidisciplinary staffing support that promotes recovery and preparedness for returning to community living, with length of stays of between 4–16 weeks.[6–9] Some models (e.g. Hawthorn House Rehabilitation Service in Australia[9]) step-down patients from hospital to enhance preparation for community living. Others (e.g. residential alternative care in North America) operate a step-up capacity with retained links with community-based clinical treatment as an alternative to hospital psychiatry care.[10] Positive outcomes have been demonstrated. One randomized trial comparing residential alternative care (less cost and staff intensive) with hospital psychiatry care found that symptom reduction, patient satisfaction, and psychosocial functioning following the admission was similar.[10] Reductions in psychotic and depressive symptoms were also demonstrated by a community-based crisis stabilization unit.[6]

The increasing role in Australia of non-government mental health services providing psychosocial rehabilitation support[11] has further impacted on how stepped care is delivered. Whereas public mental health services have traditionally focused on treating psychiatric symptoms, non-government mental health services have a broader recovery focus, often working with the person, their family and community to address functional and social difficulties. Joint delivery of support by public and non-government mental health services may be complementary in maximizing recovery.

In Australia, a number of step-up/step-down services (termed Prevention and Recovery Centres: PARCs) have been delivered in partnership between public and non-government mental health services. There has, however, been little research demonstrating their effectiveness. The only identified evaluation assessed participant characteristics, use of PARC and other mental health service resources, cost of care, and participant and staff experience.[12] PARCs were found to be less costly but also less efficient due to reduced occupancy rates than hospital psychiatry care, and staff and participants reported the combination of clinical and psychosocial care as a strength. Whether a PARC stay impacted on measures of symptom, social and behavioural difficulty was, however, not assessed. The current study was conducted to address this gap through assessing changes in clinical measures and qualitatively explored with participants how the model contributed to outcomes.

Method

South Yarra PARC

Operation of the South Yarra PARC was informed by recovery models of mental illness.[13] People entering the PARC are referred to as 'participants', reflecting the intention to promote active participation in care. The aims are to maximize recovery and preparation for a return to community living, or to prevent psychiatric hospital admission. Ten independent living units (each containing bedroom, kitchen and bathroom facilities) are provided to promote functional independence for participants. Group or community-oriented space is available (e.g. courtyard with barbeque, staff kitchen and meeting space) to promote interaction with other participants and recovery-oriented programs (e.g. cooking, art therapy, awareness of community resources, approaches to coping). The maximum length of stay is 28 days and the following are entry criteria:

1. Aged 16–64 years and living in the public mental health services' catchment region;
2. Experiencing symptoms and problems related to psychiatric morbidity and requiring structured specialist clinical care and disability support to prevent hospitalization in the early stages of relapse or facilitate a return to the community in the early stages of recovery; and
3. Assessed as low to moderate safety risk.

A non-government mental health service manages the residential environment, offers group and individual support to re-establish roles (e.g. normalising sleep–wake cycles, identifying and supporting personal skill development needs) and maintain or develop natural supports (e.g. family, friends or other community groups). Participants are linked into housing, employment and carer support programs if needed. The public mental health service conducts risk and mental state assessments, determines PARC entry or exit, and provides medical and other clinical treatment that continues beyond exit.

Design

A mixed-method design was adopted focusing on PARC participants from January to December 2010. Demographics and outcomes were audited from participant files. PARC participants were also invited to a feedback group to share their experience. The study was approved by a hospital Human Research and Ethics Committee.

Materials

Participant audit. The following measures were audited: age, sex, housing prior to PARC, highest educational achievement, entry source and discharge destination, length of stay, episodes of PARC care in 2010, primary diagnosis, and relationship, employment and education status and prescribed medication. To measure clinical

change, the clinician-rated 12-item Health of the Nation Outcome Scale (HONOS) and the participant-rated 32-item Behavior and Symptom Identification Scale (BASIS-32) were used. The HONOS is routinely used by Australian mental health services to measure the severity of behavioural, symptom and social difficulties. The BASIS-32 is a validated measure with five subscales: relation to self/others, daily living/role functioning, depression/anxiety, impulsive/addictive behaviour, and psychosis.

Participant feedback group. To guide discussions the following questions were placed on large paper pads:

1. What would you like to say about PARC?
2. What is the best thing about PARC?
3. What is the first thing to improve about PARC?

Procedure

Participant audit. A report listing the participants of PARC in 2010 was generated from the hospital's medical record system with additional details audited from participant files.

Participant feedback group. To assist with recruitment, members of a consumer participation workteam mailed a flier advertising the feedback opportunity to current and past PARC participants. The feedback group was facilitated by a consumer consultant with feedback written on a large paper pad so all participants could view recorded notes. A second workteam member took handwritten field notes of the discussions as a second method for recording.

Analysis

Change in outcome indicators was assessed using repeated-measures *t*-tests. For qualitative data, thematic analysis was performed following the six-stage thematic approach proposed by Braun and Clarke.[14] This involved: familiarization with responses, generation of initial codes, collation of codes into potential themes, reviewing themes in relation to coded extracts and the entire data set, defining and naming themes and reporting outcomes. Two researchers were involved in coding to enhance reliability.

Results

Participant audit

During 2010, 118 people (experiencing 150 episodes of care) entered PARC (see Table 1). Most were single; 89% were unemployed; 35% were living in primary, secondary or tertiary homelessness before PARC entry and 5% were in study/training. A significant reduction in days admitted to the public mental health services' hospital psychiatric unit was seen in the six months following PARC exit compared with the six months before PARC entry, $t(117)=5.58$, $p<0.001$.

The 150 episodes of care lasted on average 15.8 days (see Table 2). Most stays involved a step-up with exit most commonly to the community. Regular medications at PARC entry were most commonly atypical antipsychotics and no change in medication occurred during the PARC stay for 75% of care episodes.

Table 3 displays the completed HONOS and BASIS-32 scores at entry and exit. To compare change over time, only episodes with entry and exit measures were included (HONOS=125 episodes; BASIS-32=40 episodes). Analysis using repeated-measures *t*-tests found significant reductions from PARC entry to exit for the HONOS, $t(124)=7.61$, $p<0.001$; and BASIS-32 Total, $t(39)=2.67$, $p=0.011$; and subscales: relation to self/others, $t(39)=3.03$, $p=0.004$; daily living/role functioning, $t(39)=2.90$, $p=0.006$; and depression/anxiety, $t(39)=2.45$, $p=0.019$. No significant change was seen for the impulsive/addictive behaviour, $t(39)=0.60$, $p=0.55$; and psychosis, $t(39)=1.37$, $p=0.18$; subscales.

Participant feedback group

Twelve PARC participants attended the feedback group. The first question 'What would you like to say about PARC?' generated the most discussion, with several responses overlapping with responses to subsequent questions. To simplify reporting, coded responses describing positive aspects are presented in Table 4, and things to improve in Table 5.

More responses described positive aspects than desired improvements. Responses in particular focused on the environment and model, stating that it promoted independence and a sense of normality. Being free to choose when to 'come and go' and what activities to engage in was important. A number of participants also said that time in PARC helped them gain strength and stability before returning home: 'After hospital you sometimes have "wobbly feet" and you can gain stability before going home'.

The 'caring' and 'lovely' nature of staff was frequently reported. Particularly valued was help to learn skills for independence as shown by the following quote: 'Staff teach us to be independent and this is very important'. The ability to seek one-on-one help from staff when distressed was also important.

The diversity of therapeutic activities available at PARC was valued. The art group in particular was highlighted: 'the art groups are good. [The art therapist] helps use to get in touch with our feelings … Art is a way of expressing things.'

Table 1. Demographic and clinical variables for people admitted to PARC in 2010

Variable	
Total people entering PARC in 2010: *n*	118
Age: mean (SD)	40.7 (12.1)
Gender: *n* (%)	
Male	61 (51.7%)
Female	57 (48.3%)
PARC entries per participant in 2010: mean (SD)	1.3 (0.7)
Average days in PARC per admission: mean (SD)	16.7 (9.6)
Primary diagnosis at discharge: *n* (%)	
Schizophrenia or other psychotic illness	74 (62.7%)
Bipolar disorder or manic episode	14 (11.9%)
Unipolar depressive episode	13 (11.0%)
Borderline personality disorder	13 (11.0%)
Acute stress reaction	2 (1.7%)
Alcohol or other substance induced disorder	1 (0.8%)
Other	1 (0.8%)
Highest educational achievement: *n* (%)[a]	
Commenced high school	46 (46.9%)
Completed high school	25 (25.5%)
Completed vocational training	10 (10.2%)
Completed tertiary degree/certificate	15 (15.3%)
Completed post-graduate studies	2 (2.0%)
Relationship status at PARC entry: *n* (%)[b]	
Single	80 (68.4%)
Separated, divorced, partner deceased	25 (21.4%)
In a relationship	12 (10.3%)
Housing before PARC: *n* (%)[b]	
Primary homelessness	8 (6.8%)
Crisis housing/rooming house/transitional housing	33 (28.2%)
Supported residential service	10 (8.5%)
With family or friends	19 (16.2%)
Public housing	21 (17.9%)
Private rental/owner occupied	26 (22.2%)
Employment status at PARC entry: *n* (%)[b]	
Unemployed	104 (88.9%)
In at least part-time employment	13 (11.1%)
Education/training status at PARC entry: *n* (%)[b]	
Not currently studying (school, TAFE, university)	111 (94.9%)
Currently studying (school, TAFE, university)	6 (5.1%)
Mean days admitted to inpatient psychiatry unit: mean (SD)	
In 6 months prior to PARC entry	23.8 (25.6)
In 6 months following PARC exit	9.6 (27.1)

Data for this variable was available for: [a]98 participants; [b]117 participants.
PARC: Prevention and Recovery Centre; TAFE: Technical and Further Education

Table 2. Source of entry and exit and regular medications during PARC episodes in 2010

Variable	
Total PARC episodes: *n*	150
Days in PARC per episode: mean (SD)	15.8 (9.6)
Entry source: *n* (%)	
Step-up from community	95 (63.3%)
Step-down from inpatient psychiatry unit	55 (36.7%)
Exit destination: *n* (%)	
Step-down to community	128 (85.3%)
Step-up to inpatient psychiatry unit	16 (10.7%)
Discharge to continuing care unit	2 (1.3%)
Other	4 (2.7%)
Regular medications prior to PARC entry: *n* (%)[a]	
Any atypical antipsychotic	111 (75.0%)
Any typical antipsychotic	46 (31.1%)
Any antidepressant	39 (26.4%)
Any mood stabilizer	54 (36.5%)
Change in regular antipsychotic, antidepressant or mood stabilizer medication during PARC stay: *n* (%)[a]	
No change occurred	111 (75.0%)
Dose change but no medication change	22 (14.9%)
At least one medication was changed	15 (10.1%)

[a]The medications at entry and exit were not available for two participants.
PARC: Prevention and Recovery Centre

Table 3. Mean (SD) outcome measures at entry and exit for PARC episodes of care in 2010 (*n* = 150)

Variable	*PARC entry*	*PARC exit*
HONOS:	(*n* = 142)	(*n* = 128)
	10.7 (4.3)	8.2 (3.3)
BASIS-32:	(*n* = 76)	(*n* = 43)
Total score	1.5 (0.9)	1.1 (0.7)
Relation to self/others	1.8 (1.1)	1.3 (0.9)
Daily living/role functioning	1.8 (1.0)	1.3 (0.9)
Depression/anxiety	1.9 (1.2)	1.4 (0.9)
Impulsive/addictive behaviour	0.7 (0.8)	0.6 (0.7)
Psychosis	0.8 (0.9)	0.6 (0.7)

PARC: Prevention and Recovery Centre; HONOS: Health of the Nation Outcome Scale; BASIS-32: Behavior and Symptom Identification Scale

Participants valued the ability to learn about factors related to their mental and physical health. Information about their medication, bulk-billing psychiatrists, or what a healthy diet involves were examples of provided information as shown by the following quote: 'If you are putting on weight from the meds, the diet can improve your confidence'.

Assistance with practical issues (e.g. help accessing housing programs or meal support) was also beneficial. A number of participants were not aware of all available support: 'It's good finding out about the community and what is available like the free food'. Help in accessing leisure activities (e.g. swimming pool) was also reported.

Table 4. Themes and codes generated from participant responses for positive aspects of the PARC stay

Themes	*Codes*
Environment facilitates recovery (*n* = 16)	• Promotes independence • Gain strength/stability before going home • Relaxing and friendly environment • Importance of garden • Some pets can stay
Supportive and caring staff (*n* = 8)	• Staff lovely and caring • Staff teach independence • One-on-one help when struggling
Practical and community access help (*n* = 8)	• Help to access community services/activities • Meal program offered • Housing help offered • Staff take participants shopping
Therapeutic activities and learning about health (*n* = 7)	• Art group and other group activities • Meditation • Learn about own medication • Help to improve diet
Social opportunity (*n* = 5)	• Enjoy sharing meals • Barbeques to celebrate events • Group walks • Other clients are friendly

PARC: Prevention and Recovery Centre

Table 5. Themes and codes generated from participant responses for things to improve about PARC

Themes	*Codes*
More therapy activities or information about care options (*n* = 5)	• Information about care options (e.g. bulk-billing psychiatrists) • More information about healthy diet • Help to access a dietician • Music and singing
Practical and community access assistance (*n* = 4)	• Provide personal toiletries • Provide public transport tickets or phone cards • Go out for shared dinners • Help with provision of clothing
Environmental improvements (*n* = 3)	• Improve parking for participants' cars • More covered outdoor areas
Staff more available and assertive (*n* = 3)	• Increase staff availability and consistency • Staff should more regularly check in at the start
No improvements (*n* = 2)	• I have no complaints • It's all positive here

PARC: Prevention and Recovery Centre

A final benefit involved being able to socialize and interact with other participants. Sharing meals provided a good opportunity to interact and develop communication skills. One participant said that: 'The group lunches are good and so are the group walks. It's good that these are unplanned sometimes'. This highlighted that participants often initiated activities.

Suggestions for how to improve the PARC experience focused on the following: broadening the provision of therapeutic activities and information on sources of community support; expanding the practical assistance to participants; availability and consistency of staff; and changes to the environment. More information about how to access second opinions, bulk-billing private psychiatrists, and dieticians was suggested. Suggestions for practical assistance included: personal toiletries, public transport tickets and phone cards (to help access the community or maintain connections with existing social networks) and new or recycled clothing. In relation to staff, consistency and being able to have regular staff who participants knew was important. More assertive engagement from staff at key points was also suggested:

> The isolation can be a big adjustment at first. Staff leave us alone and we are free, but then we can feel isolated at first if you don't know you can go to staff. Maybe staff could … see how we are going more often at the start.

Discussion

The current study assessed the outcomes and experience of care for people accessing an Australian bed-based step-up/step-down PARC. Findings showed that at PARC exit, participants reported fewer difficulties with relating to self/others, daily living/role functioning and depression/anxiety and were observed by clinicians to experience fewer symptom, behavioural and social difficulties. In the six months following their PARC stay, participants also spent less time in hospital psychiatry care. Qualitative participant data identified that promotion of independence and illness self-management, regular staff support and assistance to address potential stressors (e.g. unstable housing) were benefits of PARC, and may have contributed to improved outcomes.

Improved outcomes may be due to multiple factors. Participants said that PARC staff promoted independence and knowledge about and ability to self-manage illness symptoms and triggers through providing psychoeducation and groups addressing stress management, skills of independence and other approaches to symptom management. This included help to understand the role of and more regularly take (with reminders from staff) prescribed medications. Participants also described being given choice over what activities to participate in and what goals to focus on, which contributed to a sense of normality that helped to translate what they had learnt into their home environment. The ability to access immediate support from staff when distressed was also important and with daily monitoring of mental state, any changes were quickly responded to. Also said to be valued was that staff problem-solved with participants to identify potential stressors that would impact when returning home. This enabled referrals to be made or information to be provided (e.g. how to access meal services or fitness programs) to address potential stressors or promote physical wellbeing and access to meaningful activities. Received support was therefore consistent with principles articulated in recovery models[13] and likely enhanced participants' capacity to cope with stress and community living,[4] reducing relapse risk.

Addressing housing instability was important. One-third of participants were homeless or living in temporary housing. Public and non-government mental health staff therefore needed to work collaboratively to establish a housing pathway beyond PARC. Given that homelessness is a risk factor for rehospitalization,[15] the capacity for PARC staff to address this may have further contributed to improving illness stability.

Limitations

This study had a number of limitations. While short-term improvements at PARC exit were demonstrated, longer-term (e.g. three-month) follow-up was needed to assess whether improvements were sustained. The lack of a comparison group (e.g. patients treated in psychiatric hospital) also meant that it could not be concluded that the observed clinical benefits were directly due to PARC. Future randomized studies should compare longitudinal outcomes for people accessing PARC or hospital psychiatry care, ideally within the same service to control for sociodemographic or service factors, to more robustly assess PARC effectiveness. Future studies should also collect data describing received support (e.g. primary care, private clinicians, or public and non-government services) or stressors prior to and following a PARC stay. This would ensure that potential confounding factors can be accounted for. Future studies could also assess whether the PARC model is of particular benefit for specific illness presentations. A comparatively high proportion of participants were diagnosed with borderline personality disorder (11%). PARC care may therefore be seen as more suited to the clinical needs of this population in comparison to hospital psychiatry admission; however, further research is needed to explore this.

Conclusion

A bed-based step-up/step-down PARC that was delivered in partnership between a public and non-government mental health service contributed to improving psychosocial functioning for participants and reducing use of hospital psychiatry services. In promoting illness self-management and independence as components of recovery, PARC may play an important role in

transitioning people from hospital to the community or preventing hospitalization.

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