Mental Health Prevention and Recovery Care

A clinical and community partnership model of sub-acute mental health care

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Where the term 'Aboriginal' is used it refers to both Aboriginal and Torres Strait Islander people. Indigenous is retained when it is part of the title of a report, program or quotation.

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Executive summary

Introduction

Victorian mental health Prevention and Recovery Care (PARC) services are sub-acute mental health services operating in community settings. PARC services treat people experiencing a severe and acute mental health episode, providing a mix of clinical and psychosocial support. They are short-term, residential treatment services with a recovery focus. PARC services supplement crisis intervention in Victoria and community-based ambulatory clinical care, with the aim of enabling better overall access to mental health services and stronger continuum of care for consumers.

There are a number of PARC service models. These are Adult PARC services which include a Women's and an Extended Stay, and Youth PARC services (for consumers aged between 16 and 25). PARC services seek to provide an average length of stay between seven and 14 days, with a maximum stay of 28 days. This exception to this is the Extended PARC service where the expected stay is up to six months.

The **aims** of PARC services are to:
- improve mental health outcomes of people with a severe mental illness, who become acutely unwell
- prevent avoidable admissions to acute units and avoidable re-admissions following an acute episode.

Objectives

This report analyses state mental health service data from 2009 to 2014 to evaluate whether PARC services are meeting their aims and objectives. This research also seeks an understanding of PARC services' roles in relation to hospital-based acute inpatient mental health care services and Community Care Units (CCUs).

The objectives of this research were to:
- describe PARC services in terms of their availability, clientele and context for access, health outcomes and care pathways
- compare PARC services to hospital-based acute inpatient mental health services and CCUs by consumer demographics, service delivery and outcomes
- assess whether PARC services are providing better access to mental health services in Victoria.

Findings

PARC consumers differ significantly to those people who access hospital-based acute inpatient mental health services, with a higher proportion of women entering PARC services (54%) compared to acute inpatient services (46%).

PARC services are less available than adult acute inpatient mental health services (0.46 compared to 1.74 beds per 10,000 population). However, PARC services are not operating to capacity, with an average of 72% of available beds occupied in the study period. While rates of use are lower than expected, use of PARC services has steadily increased from 64% in 2009/10 to 77% in 2013/14 as this service type is gradually embedded into the mental health care continuum.

The average length of stay at PARC services is 18 days, with discharge peaks at 14, 21 and 28 days (range 1-59 days).

Care pathways for PARC consumers typically involve transfer to PARC from community-based services (step up) or from acute psychiatric inpatient care to PARC (step down), with all PARC services operating successfully as step up and step down services. Nonetheless, there are some PARC services that provide a high level of step up referrals that could increase their capacity as a support and recovery service. This would perhaps decrease the burden on acute psychiatric inpatient care.

The primary diagnoses of people accessing Adult PARC services are schizophrenia, schizotypal and delusional disorders (48%). Mental health indicators show that:

- PARC consumers' mental health improves significantly during the treatment period, with better mental health at discharge than at admission

- compared to people entering inpatient mental health care, PARC service consumers have less severe mental health problems

- PARC service consumers appear to experience less improvement from intake to discharge compared to inpatient consumers. This may be an indication of the more intensive treatment practices undertaken in inpatient units and greater acuity at admission to these units.

Conclusion

This report finds that PARC services play a role in improving the mental health of PARC consumers. These services have been incorporated into Victoria's continuum of mental health care and operate successfully as step up and step down services.

However, our preliminary findings suggest that PARC services have not yet had a significant impact on preventing avoidable admissions to acute units and avoidable re-admissions.

Nonetheless, PARC services provide an important option for mental health care consumers in Victoria. Through delivery with a community focus, these services aim to ensure strong links with consumer communities and families, foster consumer participation in treatment and use least restrictive treatment practices.

Investigating the experiences of consumers and service providers' decision-making and referral practices in relation to PARC services will provide more information concerning the role of this service model in supporting and treating mental health consumers. In addition, longitudinal research would indicate the sustainability of the benefits of the PARC approach, and the potential for further expansion of the service.

Introduction

Victorian mental health Prevention and Recovery Care services are sub-acute mental health services operating in community settings. These services treat people experiencing a severe and acute mental health episode, providing a mix of clinical and psychosocial support. They are short-term treatment services with a recovery focus. The introduction of PARC services has enhanced mental health treatment options for consumers. These services aim to have high levels of consumer involvement, strong links to consumer's family and/or community and are committed to least restrictive practices.

Funded by the State Government, PARC services are generally delivered through a clinical and community partnership model, with both clinical mental health services and Mental Health Community Support Services collaborating to provide an accessible, supportive and therapeutic model of sub-acute care.

PARC services provide early intervention for people experiencing mental illness that is increasing in severity, acting as a 'step up' from community-based service provision. They also provide a supportive setting for those recovering from an acute psychiatric episode, acting as a 'step down' from hospital inpatient mental health services.

As step up/step down services, PARC services are an important addition to Victoria's continuum of mental health care. By providing an early-stage service option for people with an acute episode of mental illness, PARC services aim to reduce the need for admission to a hospital-based acute inpatient mental health service. By providing intensive support for people following a hospital inpatient treatment episode, these services aim to reduce re-admission rates and the length of stay in an acute setting.

This report gives an overview of PARC services in Victoria between 2009 and 2014. It provides a profile of people who access PARC services, their outcomes and care pathways; compares PARC services to hospital-based acute inpatient mental health services and Community Care Units; and assesses whether PARC services have delivered on their aims and objectives.

Background

PARC services are managed by Public Health Services within Area Mental Health Service catchments. As of January 2016 there are:

- 20 Adult PARC services offering 194 beds and 6 day places, including a Women's only service and an Extended Stay service
- 3 Youth PARC services offering 30 beds
- 2 new Adult services under construction in Mildura and Warrnambool to offer 18 beds and 2 day places (see Table 1).

Table 1: PARC service models

Service model	Age of consumers	Expected stay	No of services
Adult	16-64	7- 28 days	18
Extended	16-64	4 to 6 months	1
Women's	16-64	7- 28 days	1
Youth	16-25	7-28 days	3

Source: Client Management Interface/Operational Data Store

Young people aged between 16-24 years of age, who are eligible for adult mental health care services are able to access PARC services.

Admission to a PARC service is voluntary, however, people on a Community-Based Treatment Order (CBO)[1] are able to access the service. All admissions and discharges to Adult and Youth PARC services are facilitated through an authorised psychiatrist from the relevant Public Health Service.

Treatment practices at PARC services include:

- intensive clinical intervention (including bio-psycho based treatment)
- support and practical assistance to foster independent living and social skills
- appropriate group-based activities and therapies.

In delivering treatment, PARC services aim to have a high level of consumer and carer participation in treatment practice and decision-making.

PARC services have been introduced within a continuum of mental health care in Victoria (see Figure 1) and it is important to look at these services in relation to acute and sub-acute mental health care treatment types. The following services are described and compared to PARC services in this report:

- **Community Care Units** (CCUs)– these units provide clinical care and rehabilitation services in a home-like environment. CCUs are sub-acute services that support the recovery of people seriously affected by mental illness to develop or re-learn skills in self-care, communication and social skills.
- **Inpatient care** – this is acute care and support for people who cannot be assessed and treated safely and effectively in the community. Inpatient care is provided through hospitals for people experiencing an acute mental illness who are unable to be treated in a community setting.

Figure 1: Acute and sub-acute mental health care services
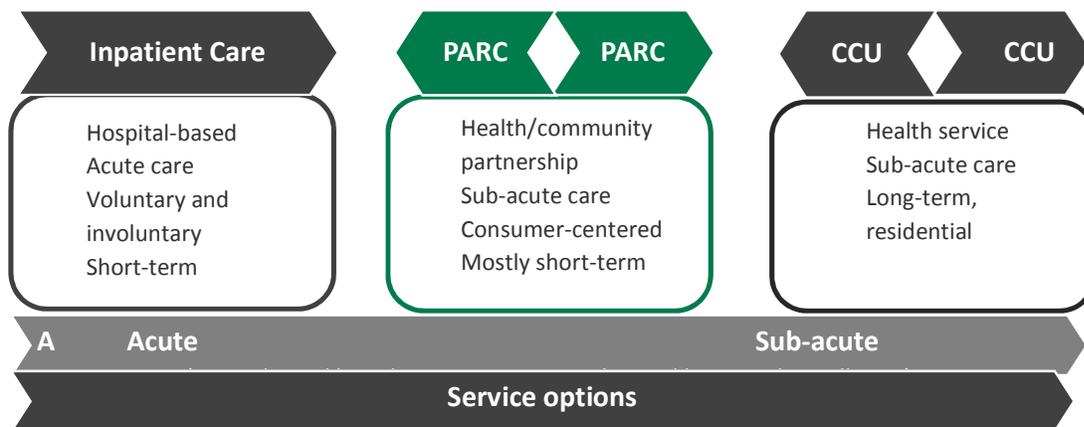
PARC aims and objectives

The **aims** of PARC services are to:

- improve mental health outcomes of people with a severe mental illness, who become acutely unwell
- prevent avoidable admissions to acute units and avoidable re-admissions following an acute episode.

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[1] A CBO means that a person has been mandated to receive mental health treatment. A person who has been given a CBO may receive treatment through a PARC service.

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The **objectives** of PARC services are to:

- provide a service option for people with a severe mental illness, both in the inpatient setting and in the community, whose treatment and recovery is better suited to intensive, short-term treatment and support in a residential setting
- provide a mix of clinical, psychosocial and other support that enables gains from the period in the inpatient setting to be strengthened, community transition and treatment plans to be consolidated and minimises the trauma and disruption for consumers and carers that may arise from an episode of mental illness
- supplement crisis intervention and enhance access to inpatient services through the prevention of unnecessary inpatient admissions and the provision of an intensively-supported early discharge alternative (Department of Health, 2010).

Research objectives

This research aims to evaluate whether all models of Adult and Youth PARC services are meeting their aims and objectives. It also seeks an understanding of PARC services' roles in relation to inpatient mental health care services and CCUs.

The objectives of this research are to:

- describe PARC services in terms of their availability, who is accessing them, health outcomes and care pathways
- compare PARC services to hospital-based acute inpatient mental health services and CCUs by consumer demographics, service delivery and outcomes
- assess whether PARC services are providing better access to mental health services.

To achieve these objectives, state mental health service data between 2009 to 2014 have been analysed, looking at Adult[2] and Youth[3] PARC services compared to inpatient mental health services and CCUs.

Providing this analysis enables us to discuss implications in terms of state-wide mental health service provision policy and service delivery. It also gives insight into how PARC services are being incorporated into the spectrum of mental health care services in Victoria.

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[2] Adult PARC services refers to all Adult, Extended stay and Women's PARC services unless specified.

[3] Youth PARC services have only been available for since March 2013 so data are limited to 2013/14 for these services.

Findings

Availability of PARC services

Availability of PARC services has been assessed by measuring the rate of PARC beds per 10,000 population. Using this measure, there is an average of 0.46 Adult PARC services beds per 10,000 population. PARC services have similar availability in metropolitan (0.46 beds per 10,000 population) and rural areas (0.40 beds per 10,000 population).

Compared to acute inpatient mental health services (1.74 bed per 10,000 population), there are significantly fewer Adult PARC service beds available in Victoria.

Use of PARC services

While PARC services have lower levels of availability in comparison to inpatient mental health services, they are not currently operating at capacity. Guidelines stipulate that PARC services should maintain a bed occupancy rate of 85%, however, current occupancy rates are below this (see www.health.vic.gov.au/mentalhealthservices/parc.pdf).

On average, over the five year study period 72% of PARC beds were occupied, with no variation between metropolitan Melbourne services and rural services. This compares to 91% bed occupancy at inpatient mental health services.

While rates of use are lower than expected at PARC services, service use has increased, with average bed occupancy increasing by 13%, from 64% in 2009/10 to 77% in 2013/14.

As with Adult services, Youth PARC services have a lower than expected rate of use, with an average of 67% of beds occupied. This compares to 86% bed occupancy at Orygen Youth inpatient services.

It is possible that the comparatively low level of use of PARC services is a result of both mental health professionals and consumers having limited information concerning the treatment and support offered by PARC services as well as the embedding of the service type into the continuum over time. Increasing levels of use, however, are promising and suggest these services will reach their recommended occupancy level.

Who uses PARC services?

Gender

PARC consumers have a slightly different profile to that of people entering inpatient mental health care. Adult PARC services are being used by a higher proportion of women (54%) compared to the proportion of women at inpatient mental health services (46%). Youth PARC services also report a higher proportion of young women (61%) compared to young men (39%) accessing services. This is a significantly higher proportion when compared to youths accessing other mental health inpatient units (45% female compared to 55% male).

Age

While there is a clear difference between PARC consumers and consumers of inpatient mental health services in terms of gender, this difference is not apparent by age.

Adult PARC consumers have a similar age range to consumers of other mental health services, with 13% under 24 years of age, 40% between 25 and 39 years of age and 47% over 40 years of age.

Youth PARC services provide services to a large proportion of 18 to 24 year olds (77%) with 22% of consumers under 18 years.

Country of birth

PARC services are mostly accessed by people born in Australia, with 81% of Adult PARC services and 89% of Youth PARC services consumers in this group. This cultural profile is similar to that of other mental health care services.

Aboriginal Victorians

Almost two percent of all Adult PARC consumers and 1.5% of Youth PARC consumers identify as Aboriginal Australians. These proportions are similar to those of acute inpatient services and Community Care Units.

Why do people use PARC services?

While mental health disorders can be multifaceted, a consumer's primary diagnosis provides an indication of the severity and overall nature of their mental illness. In this sense, primary diagnosis is a useful measure with which to look at and compare consumer profiles at mental health services.

The primary diagnoses of people accessing Adult PARC services are schizophrenia, schizotypal and delusional disorders (48%) (see Table 2). Mood (depressive) disorders are the second most common primary diagnoses (19%), followed by personality disorders (13%) and mood (bipolar) disorders (12%). Adult acute inpatient services and PARC services differed significantly across all categories of primary diagnosis. Notably, PARC services provide treatment to a greater proportion of people diagnosed as having schizophrenia, schizotypal and delusional disorders (48% compared to 44%) and mood (depressive) disorders (19% compared to 15%).

There are also significant differences across all areas of primary diagnosis between CCUs and PARC services. For instance, 79% of consumers at CCUs have schizophrenia, schizotypal and delusional disorders as their primary diagnoses compared to 48% of PARC service consumers. As CCUs provide long term residential support, this finding may be indicative of the intensive support this group of consumers require to live in the community.

Primary diagnosis differs significantly at Youth PARC services compared to Adult PARC services, where young people are equally likely to access either service for treatment of schizophrenia, schizotypal and delusional disorders, mood disorders or personality disorders. Youth PARC services provide more services to young people diagnosed with mood (depressive) disorders than youth mental health inpatient services.

Table 2: Primary diagnosis of consumers accessing PARC and other mental services in a 5 year period 2009-2014

Diagnosis	%				
	Adult PARC	Adult Inpatient[1]	Youth PARC	Youth Inpatient[2]	CCU[3]
Schizophrenia, schizotypal and delusional disorders	48	44	25	26	79
Mood (Depressive) disorders	19	15	24	19	3
Personality disorders	13	15	23	24	7
Mood (Bipolar) disorders	12	11	11	6	5
Substance related disorders	2	6	2	7	1
Reaction to severe stress, and adjustment disorders	3	5	3	7	0
Unknown	1	2	6	1	3
Other	3	3	5	9	2

Source: Client Management Interface/Operational Data Store

[1]Refers to adult acute inpatient mental health services
[2]Refers to youth acute inpatient mental health services
[3]Community Care Units

Service delivery

Care pathways into PARC services

Care pathways in mental health are critical in supporting consumers at various stages of mental illness – from acute care to sub-acute treatment and then to ongoing support and recovery. Ensuring PARC services are appropriately accessed to support consumer care pathways is an important gauge of service efficacy. Care pathways for PARC consumers typically involve transfer into PARC from community-based services (step up) or from acute psychiatric inpatient care into PARC (step down). Our data show that all PARC services are operating as both step up and step down services thus achieving these programs aims and objectives in this regard.

Overall more consumers (57%) step up into Adult PARC services, with 43% stepping down from inpatient services, however, there are significant variations between individual PARC services (ranging from 43% to 80% stepping up). This suggests that some PARC services are acting primarily as early intervention services rather than in a support and recovery capacity for those discharged from a hospital setting. Given that PARC services operate within a network of mental health services this high rate of step up admissions may be influenced by hospital referral practices.

Two thirds of Youth PARC (67%) consumers step up, with significantly less stepping down (33%).

At the Extended PARC, significantly less consumers step up (34%) compared to those who step down from inpatient services (66%). This demonstrates this particular service's role as step down care support and is perhaps indicative of the long term support required by some mental health care consumers.

How long do people stay in PARC services?

PARC services aim to provide an average length of stay between seven and 14 days, with a maximum stay of 28 days. The exception to this is the Extended PARC service where the expected stay is up to six months.

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Overall, the length of stay is as expected for all PARC services, with the average length of stay across PARC services as follows (see Figure 2):

- Adult PARC 18 days
- Youth PARC 19 days
- Extended PARC 66 days.

For Adult PARC services, the average length of stay is 19 days in metropolitan services and 15 days in rural services.

Generally, stays at PARC services are within a 28 day period, and around half of PARC consumers stay for seven to 14 days (see Figure 2). Overall:
- 50% of PARC service consumers complete stays in a seven to 14 day period
- 88% of PARC service consumers complete stays within a 28 day period
- 23% of PARC consumers stay for less than seven days
- 12% of PARC consumers stay for more than 28 days.

**Figure 2: Length of stay at Adult and Youth PARC services**
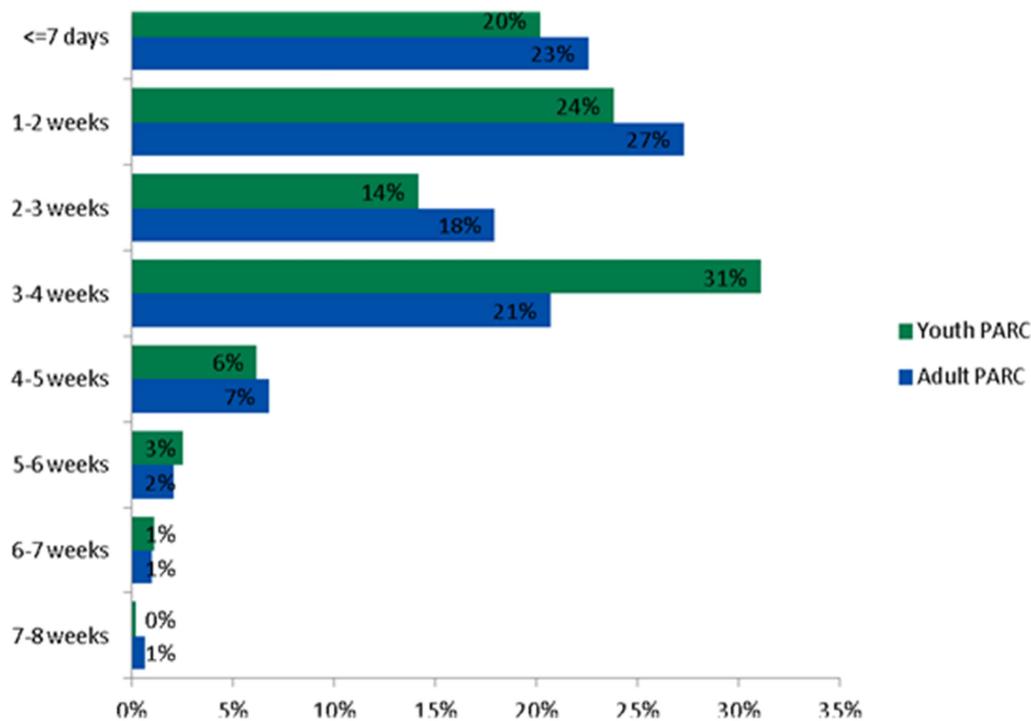
Source: Client Management Interface/Operational Data Store

Discharge from PARC services

Discharge from PARC services corresponds with consumers' length of stay and tends to be at 14, 21 and 28 days (see Figure 3). This contrasts with the high rate of discharge at one day after admission to hospital-based inpatient mental health services.

Figure 3: Discharge from Adult PARC and adult inpatient services
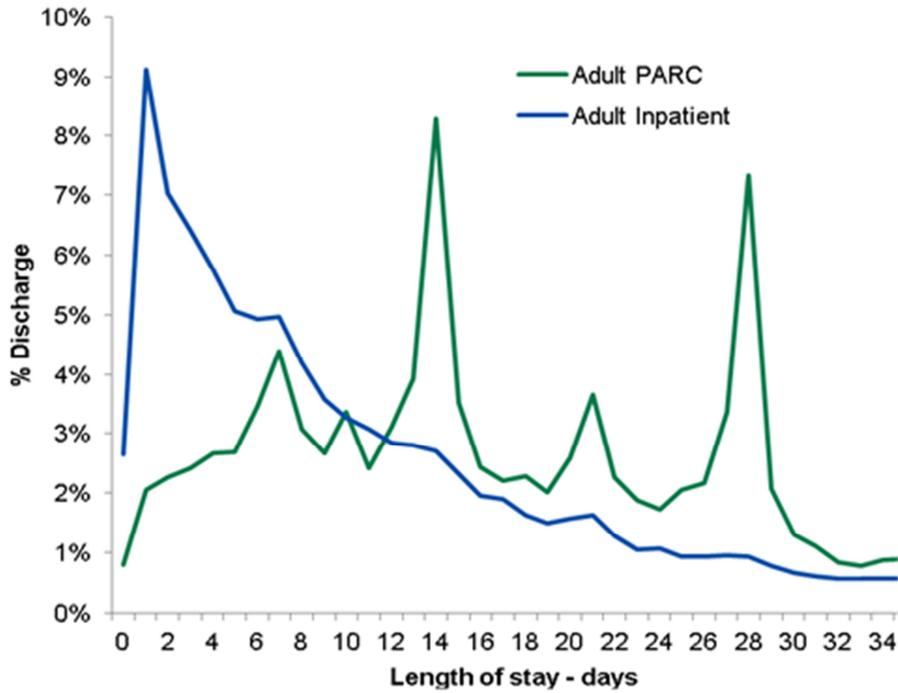
Source: Client Management Interface/Operational Data Store

Similar to the discharge patterns at Adult PARC services, Youth PARC services discharge peaks at 14, 21 and 28 days. This contrasts with other youth inpatient mental health services where discharge peaks at the second day after admission (see Figure 4).

Figure 4: Discharge from Youth PARC and youth inpatient services

Source: Client Management Interface/Operational Data Store
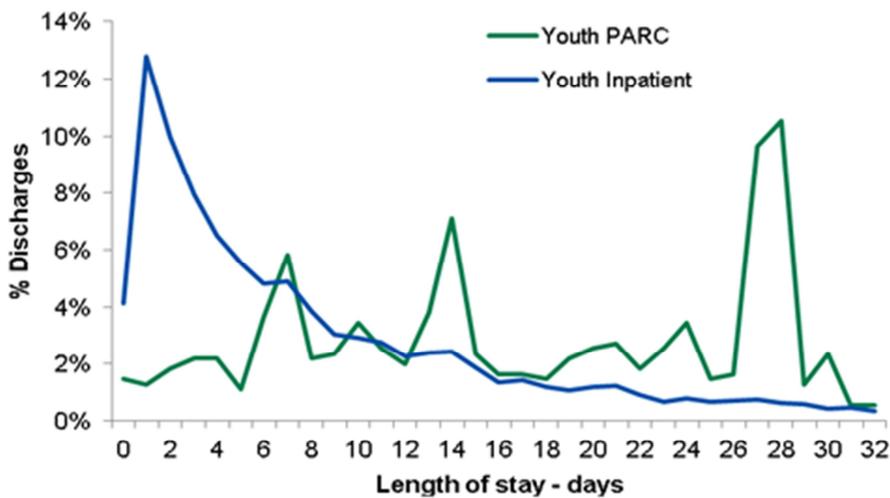
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The early discharge from acute inpatient services (between 1-2 days) may be a result of legislation that is in place to minimise the use of compulsory treatment (see the Mental Health Act 2014 for further information). Inpatient units are the main sites for people on an Assessment Order, the first step in receiving compulsory treatment. People on an Assessment Order are typically assessed by an authorised psychiatrist within 24 hours. After this assessment, a number of people will be detained for compulsory in-patient treatment, whereas others will be eligible for community-based treatment— including that offered through PARC services—and leave the unit.

Mental health outcomes

One of the ways in which mental health outcomes are assessed in Victorian mental health services is by using the Health of the Nation Outcomes Score (HoNOS) results (Wing, Beevor, Curtis, Park, Hadden and Burns, 1999). The HoNOS is designed to measure the health and social functioning of people with mental health diagnosis across time. HoNOS results are calculated from a range of indicators that measure problems the consumer is experiencing. A higher overall HoNOS result indicates poorer mental health. Looking at changes in HoNOS outcomes can provide an indication of treatment efficacy.

Change in overall HoNOS results

Overall HoNOS results for both Adult and Youth PARC service models show improved health outcomes for consumers (see Table 3).

Table 3: HoNOS outcomes by Service Type

Service type	HoNOS Admission	HoNOS Discharge
Adult inpatient (n=39,228)	15.9	7.4
Adult PARC (n=5,915)	12.4	9.1
Community Care Units	13.8	13.9
Youth PARC (n=347)	12.3	7.8
Youth inpatient (n=10,890)	16.6	9.0

Source: Client Management Interface/Operational Data Store

Note: n = number of ended episodes where a valid admission and a valid discharge score were available.

HoNOS results in Adult PARC services show a significant drop from 12.4 at admittance to 9.1 at discharge. In the smaller Youth PARC sample (347 records) the average admission score reduced significantly from 12.3 at admittance to 7.8 at discharge. In both groups this change indicates that people had better mental health upon discharge from PARC services.

Compared to consumers at inpatient mental health services, PARC consumers had significantly lower HoNOS results at admission (12.4 compared to 15.9) and higher results at discharge (9.1 compared to 7.4). Further, adult inpatient consumers appear to show greater improvement at discharge compared to PARC consumers.

On average, Youth PARC services HoNOS scores (12.4) appear lower at admittance than youth inpatient services (16.6) and higher at discharge (7.8 compared to 9.0).

The different HoNOS results at admission for PARC consumers compared to inpatient services reflect the selection criteria of each particular service model. It is expected that people with more serious mental health disorders (and therefore higher HoNOs scores) would access the more intensive model of hospital-based acute inpatient treatment.

Likewise, the apparent greater rate of change in the mental health of people receiving treatment in an acute inpatient setting may be reflective of the more intensive treatment received and the greater acuity at admission. Further analysis and documentation of treatment practices by service type could provide a better understanding of these rates of change and their sustainability in the long term.

Change in individual HoNOS indicators

Individual HoNOS indicators provide a picture of the areas of concern for people at admission to mental health services. They also give an indication of the impact of treatment on these areas of concern. Table 4 shows the proportion of consumers by each HoNOS indicator at intake and at discharge.

For both Adult PARC services and adult acute inpatient services 'other mental and behavioural problems' was the most common area of concern for consumers at admission (69% and 67% respectively). This was followed by 'depression' (56% for both service types) and 'problems with relationships' (53% and 55% respectively).

However, at intake, there were a significantly higher proportion of consumers from inpatient services on various areas of concern including:

- overactive/aggressive/disruptive behaviour (53% of adult inpatient compared to 21% of Adult PARC services consumers compared)

- non accident self-injury (36% of adult inpatient consumers compared to 16% of Adult PARC services consumers)

- hallucinations and delusions (54% of adult inpatient consumers compared to 35% of Adult PARC services consumers)

- problem drinking or drug taking (44% of adult inpatient consumers compared to 23% of Adult PARC services consumers).

The above differences between PARC and inpatient mental health service consumers are reflective of the different role of the service types. People with more severe mental health disorders and resulting symptoms would not meet the selection criteria for treatment at a PARC service and would require admission to an inpatient service.

Treatment impact

Looking at changes in individual problem areas, HoNOS results for Adult PARC services show a significant drop in the proportion of people with each indicator at intake and then at discharge in a number of areas (see Table 4):
- other mental and behavioural problems (proportion of consumers decreased by 39%)
- problems with relationships (proportion of consumers decreased by 32%)
- depressed mood (proportion of consumers decreased by 28%)

These decreases suggest that PARC services have a positive impact on these particular problem areas measured by the HoNOS.

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Table 4: Percentage of consumers with HoNOS indicators at admittance and discharge

HoNOS indicator	Adult PARC (%)		Inpatient (%)	
	intake	discharge	intake	discharge
Overactive/aggressive/disruptive behaviour	21	15	53	42
Non-accidental self-injury	16	11	36	29
Problem drinking or drug taking	23	11	44	23
Cognitive problems	20	10	30	22
Physical illness /disability problems	26	11	25	15
Hallucinations and delusions	35	15	54	37
Depressed mood	56	28	56	37
Other mental and behavioural problems	69	30	67	45
Problems with relationships	53	21	55	34
Problems with activities of daily living	38	21	37	29
Problems with living conditions	29	15	28	20
Problems with occupation and activities	44	23	41	28

Source: Client Management Interface/Operational Data Store

Have PARC services relieved the burden on acute mental health services?

Through providing intensive and accessible treatment, PARC services supplement acute community and bed based interventions in Victoria, with the aim of enabling better overall access to mental health services.

In order to determine whether PARC services are meeting this aim, we assessed whether they had reduced admission and re-admission to acute inpatient mental health services. As a preliminary exercise we looked at local rates of use and length of stay at inpatient services before and after the establishment of a PARC service in the same Area Mental Health Catchment.

Preliminary findings indicated that despite the introduction of PARC services there have been no significant changes in use of or length of stay at inpatient mental health services.

These findings suggest that the current balance of PARC services available have not reduced the burden on acute inpatient mental health services, however, further investigation is required into this matter that is not in the capacity of this study.

Enhanced consumer choice

While it is not currently evident that PARC services have had a significant impact on stay and admission rates in acute inpatient services, they provide an important option for consumers in terms of mental health treatment. Through delivery with a community focus, these services aim to ensure strong links with consumer communities and families, consumer participation in treatment and less restrictive practices.

PARC services have enhanced treatment options for certain consumer groups, for instance, providing services specific to women.

Conclusion

Implications for policy

PARC services are providing both early intervention and post-acute care through a unique partnership model and health services have incorporated them well in their continuum of care. There are, however, some services that operate primarily in a step up capacity. Greater support could be provided in order for these services to increase their support and recovery capacity.

PARC services aim to provide an alternative to hospital-based inpatient acute mental health care and/or post-acute support, and a step down service for consumers leaving inpatient care. However, initial analysis finds that use of hospital-based services has not decreased with the introduction of PARC services. Additionally, PARC services have a lower than expected rate of use – although this is steadily increasing. Better knowledge of service provider decision-making and referral practices, as well as consumer experiences might assist to understand the current levels of use of PARC services and improve and promote their role in the delivery of mental health treatment in Victoria.

The slightly different profile of PARC service consumers suggests that these services provide a treatment option for populations that have had lower rates of use of inpatient services, such as women. Further investigation is warranted in this area.

Future investment in both Adult and Youth PARC services should be considered on an individual catchment basis. This should take into account local use and availability of existing inpatient mental health services, as well as each catchment's ability to provide comprehensive services, to ensure there is a strong case for investment.

Implications for practice

Consumers, carers and mental health practitioners may require more comprehensive information concerning the role of PARC services and the support and treatment they provide. This could lead to improved referral practice to PARC services and ensure their operation as both a step up and step down service, relieving the burden on inpatient mental health care.

For those PARC services operating primarily as step up services, service providers are encouraged to consider their role as a support and recovery service for people discharged from a hospital-based service and, where appropriate, provide a higher volume of step down admissions.

Service providers are encouraged to consider assessment and admittance practices and ensure they are culturally sensitive and appropriate for people born in other countries than Australia.

To support reflective and informed practice, aggregated HoNOS results should be released to PARC health services.

Implications for research

Further investigation of consumer experiences and documentation of treatment practices at PARC services could provide insight into service strengths as well as areas for improvement.

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Appendix A: Adult PARC services in operation in Victoria

Table 5: Adult Prevention and Recovery Care Services Operating

Health Service	Campus	Beds
Alfred Health	Inner south	10
Austin Health	North east	0
Eastern Health (Box Hill)	Central east	8
Eastern Health (Maroondah)	Outer east	10
Melbourne Health (RMH)	Inner west	10
Melbourne Health (Sunshine)	Mid west	10
Melbourne Health (Northern)	Northern	10
Melbourne Health (Broadmeadows)	North West	10
Monash Health (Casey)	Casey	20
Monash Health (Dandenong)**	Dandenong	10
Monash Health (Monash MC)	Middle South	10
Peninsula Health	Peninsula	10
St Vincent's Hospital	Inner East	10
Werribee Mercy	South west	10
Ballarat Health	Grampians	0
Barwon Health	Barwon	6
Bendigo Health	Loddon Mallee	10
Goulburn Valley Health	Goulburn Valley	10
Latrobe Regional	Gippsland	10
Mildura Base Hospital	Northern Mallee	0
North East & Border	Hume	10
South West Health	Glenelg	0

Source: Client Management Interface/Operational Data Store

Appendix B: Methodology

This research has examined PARC services and compared them to other acute inpatient mental health service types and Community Care Units (CCUs) using Client Management Interface/Operational Data Store (CMI/ODS). The data are analysed over a five year period (1/05/2009 to 30/04/2014).

Our analysis investigated:

- PARC health outcomes, with a comparative analysis to mental health inpatient services and CCUs
- operational benchmarking against set parameters, including length of stay, bed use and occupancy, discharge patterns and 'step up' and 'step down' functioning.

To describe PARC services, demographic and diagnostic variables were analysed.

Length of stay and HoNOS analysis is based upon completed treatment episode, where the end date is the date of discharge.

All analysis is by treatment episode and therefore includes repeat consumers.

Episode type was either 'PARC' or 'inpatient'. These types were determined using a reference table which combines: subcentre type; ward/residential type; outcome measurement setting; program types attached; and department knowledge.

The 'Youth Inpatient' category was created with consumers aged between 16 to 25 years in Adolescent Units, Orygen and adult inpatient units. Young people admitted to adult inpatient units are also included in the 'Adult Inpatient' category. Approximately 14,000 records fall into this category.

In most instances, the Monash Health Extended Adult PARC located in Narre Warren was excluded from the analysis. This was because the model variation would distort the data analysis outcomes.

Frequencies have been reported and standard statistical tests have been applied to the results. These include t-tests and analysis of variance to compare means. Areas of statistical significance have been highlighted in the report.

Table 6: Number of records per episode type

Episode type	No. of records
Adult inpatient	75,833
Adult PARC	9,115
Extended PARC	35
Youth PARC	551
Youth inpatient*	22,617

Note: Youth consumers admitted to an Adult inpatient unit are included in the Adult inpatient and the Youth inpatient category.

Glossary of Acute and Sub-acute Mental Health Services

Community Care Units (CCUs)

Community care units (CCUs) provide clinical care and rehabilitation services in a home-like environment. CCUs are sub-acute services support the recovery of people seriously affected by mental illness to develop or re-learn skills in self-care, communication and social skills in a community-based residential facility.

CCUs provide medium to long-term clinical and rehabilitation support for people unable to live in other community residential options. Length of stay can be up to two years. During this time, consumers have access to 24-hour multidisciplinary clinical support and treatment, including regular medical psychiatric review.

In-patient care

Acute inpatient services support people who cannot be assessed and treated safely and effectively in the community. General hospitals commonly provide acute inpatient services.

These services provide a range of therapeutic interventions and programs to patients and their families to learn more about the impact of, and to better manage mental illness, improve coping strategies and move towards recovery.

Preventative and Recovery Care (PARC)

Mental health Prevention and Recovery Care (PARC) services are sub-acute mental health services operating in community settings. These services treat people experiencing a severe and acute mental health episode, providing a mix of clinical and psychosocial support. They are short-term, residential treatment services with a recovery focus.