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A two-model integrated personality disorder service: effect on bed use

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Aims and method To assess the impact on psychiatric in-patient bed use of a new personality disorder service that uses two psychoanalytical models: mentalisation-based treatment (MBT) and the service user network (SUN). The number of psychiatric bed days used by patients attending each of the three arms of the service model (SUN, 3-day MBT, 2-day MBT) was collated using the electronic patient records system. Bed use in the 6 months and 12 months before each patient started treatment was compared with bed use in the same periods after starting treatment.

Results Overall, statistical analysis revealed bed use to be significantly reduced by 6 months of treatment, and the reduction continued to prove significant at 12 months. Comparison between subgroups found no significant difference in bed use between patients attending the MBT programme and patients attending the SUN project at 6 months, but patients on the 3-day MBT programme exhibited a significantly greater reduction in bed use at 6 months compared with patients on the 2-day MBT programme.

Clinical implications Intervention had a statistically significant effect overall on reducing bed use, which we suggest is linked to an improvement in patients' functioning, and is maintained at 6 months and 12 months of treatment. The lacking difference between the SUN and MBT components of the model raises questions regarding the best allocation of resources and the longer-term effects on bed use, to be answered by further study.

Declaration of interest None.

The diagnosis of personality disorder covers a wide range of conditions with disparate presentations. Given the plurality of approaches, the limited evidence base and the overlap

between models, choosing an approach is difficult. In response to this, the National Personality Disorder Development Programme undertook an evaluation of 11 pilot

community personality disorder services. The evaluation found widespread agreement about the principles that should underpin service delivery, including the need for 'open communication, explicit boundaries [and a] consistent theoretical model'.¹

Among presentations, the poor impulse control, self-harm and aggression to other people that characterise cluster B personality types (dramatic, emotional, erratic) are highlighted as major burdens to psychiatric settings.^{2,3} A high rate of acute in-patient admission is further associated with a high incidence of suicide among people with borderline personality disorder, estimated at 10%.⁴ Partial hospitalisation over a 5-day week with a mentalisation-based treatment (MBT) approach to care has been shown to decrease this burden, reducing the duration of in-patient care among patients with borderline personality disorder,⁵ in addition to a reduction in rates of self-harm and suicidality.^{6,7} The provision of inexpensive open-access service user network (SUN) groups has also demonstrated effectiveness in reducing emergency department attendance among patients with personality disorder.⁸

A working party survey of the London Borough of Croydon previously highlighted the need for service development geared towards intervention for people with personality disorder, with an estimated 4000 people having a diagnosis of personality disorder⁹ but with no access to a specialist intervention. In a departure from existing specialist personality disorder service models, the new specialist service proposed to use both MBT and SUN models of care, each consistent and explicit in the theoretical approach, and with the combined approach then catering for a wider population of patients than could be reached by either model alone. This 'inter-digitation' of the two models offered an acceptable balance of catering for a large number of patients and offering a specific, evidence-based intervention for patients exhibiting borderline pathology.

The construction gave rise to three subgroups of patients. Patients offered a place on either of the two MBT programmes (2-day or 3-day) exhibited borderline pathology at clinical assessment, with confirmation of the diagnosis of borderline personality disorder through

subsequent Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II) assessment (Table 1). Both MBT programmes adopted therapeutic community principles comprising individual and group therapy but differed in the frequency of individual therapy, community meetings and creative structures. The patients with greater disturbance (in terms of self-harm and service use) were offered a place on the 3-day programme, with weekly individual sessions, while the patients on the 2-day programme were offered individual sessions every 2 weeks.

The SUN project offered open access to four groups per week, using therapeutic community principles alongside coping process and psychoanalytical theories, but catering for a wider range of personality disorder subtypes. Patients in the MBT programme could also access the SUN project if they wished, to varying degrees (Fig. 1). The process of service development has been described fully elsewhere.¹⁰ Briefly, patients presenting at assessment and exhibiting borderline pathology, assessed as having a 'mentalising deficit' and viewed by the assessing pair as potentially being able to make use of MBT were offered a place on the MBT day programme. Patients who declined the offer of the MBT programme and self-presented without referral were thought either to not exhibit borderline pathology or to be too disordered in their functioning and were signposted to the open-access SUN project.

This article focuses on the impact of the new service on psychiatric bed use for all patients receiving an intervention.

Method

Two methods were used to clarify the presence of personality disorder: (a) the diagnosis was ascertained by a single rater using SCID-II on entry of patients into either arm of the 18-month MBT programme; and (b) as the open-access, open-ended nature of the SUN project did not allow for the same diagnostic measure, the Standardised Assessment of Personality – Abbreviated Scale (SAPAS) was sent to every member who attended the SUN project as a result of an initial leafletting exercise aimed at attracting potential members. The SAPAS is a validated eight-item self-report

Table 1 Demographic and diagnostic data for the whole sample

	SUN group (n = 41)	2-day MBT programme (n = 16)	3-day MBT programme (n = 15)	Total (n = 72)
Age, years: mean (s.d.)	42 (12.97)	40 (10)	35 (11.39)	39 (12.30)
Gender, % (n)				
Male	31.7 (13)	31.25 (5)	0 (0)	25 (18)
Female	68.3 (28)	68.75 (11)	100 (15)	75 (54)
Ethnic origin, % (n)				
White	82.9 (34)	87.5 (14)	93.3 (14)	86.11 (62)
Black	0 (0)	6.25 (1)	0 (0)	1.39 (1)
Mixed race	2.4 (1)	6.25 (1)	6.67 (1)	4.17 (3)
Other	14.6 (6)	0 (0)	0 (0)	8.33 (6)
SCID-II categories, n: mean (s.d., range)	3.31 (2.18, 0–8)	3.57 (1.6, 1–7)	3.43 (1.91, 0–8)	
SAPAS score (threshold 3), mean (s.d., range)	5.18 (0.85, 4–7)		5.18 (0.85, 4–7)	

MBT, mentalisation-based therapy; SAPAS: Standardised Assessment of Personality – Abbreviated Scale; SCID, Structured Clinical Interview for DSM-IV Axis II Personality Disorders; SUN, service user network.

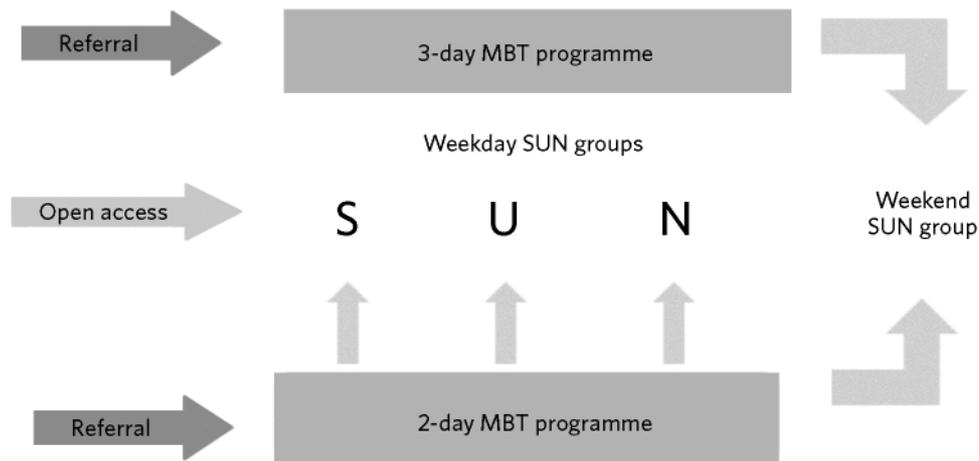


Fig. 1 Service structure.
MBT, mentalisation-based therapy; SUN, service user network.

questionnaire with established psychometric properties, where a cut-off score of 3 or more indicates the likely presence of a personality disorder.¹¹

At the point of study, all patients reaching 6 months or more across the three treatment groups were identified ($n = 72$). As a subset, patients reaching at least 12 months of treatment in each of the three groups were also identified ($n = 41$). All patients reaching 6 months and 12 months of intervention were included. Patients who dropped out of MBT before 6 months ($n = 10$) or before 12 months ($n = 5$) were not included in the relevant part of the audit. The open-access policy of the SUN project meant every patient retained access to the groups once membership had been granted, so all SUN members were included in the sample, irrespective of attendance rates. Demographic data and durations of psychiatric in-patient stays (bed days) were collected using the electronic patient record system of patients' case notes.

Data analysis was carried out using SPSS version 17 for Windows. We used two-tailed non-parametric statistical tests throughout because of the uncertain direction of change in the early stages of treatment and the positively skewed distribution of the data on bed days. The within-group statistical significance of changes in bed usage between 6 months and 12 months before treatment and 6 months and 12 months after starting treatment was determined using the paired-samples Wilcoxon signed-ranks test. The three treatment groups were compared with regard to the 6 months before treatment and the 6 months after starting treatment period, and the 12 months before treatment and the 12 months after starting treatment, using the Mann–Whitney U -test. Patients attending both the SUN project and either of the MBT programmes ($n = 12$) were excluded from SUN/MBT between-groups analysis; the majority of these patients ($n = 10$) were from the 2-day MBT programme.

Sample description

The sample characteristics are shown in Table 1.

An overrepresentation of women was found across treatment groups, but the age range of patients presenting

appeared similar across groups. Black and minority ethnic patients were underrepresented across groups compared with the borough's demographic data.¹² For patients attending the 2-day and 3-day MBT programmes, most met threshold criteria for numerous personality disorder diagnoses, and 86% met criteria for borderline personality disorder.

Of the patients attending the MBT programmes (including those who subsequently dropped out), 91.7% met SCID-II threshold criteria for at least one category of personality disorder. The remaining patients exhibited borderline traits that did not meet diagnostic threshold. The majority of patients typically met criteria for a combination of three categories. Alongside borderline personality disorder, the two most common SCID-II diagnostic categories were avoidant personality disorder and paranoid personality disorder. The combination of these three subcategories was particularly evident among patients on the 3-day MBT programme. By comparison, more patients on the 2-day MBT programme met diagnostic threshold for the obsessive–compulsive and antisocial subcategories alongside borderline personality disorder.

Of the 53.7% of patients attending the SUN project who returned the SAPAS questionnaire, 100% scored positive for three or more criteria, indicating that the diagnosis of personality disorder was likely.

Results

Whole service impact

A Wilcoxon signed-ranks test showed that overall bed use reduced dramatically after starting treatment. The number of bed days in the 6 months before treatment was significantly greater than the number of bed days in the 6 months after starting treatment. The number of bed days used by patients in the 12 months before treatment was also significantly greater than the number of bed days used in the 12 months after starting treatment (Fig. 2 and Table 2).

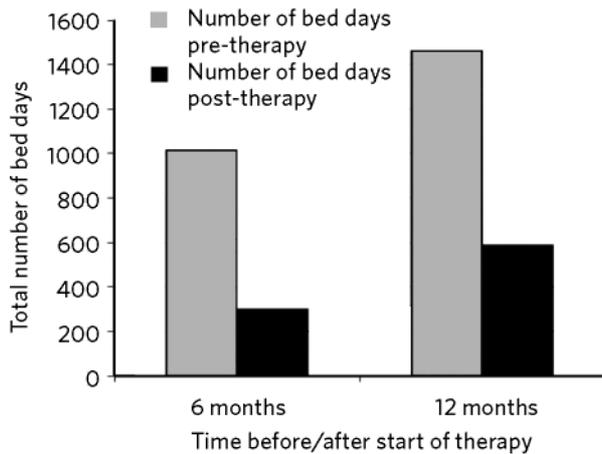


Fig. 2 Total bed days 6 months and 12 months before and after start of therapy.

Within-group analysis

2-day MBT programme

Wilcoxon signed-ranks tests showed that bed use in the 6 months before treatment (median 0, interquartile range (IQR) 5.5) did not differ significantly from bed use in the 6 months after starting treatment (median 0, IQR=6.5) among the 2-day MBT programme attendees ($z = -0.169$, $P = 0.866$, $r = -0.042$). Similarly, bed use in the 12 months before treatment (median 3, IQR=111) did not differ significantly from bed use in the 12 months after starting treatment (median 7, IQR=30, $z = -1.069$, $P = 0.285$, $r = -0.404$).

3-day MBT programme

Bed use in the 6 months before treatment (median 12, IQR=60) differed significantly from bed use in the 6 months after starting treatment (median 0, IQR=4) among the 3-day MBT programme attendees ($z = -2.667$, $P = 0.008$, $r = -0.689$). This finding corroborated the initial clinical assessment of high service use among this group of patients and highlighted the impact of treatment on bed use. However, bed use in the 12 months after starting

treatment (median 13, IQR=57) did not differ significantly from bed use in the 12 months before treatment (median 55, IQR=97.5, $z = -1.461$, $P = 0.144$, $r = -0.731$).

SUN project

A statistically significant reduction in bed use was found when comparing the 6 months after starting SUN (median 0, IQR=0.5) with the 6 months before joining the programme (median 0, IQR=10, $z = -2.580$, $P = 0.01$, $r = -0.403$). The same median values highlight the skewed nature of the data and the fact that a small number of patients account for the majority of bed days. Bed use in the 12 months before starting the SUN project (median 0, IQR=0) did not differ significantly from bed use in the 12 months after starting treatment (median 0, IQR=0, $z = -1.600$, $P = 0.11$, $r = -0.292$).

Between-group analysis

SUN versus MBT

The Mann–Whitney *U*-test showed that during the 6 months before treatment, patients attending SUN (median 0, IQR=5) did not differ significantly in use of psychiatric beds from the patients attending either of the MBT programmes (median 8, IQR=54, $U = 216.00$, $P = 0.053$, $r = -0.274$). The number of bed days used by SUN attendees 6 months after starting treatment (median 0, IQR=0) continued to differ insignificantly from the number of bed days used by patients in the MBT programmes (median 0, IQR=4, $U = 248.00$, $P = 0.169$, $r = -0.194$). A significant difference was found, however, when comparing SUN bed use at 12 months after starting treatment (median 0, IQR=0) with bed use among the combined MBT group (median 3, IQR=17). It must be noted that the between-group sample size after excluding patients attending both SUN and MBT was very small for the MBT group ($n = 5$) compared with the SUN group ($n = 21$) 12 months after starting treatment.

MBT groups

A comparison between the two MBT programmes revealed that bed use by patients on the 3-day programme (median 0,

Overall service evaluation	Bed days before treatment	Bed days after treatment	Wilcoxon signed-ranks test		
			z-score	P	Effect size (r)
6 months (n = 72)					
Total	1014	299	-3.522	<0.001*	-0.415
Mean	14.08	4.15			
s.d.	29.12	10.12			
Median	0	0			
IQR	17	3.5			
12 months (n = 41)					
Total	1460	588	-2.483	0.013*	-0.293
Mean	35.61	14.34			
s.d.	67.46	35.09			
Median	0	0			
IQR	55.5	9			

IQR, interquartile range.

*Indicates a result of statistical significance at the 95% confidence interval.

IQR=4) differed insignificantly from bed use in the 2-day programme (median 0, IQR=6.5) 6 months after starting treatment ($U=114.50$, $P=0.799$, $r=-0.046$). In contrast, bed use by patients on the 3-day programme (median 12, IQR=60) was significantly greater than bed use by patients on the 2-day programme (median 0, IQR=5.5, $U=69$, $P=0.025$) 6 months before treatment. Bed use by patients on the 3-day programme (median 13, IQR=57) was not significantly different from bed use by patients on the 2-day programme (median 13, IQR=57) 12 months after starting treatment – that is, bed use by patients in the two groups became increasingly similar as treatment progressed.

Alongside the reduction of in-patient bed days across the whole sample, no completed suicidal acts were recorded during the year-long study period.

Discussion

This audit suggests that a two-model specialist personality disorder service had a significant impact on psychiatric bed use 6 months after starting treatment, with a reduction in use highlighted. This effect was maintained 12 months after starting treatment. It has been argued that the apparent improvement in prognosis in borderline personality disorder over the past few decades reflects, in part, shorter hospitalisations.¹³ Given the 86% overall treatment retention rate at 6 months, the 88% overall retention rate at 12 months, and the fact that no completed suicides occurred within the context of reducing the duration of hospitalisation, the link to improved prognosis appears to find support in our results. This echoes similar findings of reduced in-patient stays from naturalistic studies undertaken by other community personality disorder services.¹⁴ The demographic data suggest that Black and minority ethnic patients are less likely to access the service. In part, this may be explained by bias in the referral pathway to the MBT programme, although the fact that the SUN project is open access suggests additional cultural differences.

Analysis of changes within each treatment group shows a large effect size of the 3-day MBT programme ($r=-0.731$) when comparing the 12 months before and after starting treatment, which differed little from the corresponding comparison of the 6 months before and after starting treatment ($r=-0.689$), which was found to be highly significant. This suggests that the insignificant change in bed days for the analysis at 12 months might also reach significance if a larger sample size were used.

By contrast, analysis of the 2-day MBT programme does not reach significance in the same way as the 3-day MBT programme at 6 months of treatment. The effect size is negligible when comparing the 6 months before and after starting treatment ($r=-0.042$) for the 2-day MBT programme. When comparing the 12 months before and after starting treatment, the effect size is medium ($r=-0.404$), but without reaching statistical significance. Again, this may reflect a small sample size and the need for further data collection.

That no significant reduction in bed use was found specifically within the 2-day MBT programme at 6 months may reflect a differing sample population compared with the 3-day MBT programme. The apparent variation in SCID-II

comorbidity between these groups is in keeping with this suggestion, as is the initial difference highlighted through the clinical allocation process. Subsequent differences in treatment 'doses' may further account for this finding. It would appear that treatment has little impact on bed use during the first 6 months within the 2-day MBT group, whereas within the 3-day MBT programme there exists a dramatic reduction in bed use in the first 6 months, such that bed use by the two groups becomes increasingly similar over time.

Analysis of the SUN project at 6 months before and after treatment highlighted a significant reduction in bed use, with a medium effect size ($r=-0.403$). At 12 months, however, the significance is absent and the effect size is reduced ($r=-0.292$). It appears that the greatest effect in reduction of bed use is achieved within the first 6 months of SUN attendance. Further data collection at 12 months is required to ascertain whether a significant effect remains. Although a significant difference was obtained when comparing SUN and the combined MBT sample on bed use at 12 months after starting treatment (excluding patients attending both SUN and MBT), the results should be interpreted with caution. A very small remaining sample size may not represent the wider sample at this stage, and therefore further study with a larger sample size is indicated.

Finally, the diagnostic profile of the SUN sample in this study is reflective of a similar finding in a previous study, in which over 91% of patients scored three or more points on the Standardised Assessment of Personality (SAP) in the 44% of the sample returning the SAP questionnaire.⁸ Our clinical knowledge of the remaining patients not returning the SAPAS leads us to suggest that they are at least as likely to meet the threshold for the diagnosis of personality disorder. We must concede, however, that the robustness of the diagnosis is less in the SUN sample than in the MBT samples, where the SCID-II was formally conducted. A further study is planned and will entail the administration of the SAPAS screening tool to all groups of patients, irrespective of subsequent administration of the SCID-II, to afford greater comparability between patient groups.

There are a number of limitations to this study, including the lack of a control group, without which no definitive statement about the effectiveness of the three interventions offered can be stated. Randomisation to specific intervention groups was not conducted. Some very small post-treatment sample sizes, particularly with the MBT sample, may have reduced the ability of the analyses to reach significance. There exists no control group against which to compare the size of reduction in bed use. A remaining question exists regarding whether reduction in bed use is maintained once the 18-month MBT treatment is completed and indeed whether reduction is linked to frequency of attendance. These three facets indicate the need for further study.

With that caveat, and given the current zeitgeist for cost savings, the suggestion that a cheap, open-access, community-based intervention offers the prospect of significantly reducing psychiatric bed use by 6 months (comparable to the reduction afforded by an MBT programme) warrants ongoing investigation.

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Supervised community treatment: 2-year follow-up study in Suffolk

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Aims and method To describe the use of community treatment orders (CTOs) and outcomes for patients placed under CTOs within the first 8 months of use in Suffolk. We performed retrospective and prospective examination of health records to collect sociodemographic and clinical measurements with a specific data-collection tool.

Results All of the patients studied had a major psychotic mental illness. A significant proportion of the patients had a history of alcohol or substance misuse and contact with judicial services. Implementation of a CTO was associated with an increase in engagement, a decrease in the number of admissions, and increased time spent outside hospital.

Clinical implications This small localised study indicates that supervised community treatment can have benefits for some patients. The challenge now is to examine the practice of supervised community treatment and to receive meaningful feedback from people who are subject to such treatment.

Declaration of interest None.

Community treatment orders (CTOs) in England and Wales were introduced by 2007 amendments to the Mental Health Act 1983, and have been used since November 2008. The Code of Practice states the principle is to provide an alternative to ongoing treatment in hospital and to prevent relapse and the harm associated with it.¹ The purpose of CTOs is to provide support and treatment to patients who

would otherwise refuse treatment and deteriorate and return to hospital as a result.

Community treatment orders allow specific conditions to be attached to community treatment that are felt necessary or appropriate to ensure that the patient receives medical treatment, or to prevent risk of harm to the patient's health or safety, or to protect other people.