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Crisis resolution and home treatment teams for older people with mental illness

AIMS AND METHOD

We examined the impact of a crisis resolution and home treatment teams (CRHTT) on hospital admission rates, bed days and treatment satisfaction among older people with mental illness and their carers. We compared these factors in the 6 months before the service started and 6 months after its introduction.

RESULTS

The CRHTT significantly reduced admissions ($P < 0.001$), but there was no significant difference in the length of hospital stay as compared before and after the introduction of this service. There was a trend towards carers, but not patients, being more satisfied with treatment after the introduction of the CRHTT.

CLINICAL IMPLICATIONS

The CRHTT reduced hospital admissions for older people by 31% and carers preferred the service. Further research on crisis teams in older people with mental illness is needed using randomised controlled methodology.

The psychiatric services of West Suffolk County cover a population of approximately 280 000, of which 46 384 is over 65 years of age. There are five adult and five older age community mental health teams. Current government policy has made compulsory the introduction of crisis resolution and home treatment teams (CRHTT) for working-age adults (Department of Health 2000, 2001). The CRHTT in West Suffolk was launched in June 2005 to cover working-age adults, namely those aged 17–65 years old. This is a practitioner-led service which provides short-term assessment and management at the time of a crisis as an alternative to hospital admission and/or facilitates early discharge from hospital through intensive home treatment post-discharge. To date the teams have reduced adult admissions to mental health wards on average by 18%.

In the UK there are very few crisis teams covering older people's mental health services (Cooper *et al*, 2007). An electronic database search revealed only one study that has considered the use of an outreach team for older people on a waiting list for hospital admission (Richman *et al*, 2003). The existing CRHTT in Suffolk was extended to cover older people from March 2006, in line with the West Suffolk Hospital National Health Service (NHS) Trust policy to provide equitable services for all age groups. This gave us a unique opportunity to examine the impact of the crisis team on hospital admissions, length of stay and satisfaction with the service, in the period before and after the introduction of the CRHTT.

When the CRHTT was extended to cover service users over the age of 65, there were a number of other service changes, including the closure of a dementia care ward and two day hospitals, and introduction of an old age intermediate care team.

Method

The study was approved by the Suffolk local research ethics committee. We compared the factors outlined above 6 months prior to the start of the crisis team

(September 2005–March 2006) and 6 months after its introduction (March 2006–September 2006). All service users aged 65 years old or over who presented in a crisis during this period were included in the study unless they were out-of-area. A 'crisis' was defined as an event where admission was being considered. If the individual presented within 2 months of the original crisis presentation then this was considered one and the same crisis, but if they presented again after 2 months then this was counted as a new crisis event. Prior to the introduction of the CRHTT every individual presenting in a crisis was admitted to hospital; the CRHTT only provided a service to those who would otherwise have been admitted to hospital.

For every individual the following were ascertained: age, gender, marital status, place of residence, whether they lived alone, diagnosis, past psychiatric history and current Mini-Mental State Examination score (Folstein *et al*, 1975). We looked at total number of admissions, number of compulsory admissions, average length of hospital stay and number of deaths over the study period.

After the CRHTT was introduced, we also collected the following data: total number of days of home treatment and whether an individual needed to be admitted within 2 months of a crisis intervention.

Service user satisfaction was assessed by the Client Satisfaction Questionnaire (Larson *et al*, 1979), a validated 8-item self-report questionnaire using a 4-point scale (1=very dissatisfied, 4=very satisfied). It has been applied in previous studies on crisis teams (Taachi *et al*, 2003; Johnson *et al*, 2005a, 2005b) and we also adapted it for use in carers (available from authors).

The treating consultants were asked whether the service user had capacity to complete the satisfaction questionnaire and whether they had a suitable carer. Users were excluded if they were detained under the Mental Health Act, if they lacked capacity or were admitted out-of-area; carers were excluded if they lacked capacity or if the person they cared for had died.



Written consent was obtained from the participants and the questionnaire was sent by post.

We analysed data using SPSS version 13 for Windows. Continuous data were analysed using two-tailed *t*-tests and categorical data were compared using the chi-squared test.

Results

Demographics

The baseline characteristics of the service user groups before and after the introduction of the crisis team are presented in Table 1. There were no significant differences. In total, 21 service users died (14%); 13 in the pre-CRHTT (22.6%) and 8 in the post-CRHTT group (8.6%); all the deaths were attributed to natural causes.

Admissions and bed days

There was a significant reduction in admission after introduction of the crisis team ($P < 0.001$). In the pre-CRHTT period there were 65 crisis events which resulted in 65 admissions. After the introduction of the CRHTT there were 102 crisis events of which only 70 required admissions. Of these, 66 crisis events led to direct hospital admission while four required admission after a brief period of home treatment. The crisis resolved with home treatment alone in 32 instances. Overall, the CRHTT reduced admissions by 31%. Nine individuals were detained under the Mental Health Act in both the pre- and post-CRHTT periods.

There was no reduction in length of hospital stay or in bed usage according to functional and organic diagnostic groups during the post-CRHTT period (Table 2).

Of the 70 individuals admitted, 17 also had contact with the CRHTT either before admission or after discharge. The crisis team treated people on average for 6.25 days pre-admission and 19.71 days post-discharge. In the group ($n=32$) who received only home treatment, 17 had depression, 8 dementia, 3 schizophrenia and 2 other psychotic illness. Twenty-three were referred in hours and 9 were referred out of hours. The mean number of days that the crisis team were involved for was 10.52 (s.d. = 14.91).

Patient and carer satisfaction

Of the 143 service users only 59 had capacity to give consent to participate in the study. Of these, 28 returned their postal questionnaires (response rate 47.45%). In the carer satisfaction survey, 39 out of 143 service users did not have any suitable carer: 21 users died and so carers were not contacted, 15 users did not have a next of kin, 2 carers lacked capacity and for 1 contact address could not be found. This left 104 potentially eligible carers of which 56 replied to our questionnaire (response rate 53.85%). There was no statistical difference in service user or carer satisfaction between the pre- and post-CRHTT groups, but there was a trend for greater satisfaction in carers in the post-CRHTT group (Client/Carer

Table 1. Baseline characteristics

	Pre-CRHTT ($n=57$)	Post-CRHTT ¹ ($n=93$)
Age, years: mean (s.d.)	77.09 (1.04)	77.18 (0.78)
Male, n (%)	22 (38.60)	40 (43)
Single, divorced, or widowed, n (%)	35 (61.40)	51 (54.84)
Married, cohabiting, n (%)	22 (38.60)	42 (45.16)
Lives alone, n (%)	17 (29.82)	28 (30.01)
Functional diagnosis, ² n (%)	31 (54.38)	59 (63.44)
Organic diagnosis, ³ n (%)	26 (45.62)	34 (36.55)
Past psychiatric history, n (%)	32 (56.14)	55 (59.13)
Previously admitted, n (%)	23 (40.35)	31 (33.33)

1. There were no significant statistical differences in both groups.

2. 'Functional' denotes here individuals where main diagnosis was depression, bipolar disorder, schizophrenia, schizoaffective disorder, personality disorder, comorbid substance misuse or other psychotic illness not otherwise specified.

3. 'Organic' denotes individuals with dementia and related behavioural and psychotic complications.

Table 2. Bed use

	Pre-CRHTT	Post-CRHTT
Total number of admissions/crisis events, n	65/65	70/102***
Average hospital stay		
All admissions, days: mean (s.d.)	49.37 (45.62)	53.13 (46.40)
Functional admissions, days: mean (s.d.)	39.47 (34.47)	42.17 (33.41)
Organic admissions, days: mean (s.d.)	63.30 (55.58)	69.57 (57.79)***

$P < 0.001$, χ^2 -test for categorical variables and *t*-test for continuous variables.

Satisfaction Questionnaire, maximum score 32 indicating most satisfaction, mean 25.38 v. 25.51 for service users and carers respectively; Table 3).

Discussion

Since the introduction of the crisis team in older people's mental health service there has been a 31% reduction in admissions, and service users and carers were in general satisfied with the service. However, there was no difference in involuntary admissions. These findings are in keeping with studies conducted on working-age adult crisis teams (Johnson et al, 2005a, 2005b; Joy et al, 2006).

It may be argued that individuals who received home treatment only were below the 'admission threshold' and the referrals to the CRHTT had been generated by the availability of this new service. Most of these individuals had depression, were referred in-hours and their episode settled quickly. Still, we could argue the CRHTT played an



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Table 3. Satisfaction of service users and carers¹

	Pre-CRHTT	Post-CRHTT
Service user	<i>n</i> =12	<i>n</i> =16
Mean score (s.d.)	24.50 (8.32)	25.38 (5.63)
Carer	<i>n</i> =21	<i>n</i> =35
Mean score (s.d.)	22.71 (6.43)	25.51 (5.26)

1. Client/Carer Satisfaction Questionnaire, maximum score 32 indicating most satisfaction.

important role in preventing possible future admissions of this subgroup of service users by treating them early.

Although the average length of contact with the CRHTT was greater post-discharge (19.71 days) than pre-admission (6.25 days), the total length of hospital stay showed no reduction. This may suggest that the CRHTT was not fulfilling its other role of enabling early discharge and may be working with users longer than is necessary for an acute service. However, length of stay may be largely affected by factors out of the crisis team's control. Discharge of in-patients on elderly wards is frequently delayed because of difficulties that social services have finding suitable placements and arranging care packages. In addition, due to a reduction in the total number of in-patient beds, only severely unwell individuals who need to stay in hospital for longer are admitted.

Limitations

During the study period the local services were undergoing changes which may have had an impact on admission rates. However, the intermediate care team were not dealing with 'requests for admissions' *per se*. Another limitation would be seasonal variation in the number and type of referrals, as the study period covered different seasons of the year. Yet another limitation was lack of randomisation. Nevertheless, there were no differences between the study groups at baseline. The satisfaction survey did not include referrers, which could be looked at in future studies. We also did not do a formal evaluation of the cost-effectiveness of the CRHTT. All these limitations need to be addressed in future studies.

Declaration of interest

None.

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References

- COOPER, C., REGAN, C., TANDY, A. R., et al (2007) Acute mental health care for older people by crisis resolution teams in England. *International Journal of Geriatric Psychiatry*, **22**, 263–265.
- DEPARTMENT OF HEALTH (2000). *The NHS Plan: A Plan for Investment, A Plan for Reform*. TSO (The Stationery Office).
- DEPARTMENT OF HEALTH (2001) *The Mental Health Policy Implementation Guide*. (http://www.nepho.org.uk/view_file.php?c=2120).
- FOLSTEIN, M. F., FOLSTEIN, S. E. & McHUGH, P. R. (1975) 'Mini-mental state': a practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, **12**, 189–198.
- JOHNSON, S., NOLAN, F., HOULT, J., et al (2005) Outcomes of crises before and after introduction of a crisis resolution team. *British Journal of Psychiatry*, **187**, 68–75.
- JOHNSON, S., NOLAN, F., PILLING, S., et al (2005) Randomised controlled trial of acute mental health care by a crisis resolution team: the north Islington crisis study. *BMJ*, **331**, 599.
- JOY, C. B., ADAMS, C. E. & RICE, K. (2006) Crisis intervention for people with severe mental illnesses. *Cochrane Database of Systematic Reviews*, **18**, CD001087.
- LARSON, D. L., ATTKISSON, C. C., HARGREAVES, W. A., et al (1979) Assessment of client/patient satisfaction: development of a general scale. *Evaluation and Program Planning*, **2**, 197–207.
- RICHMAN, A., WILSON, K., SCALLY, L., et al (2003) Service innovation: an outreach support team for older people with mental illness—crisis intervention. *Psychiatric Bulletin*, **27**, 348–351.
- TACCHI, M. J., JOSEPH, S. & SCOTT, J. (2003) Evaluation of an emergency response service. *Psychiatric Bulletin*, **27**, 130–133.

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