Evaluation of three assertive outreach teams

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Aims and method To evaluate outcomes for service users during their first year of treatment in three English assertive outreach teams. Changes in health and social functioning, engagement with services, service use and need (rated by staff and service users) were evaluated.

Results In 49 service users we found a significant increase in mean staff-rated met needs up to 6 months of treatment. There were no significant changes in ratings of engagement or Health of the Nation Outcome Scales (HoNOS) scores at 6 and 12 months. Unmet needs rated by service users and staff showed a non-significant trend for improvement across a range of individual health and social domains. Duration of hospital admission reduced significantly between the 12 months before the evaluation and the 12 months of the evaluation. Formal and informal admission and levels of contact with crisis teams reduced over the study period.

Clinical implications Although these results offer some support to the assertive outreach approach, further research in larger samples is needed to identify which changes in health and social functioning are associated with transfer to assertive outreach teams.

Declaration of interest None.

From 1995 the UK government prioritised the development of assertive outreach as part of its modernisation programme.[1] Key components of the assertive outreach model include 'outreach', delivering care in the patient's home, assertive follow-up even when patients disengage, small case-loads of 10–12 per professional, and some form of 7-day, 24-hour availability. Initial reports from the USA[2] and Australia[3] of dramatically reduced hospital admission rates have not been replicated in the UK,[4–6] raising debates about the relative value of the assertive outreach model against 'control group' standard services, where these are good-quality community mental health teams. Such findings also challenge the importance of fidelity to the original assertive outreach treatment model and raise questions about which elements of the assertive outreach model in standard services are necessary.

Since 1990 the UK National Health Service and Community Care Act required that mental healthcare should be provided on the basis of need, defined as 'the requirements of individuals to enable them to achieve, maintain or restore an acceptable level of social independence or quality of life'. The routine use of outcome measures by psychiatrists has been low,[7] leading to arguments[8] for the development of 'demonstration sites', where routine outcome measurement would promote a focus on the patient's perceptions and enable systematic needs assessment and evaluation. The Camberwell Assessment of Need (CAN)[9] was developed explicitly to measure needs in mental health settings and the CAN Short Appraisal Schedule (CANSAS), which assesses needs ratings for each of 22 domains, was developed for routine clinical use.[8] Research to date using the CAN has shown that the level of unmet need is the most relevant rating for patient-level use, and met need is most relevant for service-level use.[10] Service user and staff accounts of needs differ,[11] the service user's account being the most reliable.[12] The Engagement Measure[13] rates five measures of engagement and can be used to assess changes over time. The Health of the Nation Outcome Scales (HoNOS)[14] assess health and social functioning and has been recommended for use in routine clinical settings. Assertive outreach teams may be ideally placed to implement routine outcome measurement, as they typically work with defined case-loads over lengthy periods. The routine use of CANSAS may facilitate systematic care planning and improve outcomes. However, there is little reported research in this area of assertive outreach practice.

This study was undertaken in three 2Gether NHS Foundation Trust assertive outreach teams that were developed from two community rehabilitation teams (from approximately the year 2000) following standard guidance from the *Mental Health Policy Implementation Guide*,[1] with integrated psychiatry, psychology and occupational therapy input. The teams had a single operational policy, with explicit admission criteria, dedicated in-patient beds and adopted a standard care programme approach to care coordination for all patients on the team case-load. The teams scored

highly on the Dartmouth Fidelity rating scale,[15] indicating a 'high' level of fidelity to the assertive outreach model, similar to 'Cluster A' teams in the Pan London assertive outreach study.[16] The teams had an established history of research and audit and the Gloucester team had previously reported on use of routine outcome measurement over a 6-month review cycle.[17] Our intention was to study change in engagement, health and social functioning and CANSAS-rated need, 6 and 12 months after patients were taken on to the case-load of the assertive outreach teams. It was also hoped to assess change in various other social and health-related data.

Method

Participants

The protocol for this study was developed in conjunction with the local research and development support unit and, as a service evaluation, formal ethics committee approval was not required, but the Trust Research Governance Committee oversaw the project. All new service users taken onto the case-loads of the three assertive outreach teams from early 2008 had baseline demographic data taken and staff collected entry data, including recent hospital and crisis team support, contact with the criminal justice system and carried out ratings as outlined below. All ratings were repeated at 6 and 12 months after starting work with the team. An administrative assistant (G.R.) created a database of participants and helped to organise collection and coordination of data.

Measures

For each patient, keyworkers completed a baseline demographic/clinical information form. This was updated 6 and 12 months later, using a standard pro forma to allow assessment of changes in treatment/social variables that occurred during the two 6-month periods. Three instruments, HoNOS, CANSAS and the Engagement Measure, were rated longitudinally at baseline, 6 and 12 months. The CANSAS[8] rates need as 'absent' (no problem), 'met' (problem addressed by services) or 'unmet' (significant, ongoing problem) across 22 social and healthcare domains. At the three rating points, keyworkers rated their own perceptions of patient need and CANSAS forms were given by keyworkers to patients for self-completion, with an explanation about how to complete them. Keyworkers were instructed to ensure that patient rating of need was independent of their own rating, and access to support from local advocacy services was offered if this was considered helpful.

The Engagement Measure[13] was used by keyworkers to rate engagement with the assertive outreach teams. This 11-item, observer-rated scale rates six dimensions of engagement: appointment keeping, client–therapist interaction, communication, perceived usefulness of treatment, collaboration and adherence with medication. Each item is scored on a five-point Likert rating scale, ranging from 1 (no engagement) to 5 (full engagement). Aggregated scores range from 11 to 55.

The HoNOS[14] is a 12-item scale that rates various aspects of health and social functioning on a five-point Likert scale to measure levels of problem severity.

Staff had already received training in the use of HoNOS but all were trained in the use of the other two measures in a single, team-based training session that included joint assessments and discussion about ratings.

Statistical analysis

Data were entered into SPSS for analysis (SPSS version 18 for Windows). Non-parametric Wilcoxon matched pairs signed ranks tests were used to assess changes in mean HoNOS, CANSAS and Engagement Measure ratings and duration of hospital stays.

Results

Full baseline information was obtained for all 49 individuals taken on in the study period. Individuals who did not complete 6 months with the team (i.e. through leaving the area) were not included but we believe that otherwise this population represented all new cases taken on. None were lost to follow-up, although a number of individuals left the area and were transferred to other teams, resulting in some incomplete data-sets. Baseline information is presented in Table 1. When taken on for assertive outreach, primary diagnoses were schizophrenia ($n = 46$, 93.9%) and bipolar disorder ($n = 3$, 6.1%). A substantial proportion of the study group were initially on clozapine ($n = 11$, 22.4%) or intramuscular antipsychotic medication ($n = 15$, 30.6%), and 28.6% ($n = 14$) were reported to have substance misuse problems.

Table 1 Baseline demographic and clinical characteristics

Characteristic	Service users ($n = 49$)
Age, years: mean (s.d.)	38.1 (13.4)
Male, *n* (%)	39 (70.1)
Accommodation, *n* (%)	
Tenant/house owner	20 (40.8)
Living with family	5 (10.2)
Homeless	3 (6.1)
Supported accommodation	21 (42.9)
Marital status, *n* (%)	
Married	3 (6.1)
Single	41 (83.7)
Divorced/widowed	5 (10.2)
Ethnicity, *n* (%)	
White	41 (83.7)
Asian	3 (6.1)
Other	5 (10.2)
Length of time since first contact with mental health services, years: mean	12.4
Admissions in past 12 months, *n* (%)	
Formal	20 (40.8)
Informal	13 (26.5)
Duration of in-patient stay over past 12 months, months: mean (s.d.)	3.9 (4.4)
Contact episodes with crisis resolution team in past 12 months, mean (s.d.) range	0.7 (1.9) 0–12
Contact with criminal justice system in past 6 months, *n* (%)	4 (8.1)

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Table 2 shows the change in mean staff- and service user-rated CANSAS met and unmet need, Engagement Measure and HoNOS scores between baseline, 6- and 12-month rating points. There was a significant increase in staff-rated met needs at 6 months ($P = 0.009$) and a finding of non-significantly increased levels at 12 months ($P = 0.09$). We examined the proportions of met and unmet CANSAS-defined needs (as a percentage of all ratings) rated by staff and service users at baseline and 12 months, finding no significant changes. There were non-significant increases in Engagement Measure ratings between baseline and 6 months ($P = 0.07$).

There was an increase in the proportion of service users who had their own tenancy at 12 months (from 20/49 (40.8) to 18/35 (51.4%)), but a similar proportion in supported accommodation at 12 months. The mean time in hospital in the 12 months before transfer to assertive outreach was 3.93 months (range 0–12). Between 0 and 6 months under assertive outreach this was 0.69 months (range 0–6), and between 6 and 12 months this was 0.76 months (range 0–6). The change in mean time spent in hospital 12 months before and during the first 12 months of assertive outreach treatment was statistically significant ($P = 0.014$). The number of informal admissions reduced from 11 in the year before the evaluation (one service user being admitted more than once) to 8 (one service user admitted twice) in the year of the evaluation. Formal admissions reduced from 19 (five service users admitted at least twice) to 12 (two admitted twice). Crisis team input had been required 13 times in the 6 months before the study, was needed once in the first 6 months on the team case-load and four times in the 6- to 12-month period.

Discussion

Main findings

Mean staff-rated met need increased significantly over an initial 6-month period of treatment through an assertive outreach team. There was no significant change in mean service user-rated need or in ratings using the Engagement Measure. The first year of assertive outreach treatment was associated with significantly reduced time in hospital, reduced informal and formal admissions and reduced contact with crisis teams. Non-significant changes in staff- and service user-rated needs were noted across a range of domains.

Limitations

There were a number of methodological problems in this service evaluation. Due to the lack of control group, the results cannot be used to infer whether improved outcomes resulted from an aspect of the teams' work, were affected by the study process, or indeed, time alone. We studied new assertive outreach cases over a relatively short time frame and it is possible that results were confounded by the phase of illness/treatment: the results may have reflected in part the natural history of the illness in the year before and year after discharge from hospital, a time when cases are often taken on by assertive outreach teams. It was implicit in the method of this study that the incorporation of routine needs assessment was intended to guide the team's work. It was also hoped to improve outcome, by targeting unmet need. Therefore, achieving increases in met need was perhaps not surprising. This rater bias limits the ability to use the data for benchmarking across other assertive outreach teams. The small study group limited the power to evaluate relationships between variables reliably.

As a result of the lack of a control group we were also not able to assess whether changes found in this study resulted from the assertive outreach team approach or could be obtained by generic community mental health teams, as suggested by previous research.[6] However, recent research using a similar method to our study[18] found reduced admission rates and bed usage in 73 assertive outreach service users, 1 and 3 years after transfer to assertive outreach. These authors suggested that reduced hospital admissions may have related to the incorporation of daily home treatment approaches within the assertive outreach model, a feature of the three teams in this study. A long-term follow-up of individuals in assertive outreach teams[19] also found substantially reduced admission rates, but that benefits plateaued after the first few years. Regression to the mean may have explained changes in hospital admissions in our evaluation, but the fact that crisis teams (which acted as gate keepers of admissions and covered all service users, including those under assertive outreach) operated in this service across the period of the evaluation argues against this. Finding no change in engagement scores over the time of the study may have been related to the relatively low initial levels of engagement in the population studied and also the small study group. We could not find any example of longitudinal assessment of engagement in the assertive outreach literature. The HoNOS ratings changed very little

Table 2 Changes in mean Health of the Nation Outcome Scales (HoNOS), Engagement Measure and Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) ratings at 6 and 12 months, and significance of change from baseline

Measure	Baseline rating Mean (s.d.)	6-month rating Mean (s.d.)	*P*	12-month rating Mean (s.d.)	*P*
HoNOS	1.2 (0.65)	1.0 (0.6)	0.81	1.1 (0.7)	0.235
Engagement Measure	32 (0.8)	33 (0.7)	0.07	32 (0.8)	0.27
Staff-rated CANSAS met need	6.3 (3.9)	7.7 (3.9)	<0.01	8.2 (5.5)	0.09
Staff-rated CANSAS unmet need	5.5 (3.5)	4.6 (3.5)	0.249	4.9 (3.8)	0.22
Service user-rated CANSAS met need	5.7 (4.4)	5.2 (5.2)	0.68	6.9 (5.9)	0.04
Service user-rated CANSAS unmet need	5.3 (3.6)	3.7 (3.7)	0.265	3.1 (3.0)	0.152

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and at a time when commissioning decisions are increasingly being made on the basis of demonstrable clinical progress, clinicians will reflect carefully about the importance of finding the right outcome measures.

Other researchers have also generally reported relatively modest change in staff-rated unmet need and met need over a year of standard treatment;[20] one study found an overall negative change in need over 2 years.[21] Although we did not formally assess staff attitudes, many staff seemed to appreciate the value of systematically assessing need, as an aspect of their routine work with service users. The study steering group, which included service-user representation and that was open to all team members, reported back to the wider group via protected learning time and through the trust management steering group on a number of occasions during the 3-year evaluation, as a form of team reflection.

In conclusion, this study presents outcomes from the first year of treatment in three assertive outreach teams. The findings must be viewed cautiously because of methodological limitations, and research in larger samples is needed to determine which factors are most strongly associated with changing patient need.

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