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ORIGINAL ARTICLE

The replacement of assertive outreach services by reinforcing local community teams: a replication study reporting comparative outcomes and patient reported experience

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Abstract

Background: This is the third in a series of papers on patient outcomes and other consequences of the withdrawal of specialist assertive outreach (AO) teams. We previously reported positive outcomes for patients receiving a less intensive service at up to four years, but had not systematically interviewed patients.

Aims: To test the generalizability of earlier findings through replication in another service. To complement the analysis of service utilisation with patient reported experience between the two treatment models.

Methods: Service level evaluation 12 months pre and post service change for 55 eligible AO patients. Thirty three consenting patients answered validated questionnaires.

Results: There were no statistically significant changes in hospital bed use comparing the year before and the year after the change (850–712 bed days, median 34–20). No significant change in crisis activity occurred despite a highly significant reduction in face to face contacts from a mean of 90–40. There were no significant changes in patient reported experience.

Conclusions: Results are consistent with earlier studies. Reinforcing community mental health teams can provide an integrated service model that is clinically effective and equally acceptable to patients, making this a viable and affordable alternative to orthodox AO teams.

Keywords

Assertive, outreach, community, flexible, schizophrenia

History

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Introduction

Descriptions of the adoption, rise and subsequent fall of assertive outreach (AO) as a dominant model in England for people with severe and enduring psychosis, high hospital use and a history of disengagement from community services are now familiar (Burns, 2010; Firn, 2007). Crucially, evaluations in the English health system did not show that AO teams reduced bed use or improved clinical outcomes when compared to standard community mental health teams (CMHT) (Burns et al., 2007; Killaspy et al., 2006, 2009a, 2014).

Proponents of the AO model pointed to encouraging observational or qualitative studies (Killaspy et al., 2009b; Priebe et al., 2005; Sood & Owen, 2014) or randomized trials that, although not showing benefits for hospitalisation, reported advantages for patient experience (Killaspy et al., 2006). Without reliable gains in bed use a low caseload, high-intensity service is comparably expensive. It is therefore unsurprising that, with retrenchment of public expenditure from 2008, AO services have begun to close.

A more affordable, but largely unevaluated, approach known as Flexible Assertive Community Treatment (FACT), has been widely adopted in the Netherlands (Van Veldhuizen, 2007). The principles and operational procedures for FACT have also been manualised (Van Veldhuizen & Bähler, 2013; Van Veldhuizen et al., 2015). This alternative approach represents a “hybrid” model that incorporates some practice and principles from AO into CMHTs. At any one point in time 80–90% of patients receive recovery-oriented individual case management via a multi-disciplinary sectorised team, typically receiving 2–4 home visits a month. Mirroring an AO approach, 10–20% of the same team’s caseload receives an intensive level of service with more frequent visits according to need using daily planning procedures for sharing visits across the team and review of patients. Patients move regularly and flexibly between the two levels of care within the same team. An operational model for blending this into English CMHTs has been described by Firn et al. (2013, 2016).

Aims and hypotheses

Earlier related studies were based on the hypothesis that the service redesign described would be non-inferior in clinical effectiveness. They actually found a large and arguably counter-intuitive fall in hospital use for this population,

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despite the loss of the specialised AO service and consequent reduced intensity of care (Firm et al., 2013, 2016). We therefore sought to test generalizability through replication in a second locality in London. We additionally aimed to compare patient experience and satisfaction with the two treatment models as balancing information to inform future service redesigns.

Methods

Study design

A pragmatic service level evaluation with an uncontrolled observational follow up design comparing 12 months pre and post service change.

Sample

Fifty five patients, from an AO caseload of 65, met study eligibility for comparative analysis of service utilisation by virtue of 12 months or more continuous AO team care followed by 12 months standard care. All the eligible patients with current mental capacity were then approached by their care coordinator with an outline of the study and asked if they would be agreeable to be interviewed.

Setting

The new locality was a suburban South West London Borough composed of a comprehensive mix of mental health services covering community and inpatient care. Dedicated AO was established in the locality in April 2001 with a full multi-disciplinary team and weekend working according to the standard model. A 24 hour, seven day a week Crisis Resolution and Home Treatment Team (CRHTT) was established in 2003. Patients could not be admitted to hospital by the AO teams without a “gatekeeping” assessment from the local CRHTT to determine a possible home-based alternative disposition. AO team closure occurred in January 2014, leading to the transfer of the majority of staff and all patients to two standard 9 am–5 pm, 5 day a week, locality CMHTs reinforced with FACT. CRHTT provision was unaffected.

Data

We used routinely collected quantitative data taken retrospectively from the electronic patient record system for 20 January 2013 to 19 January 2014 (AO) and 20 January 2014 to 19 January 2015 (FACT). The following data were extracted; socio-demographic characteristics, number of admissions, bed days (with and excluding leave), use of CRHTTs, number of contacts (% of which were face-to-face), missed appointments. No data were missing for the service utilisation analysis.

We also used validated instruments prior to AO closure and at least six months into the new FACT service to elicit patient reported relationships with the clinical team (TAQ – Team Attachment Questionnaire, Goodwin et al., 2003), and patient reported satisfaction with the service (CSQ-8 – Client Satisfaction Questionnaire, Larsen et al., 1979). TAQ covers 22 items of both positive and negative experiences of team care. For example, “I have regular time with the same person that knows me and my problems” or “I feel frustrated at my

lack of freedom within the team”. The CSQ-8 asks patients to rate eight items between 1 (poor) and 4 (excellent). Questions include “to what extent has our programme met your needs?” “Have the services you received helped you to deal more effectively with your problems?” “How satisfied are you with the amount of help you have received?”

In response to stakeholder concerns about the impending change, we also included a brief subjective patient reported measure of social isolation (Hughes et al., 2004). Summary scores can range from 3 (hardly ever to all questions) to 9 (often to all questions). For example, “how often do you feel that you lack companionship: Hardly ever, some of the time, or often?”

Based on an appreciative inquiry method (Hammond, 1998), free text responses to open questions were used to elicit patients’ hopes and fears of the impending change at baseline and experience or perceptions of benefits and disbenefits of the change at follow up.

Ethical considerations

Ethics approval was granted by NRES committee London Fulham on 1 October 2013 (13/LO/1408). We followed up all patients even if they declined to be interviewed as service use analysis was anonymous. To maintain impartiality of responses, interviewers (MF, DH and JH) were independent of the treating services, and interviewees were told that individual scores and comments would not be fed back to clinicians. All patients wishing to be interviewed were considered by their responsible doctor to have capacity to give informed consent to interview. Written consent was required and taken by independent researchers before each interview. Payment for interviewee’s time and participation was given at the standard rate according to local policy for each interview.

Data analysis

Descriptive statistics are presented using frequency and percentage for binary variables, mean and standard deviation (SD) for normally distributed continuous variables and median with lower quartile (LQ) and upper quartile (UQ) values for non-normally distributed or discrete variables. Binary variables, admitted to hospital or not and used CRHTTs or not, are compared between the last year of AO and the first year of FACT using McNemar’s test. Where significant skew was present in the service use variables, for example, number of admissions, Wilcoxon’s Signed ranks test was used to compare between AO and FACT, otherwise paired *t*-tests were used. Change in the measures of patient satisfaction and experience with care is reported using mean change and 95% confidence intervals, paired *t*-tests used to test the significance of the change. All quantitative analysis was conducted using IBM SPSS Statistics v22 for Windows (IBM SPSS Statistics, Armonk, NY).

A thematic analysis (Braun & Clarke, 2006) was conducted in order to identify, analyse and report patterns (themes) within the qualitative free text responses. The free text responses in each questionnaire were initially read line by line and coded into categories. No formal validation or double coding of qualitative data was conducted. The different codes

across our data set were grouped and merged together to develop themes that represented patient experiences' pre and post service change.

Results

Client characteristics

Fifty five patients from the AO caseload of 65 had received care for at least one year from an AO team and one year from a CMHT with FACT (see Figure 1). Forty three patients (78%) had a primary recorded diagnosis of schizophrenia and

12 (22%) bipolar affective disorder. At the time of team change, the sample had a mean age of 43 years (median 41), ranging from 28 to 63 years. Forty one (75%) were male and 37 white (67%). Eight (14.5%) were black, 5 (9%) were Asian and 5 (9%) of other and mixed ethnic origin. Mean duration of AO care for study patients was 6 years and 8 months (median 6 years and 6 months). Duration of care from the AO team ranged from 13 months to 13 years.

To evaluate comparative patient experience of the two treatment models, we interviewed all consenting study patients ($n=37$) in the three months before the AO team closed and were able to re-interview 89% of these at follow up ($n=33$) 6–12 months into receiving FACT care. This represents a 67% and 60% response rate respectively in the two time periods. One eligible patient was assessed as lacking capacity to consent to interview.

The interview sample differed from the total sample in diagnostic profile; 10 out of 12 patients with a diagnosis of bipolar affective disorder participated (83%) compared to only 27 out of 43 (63%) of those with a diagnosis of schizophrenia. Gender, age, ethnicity and years in treatment were similar in the interviewed and total sample.

Service use data

Table 1 shows summary statistics. As expected, mean face to face contacts decreased following the closure of the specialised AO team. Higher caseloads and no weekend working made this inevitable. Patients were seen less than half as frequently, 40 times a year compared to 90, achieving high statistical significance. Despite this drop in service intensity, service utilisation proxy measures for clinical outcomes showed no statistical difference. Eighteen percent of the AO patients had an admission within the baseline year compared to 16% with FACT, with 138 fewer bed days used. There was no statistically significant difference in median bed days for the participants in the last year before the AO team closed and the first year after their care transferred to FACT. In addition, there was no statistically significant difference in median days of care from the CRHTT or the proportion requiring this crisis service (AO 27% and FACT 24%). Total use of CRHTT for the 55 patients was 321 days in the AO baseline year and 386 days for the first year with FACT.

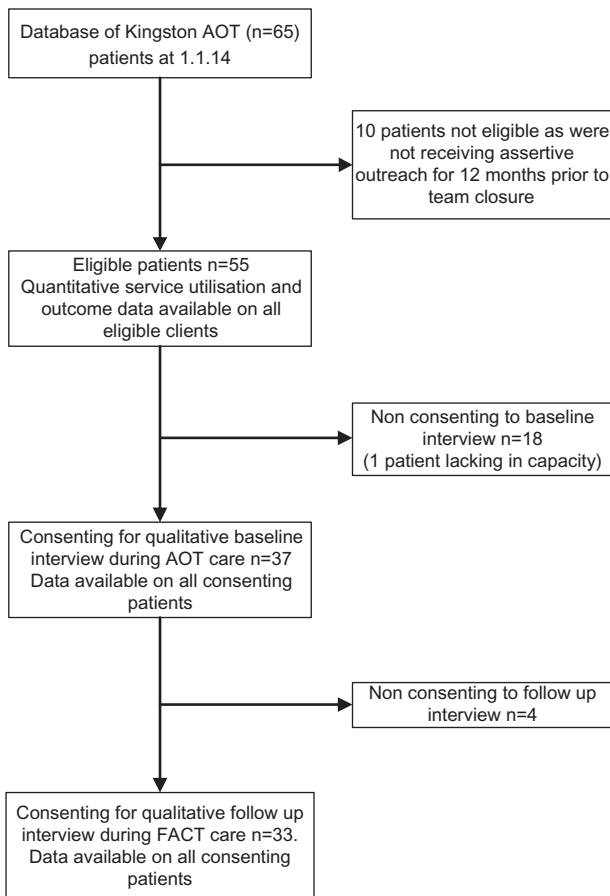


Figure 1. Numbers of patients in assertive outreach team and inclusion or exclusion from study.

Table 1. Summary statistics for service use data.

Service use data item	Assertive outreach	FACT	<i>p</i> Value
<i>N</i>	55	55	
Unique patients admitted; <i>n</i> (%)	10 (18%)	9 (16%)	1.0
Occupied bed days including leave; median, LQR-UQR ^a	34 0–92	20 0–101	0.733
Occupied bed days excluding leave; median, LQR-UQR ^a	21 0–54	0 0–46	0.691
Total bed days, inc leave	850	712	
Used crisis service – CRHTT, <i>n</i> (%)	15 (27%)	13 (24%)	0.824
Number of crisis service – CRHTT days; median, LQR-UQR ^b	0 0–23	0 0–22	0.856
Total crisis service – CRHTT days	321	386	
Missed appointments; % rate per person; median LQR-UQR	4.4 1.9–9.9	7.4 2.8–11.6	0.117
Number of face-to-face contacts; mean (SD)	90.3 (76.9)	40.5 (31.2)	<0.001
% of contacts face-to-face; mean (SD)	95.6 (6.6)	93.6 (6.7)	0.158

^aBased on 15 patients who were admitted in either one of the 2 years.

^bBased on 24 patients who were referred to CRHTT in either one of the 2 years.

The percentage of contacts that were delivered face-to-face as opposed to over the telephone remained stable throughout the study period, at 95.6% in AO and 93.6% in FACT. The median percentage of missed appointments per participant was 4.4% in the last year of AO compared to 7.4% in the first year of FACT. This difference was not statistically significant. There were no deaths of patients from the AO caseload during the study period. We did not collect or analyse other adverse events.

Patient experience

Thirty-three participants completed interviews at both time points. There was no statistically significant difference in ratings of experiences of care or loneliness (see Table 2). It can be seen that the mean change is very close to 0 for all three measures with relatively narrow confidence intervals reinforcing the lack of change in these measures.

The TAQ scored highly in both conditions. Mean satisfaction was moderate overall and showed no change. The mean sense of isolation was consistent in the two time points. Although AO patients were only moderately lonely as a group responses displayed a wide range between individuals.

Thematic analysis

There were four themes that emerged from the patient reported experience free-text responses which were: continuity; indifference to change; flexibility and freedom; reduction in contact and support. These themes emerged from either pre, post, or pre and post service change.

Continuity

The dominant theme, comprising half of all responses arising pre-service change, was participants' concern that they would no longer be able to see their familiar team doctor or care coordinator:

Hope it works out all right. Hopefully will have some of the team in the new set up. (participant 36)

I would like to keep my same CPN. (participant 2)

This fear over continuity within the new service was sometimes described in the context of the good relationship that participants had built with professionals from their current team:

I liked the people in the assertive outreach team and I am worried that I might no longer see them. (participant 21)

Yes I have some concerns about the impending changes. My primary concern is the change of key worker and psychiatrist as these relationships have to be built over time and I find it very disruptive to my care to have these people changed. (participant 37)

I have been very pleased with the standard of care with the assertive outreach team and (name) my care coordinator during the past year. I would be sorry to see this change. (participant 55)

Indifference to change

A theme that arose from both pre and post-service change was lack of concern over the change in services. Some felt that the impending change would not have a direct impact upon the care that they currently received:

I have no concerns whatsoever, I think that the hospital will run much the same anyway. (participant 11)

No, don't affect me a great deal. I presume I get my treatment at home once a fortnight? (participant 18)

This lack of concern was reflected in the follow up interviews, where most participants regarded the new service as equivocal:

It's about the same. (participants 23 & 36)

Nothing is worse. (participant 11)

I really have not noticed much difference. (participant 27)

Just the same. (participant 7)

No it's OK. (participant 12)

Flexibility and freedom

The opportunity for more freedom and flexibility was anticipated by patients in some responses pre change when asked about hopes for the new service:

I would say that it would give me the patient more freedom, hopefully. (participant 5)

Like more independence. (participant 20)

Table 2. Analysis of change in patient reported experience measures, $n = 33$.

Patient reported experience measure	Assertive outreach	FACT	Change (95% CI)	p Value
Client Satisfaction Questionnaire; range 1–4. Higher score indicates greater satisfaction; mean (SD)	2.49 (0.16)	2.50 (0.18)	0.01 (–0.09, 0.07)	0.858
Team Attachment Questionnaire; range 1–4. Higher score indicates greater attachment; mean (SD)	3.19 (0.53)	3.14 (0.57)	–0.05 (–0.24, 0.14)	0.615
Loneliness Scale; range 3–9. Higher score indicates greater loneliness; mean (SD)	5.39 (2.06)	5.00 (2.11)	0.39 (–0.29, 1.08)	0.251

As a result of the service change, some participants appreciated the sense of greater liberty and independence:

Yes I feel that they give me more space and I am able to breathe. (participant 1)

I have more freedom. More time to myself. (participant 31)

Being seen less often is more beneficial to me. (participant 55)

Reduction in contact and support

Not all feedback on the service change was positive. A small number of people raised concerns about the lower intensity of the new service, particularly in relation to the reduction in how often they got to see their doctors or care coordinator:

CMHT is not as good as AOT. Don't see me once a week, see me once a fortnight. (Participant 20)

I have to wait a long time for my appointment. I do not get seen immediately. (participant 32)

Care coordination is different, now seen less often. (participant 39)

For some, this was mentioned in the context of changes to the delivery of their medication, such as needing to collect medication from the GP or the clinic, or not have long acting antipsychotic medication injections administered at home:

“Yes, they only see you once in three months and the doctor once a year. They rely on housing support services too much. Medication was better distributed by the AO team instead of going through the GP” (participant 13)

“Have to come in for medication (injection). (participant 49)

Another participant experienced less support with broader social aspects of care:

Assertive outreach were always there for me. When I didn't need them they never bothered me. Now I can't get no money, get no help with finances. (participant 24)

Discussion

In contrast to the larger reduction in earlier studies (Firn et al., 2013, 2016), the findings of reduced admissions and days in hospital were not significant for this group of patients in this third locality. Other findings were consistent with the changes seen in the earlier studies in this series, specifically no significant changes in the use of crisis services, and a non-significant but slightly increased missed appointment rate for the new integrated FACT model.

Given the observational method of the study we checked for any confounding changes to service provision and background pattern of monthly bed use for all adult patients belonging to the locality over the 24 month study period. Services and bed use for all local adult patients remained stable aside from the closure of the AO team. The locality used an average of 714 bed days per month (range 547–942) across all adult acute and psychiatric intensive care unit (PICU). To three SDs this represented normal variation and no step change was observed at AO team closure or any other period. The study locality, with a population of 170 000, provided 23 adult acute beds over the period studied and accessed between 0 and 3 PICU beds.

We have discussed in more detail (Firn et al., 2013, 2016) some of the arguments behind this finding that reduced intensity of care for people with severe and enduring mental health problems could result in similar outcomes. Specifically concerns were raised that specialised AO may have over-provided care, nurtured dependency and had a tendency to keep patients indefinitely on intensive caseloads beyond current need. Rana & Commander's (2010) long-term follow up of 165 people taken onto AO teams suggests that the benefits of AO taper off after 2 years and raise similar questions about the low turnover of people on AO case-loads. The quantitative findings from this replication do not modify this view.

We were also interested in the question of whether patients would be disadvantaged in other ways by dismantling specialised teams and offering an alternative integrated model. We have now been able to investigate this directly from patient reported experience. We were encouraged by the high response rate to interview (an average of 63.5% over the two time points) though the interview sample differed from the total sample in diagnostic profile as detailed in the Results section. Patients were able to articulate their comparative experiences of changed relationships and the two care models perceptively. For long-term conditions service users, carers and staff dislike disruption to established relationships caused by either service reconfiguration or the shunting of patients between teams and specialities when their needs change. Although we reconfigured a specialist service that had been operating for 13 years our findings suggest that overall patient experience can be managed over the transition in the short term. Concerns expressed about reduced contact in FACT compared to AO may be interpreted as arising from unnecessary dependence rather than the failure of services to provide adequate input.

A level of continuity of care for AO patients was achieved, as the majority of staff were transferred to one of two teams in the new service. This may be a factor in explaining the large number of patients reporting little difference in their experience of care. The AO full-time team manager and a part-time administrator were redeployed into vacant posts outside the local CMHT. A further vacant care coordinator post within the AO team was deleted along with 4 sessions of medical time from the CMHT, compensated for by the full time AO consultant psychiatrist (MA-V) moving to that CMHT to help establish FACT working. These changes represent a cash releasing saving of £144 872 per annum for the provider organisation. Overall head count reduced by three whole time

equivalent posts for the provision of general adult and flexible AO care for the same caseload of patients.

Unit costs for health and social care at 2013/14 price rates give a figure of £7644 for the average annual cost per case for care from an AO team and £122 per face-to-face contact (PSSRU, 2014). This contrasts with £2528 annually per case for an adult CMHT when these costs were last reported at 2011/12 prices (PSSRU, 2012) and £128 per face-to-face contact. We do not suggest this differential applies to the study population since those patients traditionally transferred from AO teams would typically be the higher cost patients amongst a CMHT caseload. Study patients were seen less than half as frequently in CMHT with FACT so a simple calculation with these 2739 fewer contacts at £122 per contact amounts to £334 158 per annum. The service is commissioned on a block contract so this does not translate into a hard financial saving.

Limitations

This is a pragmatic service level evaluation with an uncontrolled observational follow up design which is unable to make firm conclusions on causation. A controlled study design would need to be conducted to offer greater certainty. We have described contextual factors, such as relevant service components and overall locality bed use trends, to allow potential adopters to make pragmatic interpretations.

Patients had to consent to interview so despite the high response rate there may be bias in the sample towards more attached or satisfied patients. A lower proportion of the total patients with schizophrenia consented to interview compared to those with bipolar affective disorder. Patients were seen by a researcher independent of the clinical team and without care staff present. We ensured that patients understood that no individual responses would be relayed to the care team and the negative responses suggest that patients were able to express genuine concerns without hindrance.

Ratings of fidelity to either AO or FACT fidelity scales (Bähler et al., 2010; Teague et al., 1998) were not conducted at any point in the study. We chose to adopt the FACT model because we believed that FACT conferred some protection and compensation for the reduction in provision from AO. We did not have a non-enhanced CMHT condition for a third comparison arm and therefore we cannot state whether a simple CMHT model would have produced similar results.

No comparisons were studied for effects on patients remaining with the CMHT throughout the study period, nor were any changes in the use of compulsory admissions or CTOs investigated. We did not collect or analyse adverse events other than death. We were unable to calculate costs saved from changes to the weekend working arrangements due to the way out of hours supplements were accounted and the gradual withdrawal of weekend working prior to the closure of the AO team.

Conclusions and implications for service delivery

Replication has provided support for the clinical effectiveness and generalizability of reinforcing standard multi-disciplinary CMHTs with FACT to provide a compensatory alternative following the closure of specialised AO teams. Efficiencies in staffing and reduced patient contact were achieved without

impacting significantly on the clinical outcomes we have reported.

Given that this is a cheaper and less intensive model, potential losses in the patient experience of care have not been demonstrated in a comparative analysis of patient reported satisfaction and team attachment. Concerns about patients becoming more socially isolated were not shown from self-reported loneliness scales. Patient opinion of the two models was equivocal, with concerns about reduced contact and support balanced with perceived benefits of greater freedom and self-determination. The essence of the flexibility of service provision provided in the new “hybrid” model of integrated care is eloquently articulated by one participant when describing what they felt had improved with the new service:

This has to be assessed along with changes in me. I am different now and do not need the help in the way I used to. The help I get now is excellent. The support I get now matches my needs. (participant 21)

Declaration of interest

No potential conflict of interest was reported by the authors.

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