Soc Psychiatry Psychiatr Epidemiol (2005) 40: 988–993 DOI 10.1007/s00127-005-0989-8

ORIGINAL PAPER

Martin Commander · Sashi Sashidharan · Tanvir Rana · Thilak Ratnayake

North Birmingham assertive outreach evaluation

Patient characteristics and clinical outcomes

Accepted: 12 August 2005 / Published online: 09 December 2005

Abstract *Background* Given the adoption of assertive outreach teams into UK mental health policy, it is important to assess whether gains identified in efficacy studies can be replicated in ordinary clinical settings. *Aim* The aim of the study was to assess patient characteristics and clinical outcomes in routine assertive outreach services in the UK. *Methods* Patients (*N*=250), newly taken onto five assertive outreach teams, were followed up over 2 years. Baseline characteristics and outcome measures were compared. *Results* Most patients had an *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, diagnosis of schizophrenia, schizotypal or delusional disorder and long-standing involvement with psychiatric services. Around a half had a history of substance abuse and violence. At follow-up, the majority had ongoing input from the teams and there was a significant decrease in the use of in-patient care. There was no improvement in symptoms, risk behaviours or social functioning. *Conclusions* Patients on assertive out reach teams remain in contact with services and spend less time in hospital yet show little change with respect to clinical outcomes.

Key words assertive outreach – evaluation – outcome – severe mental illness – admission

Dr. M. Commander (✉) · Dr. T. Rana · Dr. T. Ratnayake
Birmingham and Solihull Mental Health Trust
Northcroft, Highcroft Hospital
Reservoir Road
Erdington, Birmingham, B23 6AL, UK
Tel.: +44-121/685-7850
E-Mail: martin.commander@bsmht.nhs.uk

Prof. S. Sashidharan
University of Warwick
Warwick, UK

SPPE 989

Introduction

The Programme for Assertive Community Treatment (PACT) has provided the foundation for significant change in mental health practice [21]. The services predicated upon this model target patients with severe and enduring mental illness with complex needs who make high demands on in-patient beds, yet are typically disengaged from traditional provision. There is a substantial body of evidence that this model of delivery is beneficial in reducing demands on in-patient care, possibly improving clinical status and, to a lesser extent, enhancing social functioning [12]. Nevertheless, there are reservations about its implementation outside North American settings, especially in the UK where assertive outreach teams are a central feature of mental health policy [6, 8]. Although criticised for their failure to demonstrate fidelity to the PACT model [10, 11], the negative findings of two notable UK studies (PRISM [22], UK700 [2]), evaluating community mental health teams and intensive case management, respectively, have raised doubts about the likely impact of these new services. Furthermore, there is limited evidence regarding the routine implementation of assertive outreach teams in ordinary clinical settings in the UK [19].

Methods

In North Birmingham, UK, assertive outreach teams were initiated as part of a comprehensive strategy for integrated community-based services from 1995 onwards. The catchment area covered a population of over 600,000 people and included highly deprived inner city wards, with significant numbers of people from black and minority ethnic groups, as well as relatively affluent districts. The service model introduced included home-treatment teams (24-h, 7-days-a-week crisis services providing an alternative to hospital admission), primary care liaison teams (acting as gatekeepers to specialist mental health services from primary care agencies) and rehabilitation and recovery teams (focusing on the needs of those with complex long-term mental health needs who did not require assertive outreach).

Between 1995 and 2000, five assertive outreach teams were established. This service innovation offered a timely opportunity to provide a realistic test of the impact of assertive outreach teams in the UK. A naturalistic longitudinal evaluation is described.

The five assertive outreach teams in North Birmingham were set up according to the PACT model with high fidelity to the original intervention [13]. This was reflected in the operational policy for the teams, which closely matched the requirements for assertive outreach services subsequently set out in an implementation guide issued by the Department of Health [7]. The teams adhered to a 1:10 patient/care coordinator ratio. Each team had a dedicated consultant psychiatrist with junior medical support. Psychiatrists were responsible for both community and in-patient care. A team manager carrying a reduced caseload supervised the work of each team. Most team members were community psychiatric nurses and social workers. Input from other professional groups varied between teams and over time but included psychology and occupational therapy as well as support workers. A team approach was adopted that combined daily meetings to share patient-focused tasks but with care coordinators taking responsibility for the overall direction of each patient's care plan. The teams operated 7 days a week, but during the study period, extended hours of working (9 a.m. to 9 p.m.) were limited to two teams and were not consistently applied due to staff shortages. Out of hours, emergency community input was available through the home treatment service, and close working arrangements existed between the two teams. Interventions typically took place in the community and addressed all areas of need.

The entrance criteria for patients receiving PACT have not been as clearly defined as the model itself [21]. Explicit criteria were developed locally to guide teams in establishing uniform eligibility for inclusion in the service. All the assertive outreach teams were to target people aged 18–65 years with serious and enduring mental illness. In addition to two or more admissions/home treatment episodes in the past 2 years, it was expected that any person referred would fulfil three or more of the following additional criteria: a failure to engage, a history of persistent offending or violence, at risk of persistent self-harm or neglect, a failure to respond to treatment, combined substance misuse and a history of compulsory detention under the Mental Health Act. These rules are similar to those subsequently adopted in the national policy implementation guide [7]. The existing case-loads of local community mental health teams were screened against these criteria. On the basis of the information collected, those eligible were allocated to the newly established assertive outreach teams, depending on their area of residence. All these initial entrants to the teams were included in the study.

Data were collected for each patient twice: when they were recruited to the assertive outreach teams and 2 years after entry. Patients were interviewed by a psychiatrist who completed a 19-item version of the Brief Psychiatric Rating Scale (BPRS) [18]. Each symptom was scored on a 6-point scale (0=absent to 5=severe) and focused on the past 2 weeks. A total score was derived by summing the individual items and dividing by the total. In addition, subscores were produced for 'thinking disturbance', 'withdrawal retardation', 'anxious depression' and 'hostile suspiciousness'. Care coordinators for the patients assisted by a researcher collected demographic details and a history of past psychiatric service use (including use of in-patient care in the past 2 years). The primary diagnosis was that given by the clinical team condensed into the broad categories in the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision* (ICD-10) classification of mental and behavioural disorders [24]. The care coordinators also completed a semi-structured clinical assessment using FACE [4].

The Health Assessment component of the FACE includes sections on Behaviour (7 items, including physical harm to others and aggression and alcohol/drug abuse) and Mental Health (11 items), both pertaining to the previous 72 h. The Social Assessment component of FACE includes sections on Activities of Daily Living (7 items, rated over the previous 72 h) and Interpersonal Functioning (10 items, rated over the previous month). A Response to Care section includes two questions about involvement in treatment and care and the taking of medication (over the previous month). Each item is scored on a 5-point scale with 0=none, 1=mild, 2=moderate, 3=severe and 4=very severe. A score is generated for each section by summing the item scores and dividing by the number of questions completed in that section. The FACE Risk Profile was also completed for each patient. This determines the presence or absence of a range of risk factors over the patient's lifetime (risk history) as well as in the previous 1-month period (current warning signs). The current risk behaviour items were used to evaluate change in five key areas: risk to self (self-neglect or suicide attempt or other deliberate self-harm), risk to others (physical harm to others or threats/intimidation or conviction for violent/sexual offences), failure to respond to treatment, drug/alcohol abuse and disengagement (discontinuation of medication or unplanned disengagement from services or failure to attend appointments).

The data were collected between 1999 and 2002. Data on each patient at baseline were compared with those at 2-year follow-up. The primary hypothesis was that there would be a reduction in hospitalisation rates for the 2 years after inception when compared to the 2 years prior to entry into the service. The sample size was dependent on the extent of service development, but it was expected that approximately 200 patients would be recruited. Even with a drop-out rate of 10–15%, this would be sufficient to detect a 20% difference in hospitalisation rates (a conservative estimate based on previous studies [12]) as statistically significant at the 5% level with 80% power [1]. Secondarily, it was hypothesised that risk behaviours would diminish and that there would be an improvement in symptom levels and social functioning. Data were analysed using Statistical Package for Social Sciences, 12.0.1 for Windows (SPSS Inc. 2003). The Wilcoxon signed rank test and McNemar's test were used to compare patients at the two time points.

Results

During the initial inception period, 257 patients were recruited into the five assertive outreach teams. Due to an administrative error, 7 patients from one team were omitted. Of the remaining 250 patients, three quarters were aged 25–44 years and male (see Table 1). Nearly half the patients were of black ethnic group. The majority gave English as their language of choice [239 (96%)] with Punjabi (4) and Urdu (3) as the most common alternatives. Three quarters were living in independent accommodation, often alone, and a similar proportion had never been married. The majority identified themselves as long-term sick and unavailable for work.

Most patients received an ICD-10 diagnosis of schizophrenia, schizotypal or delusional disorder (see Table 2). Nearly a quarter had a bipolar affective disorder. Of the minority in the 'other' category, 2 patients had primary diagnoses of organic disorder, 4 had depressive disorder, 1 each had personality disorder and substance use disorder and 2 had neurotic disorders. By far, the majority of patients (80%) had been involved with psychiatric services for more than 5 years prior to their inclusion in the assertive outreach team (see Table 2). Only 4 patients (2%) had never previously been admitted to psychiatric hospital and most (80%) had a history of three or more admissions (n=193; missing 12). Seventeen patients had previously been in a special hospital and 16 were on a restriction order (Section 41, *Mental Health Act 1983*).

Nearly 90% of the patients had a history of an acute care episode (in-patient or home treatment) during the 2 years prior to commencing assertive outreach (see

Table 1 Demographic characteristics

Variable (*N*)	Number of patients	Percent
Age, years (250)		
18–24	13	5
25–44	177	71
45–64	60	24
Gender (250)		
Male	186	74
Female	64	26
Ethnicity (248)		
Asian	27	11
Black	114	46
White	91	37
Other	16	6
Housing (250)		
House/flat/bedsit	191	76
Hostel/group home/sheltered housing	47	19
Hospital/nursing/care home	12	5
Living group (249)		
Alone	139	56
With partner/spouse	32	13
With relative/friend	26	10
With other adults	52	21
Marital status (249)		
Single	181	73
Widowed/divorced	29	12
Married	39	16
Employment (249)		
Work/education/training	13	5
Unemployed/retired/long-term sick	236	95

Table 2). One hundred and forty-nine (63%; missing 12) had two or more admissions, and 58 (25%; missing 13) had two or more home treatment episodes in the preceding 2 years. There was a consistently high level of affirmative response to each of the six additional entry criteria for assertive outreach (see Table 2). When these criteria were evaluated collectively (with summary items being generated for those where there was more than one variable tapping into the item), all but 10 patients (4%, missing 13) fulfilled three or more criteria while half the patients [120 (51%)] met five or all six of the criteria.

By the end of the first year, 26 (10%) patients were no longer with an assertive outreach team. This had risen to 57 patients (23%) by the time of the 2-year follow-up. Of these 57, 36 patients had moved onto a less intensive service within the same organisation (either a primary care liaison or rehabilitation and recovery team). This group was included in the follow-up sample. A further 7 had died, 4 were in prison (and no longer in receipt of a service), 1 had left the country and 9 had moved residence and onto a service outside the organisation. These 21 patients were not included in the final data collection, leaving a total of 229 patients eligible for the follow-up comparisons.

Patients were significantly less likely to be admitted in the 2 years that they were with the assertive outreach team compared to the period leading up to entry into the service (47 vs. 83%; χ^2=59.65, P<0.0001). The same was true for compulsory admissions under the Mental Health Act (35 vs. 62%; χ^2=30.86, P<0.0001). Likewise, the total number of admissions, the number of compulsory admissions as well as the total number of days in hospital decreased significantly (see Table 3). When the number of bed days utilised was summed for the 214 patients with paired data, there was a reduction from 27,425 for the 2 years prior to commencement to 14,798 for the 2 years after inception onto the assertive outreach team—a 45% decrease.

There was little difference in the symptom profile or severity, as measured by the BPRS at baseline and follow-up (see Table 3). Likewise, the FACE Mental Health score did not change significantly, nor did the FACE Behaviour and Interpersonal Functioning scores. There was a statistically significant improvement in the FACE Response to Care score, although there was no change in median score. There was a significant worsening in the score for Activities of Daily Living (see Table 3). When the five FACE current risk behaviour items were compared, there was no significant difference at the two time points except that the percentage identified as failing to respond to treatment decreased.

Table 2 Clinical characteristics

Variable (*N*)	Number of patients	Percent
Primary diagnosis (250)		
Schizophrenia, schizotypal or delusional disorder	185	74
Bipolar affective disorder	55	22
Other	10	4
Contact with services prior to assertive outreach teams (242)		
Less than 1 year	4	2
1–5 years	44	18
Greater than 5 years	194	80
Acute care episode in past 2 years (236)		
None	25	11
One	43	18
Two or more	168	71
History of compulsory admission (237)		
None	19	8
1 or 2	80	34
3 or more	138	58
FACE risk profile lifetime (249)		
Alcohol/drug abuse	120	48
Failure to respond to treatment	93	37
Risk to self		
Self-neglect	193	78
Suicide attempt	71	29
Other deliberate self-harm	61	25
Disengagement		
Disengagement from services	188	76
Discontinuation of taking medication	224	90
Failure to attend appointments	195	78
Risk to others		
Threats/intimidation	180	72
Physical harm to others	136	55
Conviction for violent or sexual offences	55	22

Table 3 Clinical outcomes

Variable (*N*, eligible pairs)	Baseline		Follow-up		Wilcoxon signed rank	*P*
	Median	2.5–97.5 Percentiles	Median	2.5–97.5 Percentiles		
Admission						
Admissions in past 2 years (226)	1.00	0.00–5.00	0.00	0.00–3.25	−7.586	<0.0001
Compulsory admissions in past 2 years (218)	1.00	0.00–3.53	0.00	0.00–2.00	−6.728	<0.0001
Days in hospital in past 2 years (214)	69.50	0.00–720	0.00	0.00–611	−5.253	<0.0001
BPRS (194)						
Total	0.53	0.00–1.91	0.53	0.00–2.04	−0.439	0.66
Thinking disturbance	0.33	0.00–3.65	0.00	0.00–4.00	−0.963	0.34
Withdrawal retardation	0.33	0.00–2.67	0.33	0.00–2.33	−0.409	0.68
Anxious depression	0.67	0.00–3.33	0.67	0.00–2.97	−1.659	0.10
Hostile suspiciousness	0.67	0.00–3.49	0.33	0.00–3.63	−0.485	0.63
FACE health and social assessment						
Mental Health (203)	0.40	0.00–1.43	0.30	0.00–1.57	−0.940	0.35
Behaviour (202)	0.17	0.00–1.39	0.17	0.00–1.33	−0.044	0.97
Response to Care (202)	1.00	0.00–3.50	1.00	0.00–4.00	−2.096	0.04
Activities of Daily Living (203)	1.00	0.00–2.86	1.29	0.14–2.84	−3.204	0.001
Interpersonal (202)	1.25	0.00–3.38	1.06	0.00–3.36	−0.964	0.34
	Number of patients	Percent	Number of patients	Percent	X^2	
FACE risk profile, past month (215)						
Alcohol/drug abuse	36	17	40	19	0.21	0.64
Failure to respond to treatment	35	16	21	10	4.69	0.03
Risk to self	41	19	52	24	1.75	0.19
Disengagement	59	27	44	20	3.21	0.07
Risk to others	29	13	25	12	0.21	0.65

Discussion

There are inherent weaknesses in the study design. This was not a randomised controlled trial, and the absence of a comparison group limits the confidence that can be placed in any claim that the changes found in patients receiving assertive outreach arose as a direct consequence of the intervention. Another notable deficiency, especially given the controversy regarding the critical ingredients of assertive outreach services [26], was the lack of any formal evaluation of the extent to which service fidelity was maintained by the teams. In particular, no data on the extent and location of face-to-face contacts or the specific activities undertaken by team members were collected. This study focused on inaugural entrants into newly commissioned services. The findings may not be the same with more established teams nor indeed for patients who have been in contact with assertive outreach teams for longer periods of time, although the evidence points to more conservative results in such instances [19]. A related issue concerns the fact that 27 of the 229 eligible for follow-up received less than 1 year of intervention either because they were in hospital for more than a year (10) or because they moved onto another less intensive service (17; see [3]). The absence of any inter-rater reliability study also prohibits any critical comment on the consistency of the data collected by a large number of staff, albeit assisted by a project researcher. In spite of these methodological shortcomings, it is contended that this study adds to the emerging literature on the evaluation of assertive community treatment models providing clues as to what one might expect under normal clinical conditions. This was a routine service implemented uniformly across one large mental health provider with a substantial, albeit predominantly urban, population. The study included a large number of patients, and, in keeping with previous impressive results on teams maintaining contact with patients [20], there was negligible loss to follow up over the 2 years.

In accord with other UK assertive outreach teams [15, 19], patients in North Birmingham services were most frequently middle-aged, male, single, unemployed, living alone and had an ICD-10 diagnosis of schizophrenia, schizotypal or delusional disorder. Likewise, the percentage from the black ethnic group was high, reflecting their elevated admission rate, especially compulsory detention under the Mental Health Act [5]. The median number of days in hospital in the 2 years prior to the intervention was comparable with that reported for both the UK700 study (68 for the experimental and 75 days for the standard intervention; [2]) and new entrants to assertive outreach teams in the Pan-London study (63 days [19]). In addition, in North Birmingham, almost without exception, patients fulfilled at least three of the additional service criteria and over half met five or all six of these, confirming their suitability for the service. Although expert opinion indicates that assertive outreach teams are likely to be most effective when reserved for patients with the highest service need, as found elsewhere [15, 19], the teams accepted some patients who did not meet the recommended criteria. It is possible that teams were pressurised to take on complex cases falling outside their remit notably where there was a

high risk of serious harm to others. This deviation from the strict selection rules may in part account for the high move on from teams, predominantly to other less intensive services within the same organisation. One in ten people left within the first year, which is consistent with the rate found in the Pan-London study [19].

Admission to hospital, especially compulsory detention under the Mental Health Act, decreased significantly during the 2-year follow-up period. Indeed, the North Birmingham findings are remarkably similar to the 42% reduction in bed usage reported in a recent review of assertive community treatment [12]. It could be argued that admissions would have dropped regardless of the given the entrance criteria ('regression to the mean' effect). However, patients had long-standing recidivism, they were not recruited when acutely unwell or already in hospital and the extent of the decrease was substantial. It is more difficult to make a case for the specific benefits of assertive outreach on the basis of the North Birmingham data. While high quality community services may reduce demand on in-patient beds, the evidence is less robust when advocating for one type of service over another [22]. In particular, the North Birmingham findings need to be appraised in the light of previous negative results in the UK [2, 15]. Alongside issues about the fidelity of the interventions, a key shortcoming of these studies was the lack of a dedicated psychiatrist covering both hospital and community provision. This harks back to the Daily Living Programme study [17], which reported substantial decreases in hospital stay only when undivided medical responsibility was assumed for all aspects of care. In North Birmingham, there was a decrease in admissions as well as occupied bed days, suggesting an impact both in terms of gatekeeping entry into hospital as well as in facilitating early discharge. Given the stated importance of engagement to the success of assertive outreach, it is surprising that there was no improvement in the FACE risk behaviour disengagement item. Moreover, despite being statistically significant, the change in the FACE Response to Care score was insubstantial. One possible reason may be that compliance with medication and appointment-keeping are less predictive of outcome than measures of patient–therapist interaction and patient's perceived usefulness of treatment [14].

There was little change in either symptoms or social functioning consistent with existing evidence from evaluations of community psychiatric services [2, 15, 26]. Indeed, the FACE ratings for Activities of Daily Living worsened. It is perhaps salient that scores on both symptom and social functioning scales were generally in the 'absent-to-mild' range, possibly reflecting the predominantly relapsing rather than chronic pattern of disorder found for patients on assertive outreach teams [2]. Furthermore, scales calibrated against acutely ill or severely disabled populations may fail to register finer gradations in changes in symptoms or functioning and may not be sufficiently sensitive to change. A plausible alternative is that the emphasis on maintaining contact with patients and delivering crisis intervention distracts attention away from other therapeutic aspects. There is an argument that teams need to specifically target these areas if traditional rehabilitation needs are not to be overlooked [26]. The same case can be made for the disappointing lack of impact of the teams on either substance abuse or risk to others despite patients' extensive histories of problems. Again, this negative finding is in line with other community studies in the UK [23] and may in part reflect a failure to successfully address associated substance misuse problems [9] as well as co-morbid personality disorders [16]. It is also noteworthy that despite the availability of intensive community services, a substantial minority of patients continue to be admitted and, in some instances, remain in hospital for extended periods of time (cf. UK700 study [3]). These findings appear to indicate the need for a realistic appraisal of what assertive outreach teams can achieve and an appreciation that it may not be possible to adequately support some patients in the community.

References

1. Altman DG (1982) How large a sample? In: Gore SM, Altman DG (eds) Statistics in practice. British Medical Association, London
2. Burns T, Creed F, Fahy T et al (1999) Intensive versus standard case management for severe psychotic illness: a randomised trial. Lancet 353:2185–2189
3. Burns T, Whited I, Byford S et al (2002) Exposure to case management: relationships to patient characteristics and outcome. Report from the UK700 trial. Br J Psychiatry 181:236–241
4. Clifford P (1993) FACE profile. Research Unit, Royal College of Psychiatrists, London
5. Commander MJ, Sashidharan SP, Odell S et al (1997) Access to mental health care in an inner city health district: II. Association with demographic factors. Br J Psychiatry 170:220–317
6. Department of Health (2000) The NHS Plan. A plan for investment. A plan for reform. Department of Health, London
7. Department of Health (2001) The mental health policy implementation guide. Department of Health, London
8. Department of Health (2004) The National Service Framework for Mental Health—five years on. Department of Health, London
9. Graham HL, Copello A, Birchwood MJ et al (2003) The Combined Psychosis and Substance Use (COMPASS) Programme: an integrated shared-care approach, Chapter 7. In: Graham HL, Copello A, Birchwood MJ, Mueser KT (eds) Substance misuse in psychosis. Wiley, London
10. Marshall M, Bond G, Stein LI et al (1999) PriSM Psychosis Study: design limitations, questionable conclusions. Br J Psychiatry 175:501–503
11. Marshall M, Creed, F (2000) Assertive community treatment—is it the future of community care in the UK? Int Rev Psychiatry 12:191–196
12. Marshall M, Lockwood A (2001) Assertive community treatment for people with severe mental disorders (Cochrane review). In: The Cochrane Library, Issue 3, 2001. Update Software, Oxford

13. McGrew J, Bond GR (1995) Critical ingredients of assertive community treatment: judgement of experts. J Mental Health Adm 22:113–125
14. Meaden A, Nithsdale V, Rose C et al (2004) Is engagement associated with outcome in assertive outreach? J Ment Health 13:415–424
15. Minghella E, Gauntlett N, Ford R (2002) Assertive outreach: does it reach expectations? J Ment Health 11:27–42
16. Moran P, Walsh E, Tyrer P et al (2003) Impact of comorbid personality disorder on violence in psychosis. Br J Psychiatry 182:129–134
17. Muijen M, Marks IM, Connolly J et al (1992) The Daily Living Programme: preliminary comparison of community versus hospital-based treatment for the seriously mentally ill facing emergency admission. Br J Psychiatry 160:379–384
18. Overall JE (1998) The Brief Psychiatric Rating Scale (BPRS): recent developments in ascertainment and scaling. Psychopharmacol Bull 24:97–99
19. Priebe S, Fakhoury W, Watts J et al (2003) Assertive outreach teams in London: patient characteristics and outcomes: Pan-London Assertive Outreach Study Part 3. Br J Psychiatry 183:148–154
20. Rapp CA, Goscha RJ (2004) The principles of effective case management of mental health services. Psychiatr Rehabil J 27:319–333
21. Stein L, Santos AB (1998) Assertive community treatment of persons with severe mental illness. Norton, New York
22. Thornicroft G, Wykes T, Holloway F et al (1998) From efficacy to effectiveness in community mental health services. Br J Psychiatry 173:423–427
23. Walsh E, Gilvarry C, Samele C et al (2001) Reducing violence in severe mental illness: randomised controlled trial of intensive case management compared with standard care. Br Med J 323:1093–1096
24. World Health Organisation (1992) The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines. World Health Organization, Geneva
25. Wright C, Burns T, James P et al (2003) Assertive outreach teams in London: models of operation: Pan-London Assertive Outreach Study Part 1. Br J Psychiatry 183:132–138
26. Wykes T, Leese M, Taylor R et al (1998) Effects of community services on disability and symptoms. PRiSM Psychosis Study 4. Br J Psychiatry 173:385–390