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European Psychiatry 21 (2006) 300–306
EUROPEAN PSYCHIATRY
http://france.elsevier.com/direct/EURPSY/

Original article

Do care patterns change over time in a newly established mental health service? A report from the UK700 trial

M. Fiander [a], T. Burns [b,*], O.C. Ukoumunne [c], T. Fahy [d], F. Creed [e], P. Tyrer [f], S. Byford [g]

[a] *Department of Mental Health, St. George's Hospital Medical School, London, UK*
[b] *Department of Psychiatry, Warneford Hospital, University of Oxford, Oxford OX3 7JX, UK*
[c] *Murdoch Children's Research Institute, Parkville, Vic., Australia*
[d] *Institute of Psychiatry, Kings College, London, UK*
[e] *School of Psychiatry and Behavioural Sciences, Manchester Royal Infirmary, Manchester, UK*
[f] *Department of Public Mental Health, Imperial College School of Medicine, London, UK*
[g] *Centre for the Economics of Mental Health, Institute of Psychiatry, London, UK*

Received 7 April 2005; accepted 13 September 2005

Available online 07 July 2006

Abstract

***Purpose.* –** Data on the process of mental health care is scant. Most studies focus on services at their inception when activity may be atypical and then usually present data only mean values for the reported variables over the whole study period. We aimed to test whether care delivery changes over time, and to describe any changes at the individual patient and team levels.

***Methods.* –** Process data on 272 patients in three new intensive case management (ICM) teams were collected over 2 years. Interventions were prospectively recorded using clinician-derived categories. Changes over time are described at both patient and team level.

***Results.* –** The number of contacts and the proportion of face-to-face activity were remarkably constant after the first month at the patient level. The proportion of 'psychiatric' interventions (main focus on medication or a specific 'mental health' intervention performed) increased greatly after the first 6 months. The care activity received by individual patients varied considerably. Overall, teams varied significantly in the extent to which their activity rates were sustained over time.

***Conclusions.* –** New ICM teams deliver highly individualised care with more marked differences in treatment patterns between patients in the same team than mean differences between teams. The early 'engagement' period is marked by a greater focus on social care. There is evidence of differences in sustainability of the services by site.

Keywords: Psychosis; Case management; Longitudinal; Care patterns

1. Introduction

We have prospectively measured the process of care in intensive case management (ICM) and standard case management (SCM) services subjected to a randomised controlled trial [1,2]. In a previous paper [3] the level of care activity was compared between subjects receiving ICM and those receiving SCM. That paper demonstrated a significant treatment and a significant treatment by team interaction effect. In another paper UK700 data relating to those patients who were exposed to at least 12 months treatment were reanalysed and although a number of baseline variables were associated with outcome, caseload size did not reduce hospitalisation or treatment costs. However in neither study were changing patterns in care delivery over time considered. Do such intensive treatments have a natural tendency to taper off over time, perhaps as patient's more acute needs are met? Is there a prolonged engagement period? Are experimental teams able to sustain intensive levels of activity? Are the wider social needs addressed or is practice with such disabled patients restricted to traditional 'psychiatric' activities? Such questions can only be addressed by analysing patterns of care over time.

The aim of this study was to test whether the process of care under ICM changes over time at both patient and team

* Corresponding author. Tel.: +44 1865 22 6474.
E-mail address: tom.burns@psych.ox.ac.uk (T. Burns).

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doi:10.1016/j.eurpsy.2005.09.008

levels of analysis and, if so, to describe the manner of that change. The patient level analysis focuses on any patterns of care each patient received. The team level analysis controls for patient load and examines the sustainability of intensive treatment.

2. Methods

Subjects in the original UK700 study were recruited from four inner city mental health services; South Manchester and Brixton, Paddington and Wandsworth in London. All patients were aged between 18 and 65, were suffering from a long term psychotic illness and had a minimum of two hospital admissions, the most recent within 2 years. Those who gave written informed consent to the study were randomly allocated at an independent statistical centre to either ICM (caseload 1:12–15) or SCM (caseload 1:30–35). Details are available of the baseline characteristics of the 708 patients [4] and the process of randomisation and outcomes at 2 years [1].

A total of 353 patients were allocated to ICM. Staff at the Manchester site was unable to implement the data collection protocol successfully and their process data were, therefore, excluded from this study. A total of 274 patients who were randomised to ICM in the three London sites were eligible for the study (97 from St. George's, 100 from St. Mary's and 77 from Kings). Two of these, from the St. Mary's site, were excluded because have failed allocation or moving away. Staff involved in data collection in St. George's included 79 members of six CMHTs (including the intensive case managers) with 50 staff at Kings and 37 involved at St. Mary's.

The methods used for classifying care activity and the process of data collection has been previously reported [3]. Data collection took place from February 1994 to December 1998. The staff members in each team (consisting of mental health trained nurses, psychologists, occupational therapists, social workers and doctors) were required to fill out an 'event record' for each contact, failed contact or prolonged telephone conversation with the patient or family or prolonged contact with other agencies. This event record noted the type of care event, the duration (with and without travelling time) and location.

Five types of event were recorded:

- face-to-face patient contact;
- telephone contact (> 15 min);
- carer contact (> 15 min);
- co-ordination (contact with other professional agencies) (> 15 min);
- attempted (failed) face-to-face contact.

For all face-to-face contacts the primary focus of the event was categorised into 11 groups:

- housing;
- occupation and leisure;
- finance;
- daily living skills;
- criminal justice system;
- carers and significant others;
- engagement;
- physical health;
- specific mental health intervention or assessment;
- medication;
- case conference.

The total number and duration of contacts in each complete 30-day period over the 2 years between randomisation and final follow-up were calculated in relation to each patient's study career. The activity delivered by the ICM team within each site was calculated by complete 30-day period for the duration of the study spanning the date of randomisation for the first patient under that team to the date follow-up was completed for the last patient.

At the level of the patient, data were restricted to the first 24 30-day period representing 2 years of follow-up on the trial. Data were only calculated for the periods when the patient was deemed to be in a position to receive ICM (i.e. were 'active') for at least 15 of the 30 days. Essentially this meant that the patient was living in the area served by the teams and not resident long-term in a hospital or prison. Patients who left the area temporarily were considered not to be in a position to receive ICM for the time they were away. To this end, account was taken of the dates on which the patients permanently left the study and the dates on which two specific patients temporarily moved from the study areas and moved back again within the duration of the 2 years follow-up. Where the number of 'active' days for a given period was less than 30 but more than or equal to 15, the counted number and duration of contacts were inflated to project the activity that would have occurred if the patient was in a position to receive ICM for the full 30 days.

In describing activity at the level of the team, data were collected for 39 30-day period in St. George's and King's, and for 41 30-day period at St. Mary's. This allowed inclusion of all data for patients recruited to the study and followed up for 24 months.

2.1. Statistical methods/analysis plan

Change over time in activity was summarised graphically. Graphs were plotted against time for:

- total number of face-to-face contacts;
- total duration of face-to-face contacts;
- proportion of contacts over 15 min that were face-to-face;
- proportion of the total contact over 15 min duration that was face-to-face;
- proportion of face-to-face contacts that were psychiatric (i.e. the focus was *medication* or *specific mental health intervention or assessment*);
- proportion of duration of face-to-face contacts that were psychiatric.

These variables were summarised both at the level of the patient (for 24 30-day period) and at the level of the team (for 36 30-day period). Team data from months 37 onward were not included in the analysis because of the small and rapidly falling number of patients for whom activity data were