ORIGINAL PAPER

Impact of a community-based 'challenging behaviour' service on bed occupancy

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People with learning disability and behavioural disturbance can be difficult to treat in the community, frequently requiring specialist in-patient assessment. The impact which a new community-based 'challenging behaviour service' has had on a district's in-patient bed use is described.

The concept of challenging behaviour

The term 'challenging behaviour' was first described in the United Kingdom by Blunder & Allen (1987) in a King's Fund publication which dealt with services for people with learning disability. The term was an attempt to make practitioners more aware of the context within which a variety of difficult behaviours arose. Emerson *et al* (1987) defined it as "behaviour of such intensity and duration that the physical safety of the person or others is placed in serious jeopardy; behaviour which is likely to seriously limit, to deny access to, and use of ordinary community facilities".

The aetiology of severe behavioural disturbance is diverse and includes factors such as neurological disorders, pain, mental illness, and learnt behaviours (CRIMD, 1992). It in no way implies a diagnostic category and is a term which requires further assessment of its cause and management by an expert multidisciplinary group.

Traditionally the assessment and management of these problems was carried out in long-stay hospitals and would lead to protracted admissions. In many places this is no longer a service option, and the guidelines provided by the British Institute of Mental Handicap Report (Harris, 1991) have recommended the institution of community-based 'challenging behaviour teams'.

The study

The health district under study is a predominantly urban area with a population of 165 000. The total number of people estimated to have a learning disability was 4000, and a local multi-agency special needs register indicated that about 500 people in the district were using specialised services. Previous studies suggested there were about 30 people with severe challenging behaviour (CRIMD, 1992).

Before the formation of a 'challenging behaviour team', the local community learning disability team consisted of a consultant psychiatrist, two trainee psychiatrists, community nurses, social worker and other therapists (occupational, speech, physiotherapy). Referrals came from a variety of sources including general practitioners, other health agencies, families, self referrals and other local community-based teams.

In-patient assessment and management for clients who could not be managed in the community was provided in a nearby specialist 18-bedded open unit in the grounds of a local learning disability hospital sited in an adjacent health district, again with multidisciplinary staffing.

In April 1991 a community-based support service for people with challenging behaviour was established. It consisted of seven professionals, all with a nursing background: a manager, a programme specialist, three registered nurses and two support workers. The majority of the trained staff had received specific training in behavioural interventions.

The team operated in a variety of settings where problem behaviours arose including the home, school and adult training centres, carrying out both assessments and intervention programmes in conjunction with carers and teachers.

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The purpose of this study was to describe and measure the impact of this new challenging behaviour service on three aspects of the existing admission service:

(a) number of bed days used in the admissions ward
(b) types of clients admitted
(c) various programmes instituted.

We scrutinised all admissions during the three years 1990–93 to the specialist assessment and treatment unit. Throughout the study period the district maintained consistent consultant psychiatric services and community learning disability teams.

We obtained the number of clients admitted during the study period and the duration of stay from the hospital medical records department and recorded the reason for admission in behavioural terms and the psychiatric diagnosis according to ICD–10 criteria (WHO, 1992).

Findings

Table 1 depicts bed use in the study district over the three year study period. During the second year of operation of the challenging behaviour team (third year of the study) there was a marked reduction in bed use. The average length of stay and the maximum length of stay for most clients were also reduced. Protracted admissions were associated with clients who had autistic disorders, severe learning disability and violence towards others.

Table 2 shows reasons for admission during the study period. Although the number of people studied is small, reasons for admission appear to have changed with time.

Table 1. Comparison of bed days

	Year 1	*	Year 2	Year 3
	1. 4. 90 31. 3. 91		1. 4. 91 31. 3. 92	1. 4. 92 31. 3. 93
Study district				
Number of clients				
New admissions	9		10	5
Carried over	0		1	1
Total	9		11	6
Bed days				
Minimum	7		5	3
Maximum	144		147	68
Mean	56.4		62.7	31.6
Total	507		690	190

*, challenging behaviour team established

In particular, following the introduction of the challenging behaviour service, there was an apparent increase in the admission of clients with violent behaviour mostly directed against others. This increase was against a background of a fall in the number of clients admitted to the assessment unit.

Table 3 lists the psychiatric diagnosis and related disorders found in clients admitted from the study district for assessment and management.

Comment

Table 1 suggests there has been a reduction in the number of bed use days in the second year of operation of the challenging behaviour service. It is not possible from our study to make definitive comments on which variables affected this decrease. One factor may be the effect of the challenging behaviour team. A reason for the delay in the effect until its second year might have been the initial under-utilisation of the service by referring agencies, who were perhaps unaware of its instigation or function.

Table 2 shows that although bed use declined, the proportion of patients admitted showing violent behaviour towards others increased. It was easier for the challenging behaviour team to manage people with self injurious behaviour in their own homes than those who displayed overt aggression or inappropriate sexual behaviour.

This confirms the finding that violent behaviour towards others is particularly difficult to manage in the community. In many instances, a short-term admission was required to diffuse a difficult situation, particularly when there was a risk to others. In some cases the quality of life of

Table 2. Reasons for admission

Reasons	Year 1	*	Year 2	Year 3
	1. 4. 90 31. 3. 91		1. 4. 91 31. 3. 92	1. 4. 92 31. 3. 93
	(%)		(%)	(%)
Assessment of mental state	34		18	16
Aggression towards others	44		36	50
Destruction of property	0		18	0
Self injurious behaviour	22		9	0
Inappropriate sexual behaviour	0		18	33

*, challenging behaviour team established

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Table 3. Psychiatric diagnoses and levels of learning disability

Psychiatric diagnosis		Level of learning disability
Year 1		
Schizophrenia	1	3 severe, 2 moderate,
Depression	2	4 mild
Personality disorder	2	
Conduct disorder	4	
Year 2 Challenging behaviour team established.		
Schizophrenia	2	1 severe, 2 moderate,
Schizoaffective disorder	1	7 mild, 1 borderline
Bipolar affective disorder	1	
Personality disorder	2	
Conduct disorder*	2	
Alcohol abuse	1	
Adjustment disorder	1	
Year 3		
Pre-senile dementia	1	2 severe, 1 moderate,
Bipolar affective disorder	1	3 mild
Agoraphobia	1	
Conduct disorder	2	
Adjustment disorder*	1	

*, carried over from previous year

the carer was severely compromised. Such an admission may prevent the eventual loss of a residential placement in the community.

The annual cost of a bed at the local learning disability hospital is estimated to be £65 000. This is calculated by the total revenue for the unit divided by the number of contracted beds in addition to capital costs. A reduction in 500 days (in the second year of operation) equates to a potential saving of £90 000, compared with annual staffing costs of £110 000 (1992–93 salary levels) for the challenging behaviour team.

Other benefits include a reduction in the secondary difficulties associated with the disruption of hospitalisation, together with the stigmatisation that may accompany it. Also many of the behaviours treated were situation specific, and they were more appropriately managed in the place where they arose, rather than in a hospital setting.

A possible problem with community treatment which warrants further study is the stress placed on carers and others who have to cope with these behaviours during the assessment and treatment period.

The Community Challenging Behaviour Team may have decreased bed use at the base hospital in two ways. First by initiating successful behavioural programmes in the community, second by continuing hospital initiated programmes in the community when the behaviour had reached more manageable levels. If this trend continued the reduced hospitalisation expenditure could fund expanded community resources. A significant number of people, however, still require in-patient treatment, for example, those in which the current placement is part of the problem *per se*.

The diagnoses listed in Table 3 emphasise the multi-factorial nature of challenging behaviour. Many of these are outside the scope of behavioural interventions and other approaches including medication and cognitive therapy are more appropriate.

In summary, it would appear that the Challenging Behaviour Team does have an impact on bed occupancy with associated potential financial savings. These early findings need to be monitored over a greater period to ensure that changes are long-standing. They also suggest in some cases a continuing need for specialist in-patient facilities, a finding supported by Hurst *et al* (1994).

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